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Vesna Vulić

Grapes of Knowledge

English for First and Second-Year Students of Viniculture – Encompassing Grape Growing and Winemaking, Fruit Growing and Food Technology

Second revised edition



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*Mother planet is showing us the red warning light-
"be careful" - she is saying.*

*To take care of the planet is to take care of our own
house.*

The Dalai Lama

Preface

Grapes of Knowledge is designed to meet the needs of first and second-year Agriculture students whose mother tongue is Croatian. The book could also be of interest to college and university staff and other students and professionals who wish to develop and improve their knowledge of vocabulary in agriculture. The book is suitable for learners who are at an intermediate level of English (or B1 according to the Common European Framework of Reference for Languages).

In this revised edition of the textbook we have updated many of the texts and information they bring. Some new texts and exercises have also been added. The glossary has been expanded accordingly.

This textbook is composed of nine units consisting of topics primarily selected on the basis of their relevance to the knowledge that students already possess in their mother tongue, and it is closely related to the first and second-year syllabus. We have made an effort to give students both an opportunity to see key language in context and to expand their knowledge by providing a range of alternative words and expressions suitable for use in a particular context.

The exercises developed around the central theme of each unit give ample opportunities to review and practice important grammar and vocabulary in both spoken and written context. There is a variety of stimulating activities which can be done individually or co-operatively in pairs or small groups. A number of exercises focus on deducing lexical meaning via word formation, synonyms, antonyms etc. and can be used as a self-study.

The book aims to increase students' skills and confidence in using English in particular contexts, as well as to activate the acquired knowledge through which they can express themselves naturally in contemporary English.

I express my gratitude to my friends, colleagues and students for their valuable comments, suggestions and advice. Above all, I am indebted to my family who inspired me and was supportive of my work.

Author

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Abbreviations, signs, textual and grammatical notification: Kratice, znakovi, tekstualne i gramatičke oznake:

n	- noun (imenica)
v	- verb (glagol)
adj	- adjective (pridjev)
adv	- adverb (prilog)
aux	- auxiliary verb (pomoćni glagol)
sth	- something (nešto)
sb	- somebody (netko)
suffix	- sufiks, dometak, nastavak (u tvorbi riječi)
prefix	- prefiks, predmetak (u tvorbi riječi)
esp	- especially (posebno, osobito)
fig	- figuratively (u prenesenom smislu)
usu	- usually (obično)
BC	- before Christ (prije Krista)
AD	- Latin Anno Domini (in the year) –godine, ljeta gospodnjeg, naše ere
e.g.	- Latin exempli gratia (for example) – na primjer
vs	- Latin versus (against, as opposed to) – nasuprot, protiv
above	- u tekstu gore (tj. koji prethodi)
below	- u tekstu dolje (tj. koji slijedi)
para.	- paragraph (odlomak)

UNIT 1

Nature and the Environment



Photo courtesy of D. Nedela

*"The first law of ecology is that everything is related to everything else."
Barry Commoner (1917 – 2012), American biologist*

A Starting up

Word formation

The suffix –ology refers to the study of something, especially something scientific, and is used in the names of many fields of study. Recognising suffixes can help you understand the meaning of many words.

1 Match each of the following sciences to its field of study. Use the following words:

agricultural soils trees insects climate living cells
plant nutrition; soil yields humidity fermentation
life environment

SCIENCES

- 1 agrobiology
- 2 agrology
- 3 biology
- 4 climatology
- 5 cytology
- 6 dendrology
- 7 ecology
- 8 entomology
- 9 hygroylogy
- 10 zymology

FIELD OF STUDY

2 Many words can be modified by the addition of –ion, which often indicates an act, a result or a state of something. Write the meaning of each of the following words.

1 interaction: _____

2 evaluation: _____

3 interpretation: _____

4 solution: _____

5 emission: _____

3 Read the following definitions carefully. Which definition is most understandable? Why?

Ecology the branch of biology dealing with the relations and interactions between organisms and their environment, including other organisms.

Ecology a branch of science concerned with the interrelationship of organisms and their environments.

Ecology (from Greek: οἶκος, "house", or "environment"; -λογία, "study of") is the scientific analysis and study of interactions among organisms and their environment.



B Reading and Speaking

Ecology

1 Read the text below and find words and expressions that mean the following:

- | | |
|---------------------------|-------|
| 1 contest, race | _____ |
| 2 desire, wish | _____ |
| 3 gain, achieve | _____ |
| 4 communication, synergy | _____ |
| 5 habitat, surroundings | _____ |
| 6 administer, exercise | _____ |
| 7 sphere, distance | _____ |
| 8 adjustment, adaptation | _____ |
| 9 distinction, unlikeness | _____ |
| 10 lifeless, inanimate | _____ |

Ecology, also called bioecology, bionomics, or environmental biology is the study of the relationships between organisms and their environment. It is an interdisciplinary field that includes biology, geography, and Earth science. Ecology includes the study of interactions organisms have with each other, other organisms, and with abiotic components of their environment. Topics of interest to ecologists include the diversity, distribution, amount (biomass), and number (population) of particular organisms, as well as cooperation and competition between organisms, both within and among ecosystems.

The word *ecology* was coined by the German zoologist Ernst Haeckel, who applied the term *oekologie* to the “relation of the animal both to its organic as well as its inorganic environment.” The word comes from the Greek *oikos*, meaning “household,” “home,” or “place to live.” Because ecologists work with living systems possessing numerous variables, the scientific techniques used by physicists, chemists, mathematicians, and engineers require modification for use in ecology. Moreover, the techniques are not as easily applied in ecology, nor are the results as precise as those obtained in other sciences. Ecological measurements may never be as precise or subject to the same ease of analysis as measurements in physics, chemistry, or certain quantifiable areas of biology. In spite of these problems, various aspects of the environment can be determined by physical and chemical means, ranging from simple chemical identifications and physical measurements to the use of sophisticated mechanical apparatus.

(Source: <https://www.britannica.com/science/ecology>)

2 Read the text below and find words and expressions that mean the following:

- 1 influence _____
- 2 eat up, use up _____
- 3 argument, affair _____
- 4 universal _____
- 5 stream _____
- 6 drainage, overflow _____
- 7 crucial _____
- 8 earthy _____
- 9 manufacture _____
- 10 item _____



Source: https://pixabay.com/p-594461/?no_redirect

Ecosystem ecology

Ecosystem ecology deals with large-scale ecological issues, ones that often are framed in terms not of species but rather of measures such as biomass, energy flow, and nutrient cycling. Questions include how much carbon is absorbed from the atmosphere by terrestrial plants and marine phytoplankton during photosynthesis and how much of that is consumed by herbivores, the herbivores' predators, and so on up the food chain. Carbon is the basis of life, so these questions may be framed in terms of energy. How much food one has to eat each day, for instance, can be measured in terms of its dry weight or its calorie content. The same applies to measures of production for all the plants in an ecosystem or for different trophic levels of an ecosystem. A basic question in ecosystem ecology is how much production there is and what the factors are that affect it. Not surprisingly, warm, wet places such as rainforests produce more than

extremely cold or dry places, but other factors are important. Nutrients are essential and may be in limited supply. The availability of phosphorus and nitrogen often determines productivity—it is the reason these substances are added to lawns and crops—and their availability is particularly important in aquatic systems. On the other hand, nutrients can represent too much of a good thing. Human activity has modified global ecosystems in ways that are increasing atmospheric carbon dioxide, a carbon source but also a greenhouse gas, and causing excessive runoff of fertilizers into rivers and then into the ocean, where it kills the species that live there.

(Source: <https://www.britannica.com/science/ecology>, <https://en.wikipedia.org/wiki/Ecology>)

3 Connect the following collocations with their meaning.

- 1 searing heat
- 2 dire consequences
- 3 reduce our carbon footprint
- 4 food miles
- 5 hybrid car
- 6 offshore wind farms
- 7 run dry
- 8 introduce green taxes
- 9 toxic waste
- 10 renewable energy
- 11 widespread flooding
- 12 irreversible climate change

- a) any naturally occurring, theoretically inexhaustible source of energy, as biomass, solar, wind, tidal wave, and hydroelectric power
- b) extreme heat
- c) extensive overflowing of water
- d) extremely serious effects
- e) poisonous rubbish
- f) a point of no return for climate
- g) finish
- h) distance food has to travel between where it is grown or made and where it is consumed
- i) taxes which relate to the protection of the environment
- j) to lower the amount of carbon dioxide created by an activity/person/business
- k) a car which can alternate between different energy sources (e.g. petrol or battery)
- l) at sea, away from the coast wind farms

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10 ___ 11 ___ 12 ___

4 Rewrite the underlined part of each sentence using a collocation from the previous exercise based on the word in brackets.

1 We should all try to reduce the amount of carbon we emit. (FOOT)

2 Our country has experienced flooding over large areas this spring. (WIDE)

3 How far our food travels before we consume it should be a concern for everyone. (MILE)

4 The humans have caused the world's climate to alter in a way that cannot be changed back. (CHANGE)

5 Wind farms located out at sea can provide a partial solution to the problem. (SHORE)

C Language Use

Revitalising Socio-ecological Production Landscapes

What is an ecosystem?

How would you define socio-ecological production landscape?

1 Read the text below and underline all the verbs in Present Perfect Tense.

Healthy ecosystems are extremely important for human well-being and their degradation led to numerous problems some of which are freshwater scarcity, food insecurity and poverty. For millennia, humans have been interacting closely with nature and building up a wealth of knowledge about effective use and management of local resources critical for securing food, clothing and shelter.

As a result, sustainable production systems have emerged over history in many parts of the world, forming so-called “socio-ecological production landscapes” (SEPLs). These landscapes embody many aspects of the green economy concept and provide not only useful indications of how humans and nature have harmoniously interacted in the past, but also guidance on how to transition to sustainable societies built on green economies.

2 Present Perfect Simple and Progressive

In each example, one sentence (or clause) relates to an uncompleted action or series of actions in an extended period of present time, and the other relates to an action or series of actions that have occurred at some time before the present whilst having relevance to the current situation. Rewrite the sentences, using the Present Progressive Tense in one sentence (or clause) of each example, and the Present Perfect in the other. The adverbs in bold should be put in their correct position.

1 She (write) a history of agriculture in three volumes. Two volumes are **already** (publish – passive)

2 The talks **rapidly** (approach) an end. Agreement **already** (reach – passive) on most points.

3 We **at present** (take) vigorous steps to modernize our food factories. Much of our obsolete plants **already** (scrap - passive).

4 The Chancellor **constantly** (receive) suggestions for simplifying the tax system. These **on occasion** (be) quite sensible.

5 There is nothing new in what I (say). Indeed, it **often** (say – passive) before.

The Origins of Socio-ecological Production Landscapes

But what are the sustainable practices that have led to the creation of SEPLs (socio-ecological production landscapes)? Common characteristics include, among other things: extensive use of locally available and renewable resources, recycling of nutrients, spatial and temporal diversity, reliance on local crop varieties, and decision-making based on the knowledge and culture of local inhabitants.

A good example is provided by the practice of shifting cultivation, which entails the rotation of crops and/or livestock in combination with fallow periods. This ensures the recovery of soil fertility and hence the potential for sustainable production. In some tropical areas, “home gardens” have a long history of sustainable practices. Home gardens create a multi-story combination of various trees and crops resulting in ecologically-friendly practices such as efficient nutrient cycling and conservation of biodiversity, as well as sociological practices such as the incorporation of both men and women into the management of such systems.

In all of these cases, a common element is the vast quantity of traditional knowledge that has been accumulated by the people engaging in such close interactions with their natural surroundings. Survival has been contingent not only on passing this knowledge down through the generations, but also on fostering communities in which the benefits and burdens as well as the rules and norms that constituted the community structure have been shared.

3 Word partnerships

Match the words on the left with the words on the right to make word partnerships

- | | |
|-----------------|---------------|
| ▶ 1 shift | a diversity |
| ▶ 2 traditional | b economies |
| ▶ 3 numerous | c production |
| ▶ 4 vast | d quantity |
| ▶ 5 sustainable | e cultivation |
| ▶ 6 green | f problems |
| ▶ 7 temporal | g knowledge |

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___

4 Discuss these questions before you read the article.

- 1 Name some of the challenges for the countries that are trying to turn to green economy.
- 2 Which are the drawbacks of the current migration of young people from rural communities to urban areas?
- 3 What is monocultural production?
- 4 What are the potential hazards of monocultural production?
- 5 Living in a country or a town? For or against?

Challenges Facing Socio-ecological Production Landscapes

While SEPLs provide strong evidence of the potential for sustainable societies to exist in harmony with nature, countries that are now striving to transition to green economies will have further challenges. Two particularly pressing issues are the unprecedented global urbanization and the push towards agricultural intensification to feed an ever-growing population.

The world is currently in the midst of the largest migration in human history, as people move from rural to urban areas. With over half of the world's population now living in cities, rural communities are suffering from a lack of successors, as well as the abandonment of SEPLs and loss of traditional knowledge built over generations of human-nature interactions. Furthermore, demographic imbalances arising from the young people moving from rural communities to urban environments generate many other significant challenges including food security, overcrowding and pollution.

The growing global demand for food as well as an increasingly efficient international transportation infrastructure, however, has fuelled a push towards monocultural production of dominant crops such as corn, rice and wheat. Currently, impressive production levels seem to mask the inherent instability of a system requiring large quantities of external chemical pesticides, herbicides and fertiliser inputs; soil degradation and water quality issues are just two of a host of factors indicating a drop in ecosystem services.



Photo courtesy of D. Nedela

Improving Livelihoods by Greening Production

There is growing recognition that transitioning to greener production practices and shifting away from the environmentally destructive agricultural practices of the latter half of the 20th century — focused on maximum productivity and profit — will benefit the environment while also improving people's livelihoods. Traditional SEPLs have embodied such practices and it is time for a renewed appreciation of their benefits, while at the same time recognising the urgent need to build sustainable societies.

The chemical inputs that enable large-scale production of monocultures, for example, place farmers in a position of heavy external dependence, while smaller scale production centered around renewable energies and organic fertilisers enables a high degree of independence. With the dramatic fluctuations in fossil fuel prices over the past decade, a low level of energy dependence will become increasingly attractive.

The employment opportunities that would be generated by a transition to greener agricultural production and away from monocultural production would therefore constitute a substantial opportunity to reduce unemployment and bolster the economy.

Likewise, monocultural production often depends largely on mechanised labour or only requires a labour force for short periods at the beginning and end of the growing season. Traditional farming, for example in homegardens, requires a rather steady level of labour input throughout the year.

From a consumer's viewpoint, products derived from sustainable management of natural resources are increasingly attractive, as they signify a growing awareness of the environment and the safety and quality of products. Similarly, the beautiful and unique landscapes shaped across numerous generations of communities interacting with nature are attractive to many people and can generate needed resources through tourism.

(Source: <https://ourworld.unu.edu/en/revitalising-socio-ecological-production-landscapes>)

Vocabulary

Antonyms

5 Connect the words from the text (1-10) with their antonyms (a-j).

1 external	a) modern
2 destructive	b) decline
3 latter	c) internal
4 improve	d) increase
5 benefit	e) initial
6 high	f) dependence
7 independence	g) irregular
8 traditional	h) small
9 reduce	i) favourable
10 steady	j) disadvantage

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10 ___

D Language Review

Adjectives

- ▶ Adjectives are words which give extra information about nouns. They do not change their form to show number or gender.
- ▶ Many adjectives are formed from other words:
destruction→*destructive* *depend*→*dependent*
- ▶ We often use the past (-ed) and present (-ing) participles as adjectives to describe feelings or emotions.
- ▶ We can also combine words to make compound adjectives:
home-made, French-speaking.

1 Complete the sentences, using suitable comparative and superlative forms of the adjectives in the box. Add *than* or *the* if necessary.

far dry pretty bad wet

- 1 It's been raining non-stop. I'm sure this will be _____ April on record.
- 2 In ancient times people rarely travelled far. For most of them, _____ destination would be the local market place.
- 3 The singer was awful! I think that's _____ performance I've ever heard.
- 4 I don't mind the Mediterranean summer because it's a _____ heat than you find in the tropics.
- 5 We've inherited two paintings. Of the two, the portrait is _____ .

2 Choose the correct words in italics.

- 1 It's unusual colour for the wine, *redder/ more red* than pink.
- 2 My exam results were *nearly not /not nearly* as good as Gabriel's.
- 3 Are you feeling OK? You're *as white as / whither than* a sheet.
- 4 The higher you climb, *the further than / the further* you have to fall.
- 5 Is it OK to use my date of birth *as / like* my PIN number?



3 Read the article and underline all modal auxiliaries.

Seeds of the Future: How Investment in Classical Breeding Can Support Sustainable Agriculture

Publicly funded breeding programs are crucial to the development of sustainable farming systems.

Classical breeding—the practice of improving crop varieties by selectively breeding the best-performing plants—can help farmers increase their yields and profits, battle pests and weeds, resist drought, adapt to changing climate conditions, and enhance sustainability and global food security.

Decades of research and experience show that the technology of classical plant breeding is effective and efficient, achieving its goals at a fraction of the cost of genetic engineering.

Classical breeding: a proven technology

Classical breeding is responsible for the majority of existing crop varieties, or cultivars, around the world. Using technologically advanced methods, including analysis of genetic makeup, an improved cultivar can be produced in only a few generations of breeding. This is a relatively low-cost process, and it delivers traits that meet the needs of today’s farmers, such as:

- ▶ Tolerance to drought and other adverse climatic conditions.
- ▶ Resistance to disease and pests.
- ▶ Productivity.
- ▶ Efficient use of nutrients such as nitrogen fertilizers.
- ▶ Adaptation to local growing conditions.
- ▶ Profitability, through breeding for multiple desired traits in a single cultivar.
- ▶ Adaptation to organic farming and other regenerative systems.

The current crisis in plant breeding

Despite the proven benefits of classical plant breeding, publicly funded programs that could produce the seeds of the future have been in decline for decades. Recent studies have found that classical breeding programs have shrunk by more than 30 percent over the past 20 years. Even widely grown crops have few remaining public breeders.

Overall, public investment in our nation’s land grant universities is declining relative to private investment, shifting research priorities from the broad public good toward the relatively narrow interests of agribusiness.

The decline of public breeding programs has resulted in an overreliance on a few genetic lines for some major crops. This threatens our nation’s food security because low genetic diversity makes it easier for crop diseases to spread quickly and widely.

Improving sustainability with classical breeding

Publicly funded breeding programs are crucial to the development of sustainable farming systems. Agroecology—the application of ecological principles to farming—is the science most relevant to some of agriculture’s biggest challenges. Agroecological approaches aim to manage whole systems by simultaneously sustaining crop and livestock productivity, efficiently recycling inputs, and building natural capital—such as soil fertility—while reducing harmful impacts on soil, air, water, wildlife, and human health.

However, agroecological approaches can have maximal effect only when appropriate cultivars are available. And classical breeding is much better suited than genetic engineering techniques to developing the cultivars needed for agroecological systems. Classically bred cultivars generally cost less to develop, and can be tailored to the specific needs of diversified and sustainable farming systems.

(Source: <http://www.ucsus.org/food-agriculture/solutions/advance-sustainable-agriculture/seeds-future#.WBGiVyTFInk>)

Modal Auxiliaries

THE BASICS

The ten modal auxiliaries are:

can may must will should
could might ought to shall would

- ▶ Modals come before the infinitive form of a verb without to (except ought to):
*I **may** meet him tomorrow.*
- ▶ Modals never change form. They do not have -ed, -s, or -ing endings:
*She **may** join us.*
- ▶ Modals never use do when forming questions or negatives. To form negatives we use not after the modal and before the verb:
***Will** you come?*
- ▶ We can use modals with the continuous form of a verb:
*They **should be arriving** soon.*
- ▶ We can use modals with the passive form of a verb:
*The interview **can be arranged** for another day.*
- ▶ Modals are used in short answers and question tags:
*You will apply for the job, **won't you**? Well I **might**.*
- ▶ Modals usually refer to events in the present or future:
*I **can** come immediately, if you like. (present)*
*I **may** ring you later. (future)*
- ▶ However, some modals refer to the past:
*I **could** swim before I went to school.*
- ▶ Other modals need the addition of have to make a modal Perfect:
*I **should have realised** earlier.*
- ▶ Sometimes it's necessary to choose another verb:
*I **was able to** finish before I went out.*
- ▶ we use other verbs with similar meanings to modals. These verbs always use to. They include:
be able to, have to, used to, are/is/ was to, be allowed to, be supposed to, manage to.
*They will **be allowed** to bring their own food.*

Meanings of Modal Verbs

Modal	Meaning/Use	Example
<i>can</i>	ability theoretical possibility permission request offers	Can you swim? Anyone can make a mistake. Can I go out, please? Can you give me a hand? Can I help you?
<i>can't/cannot</i>	inability possibility prohibition deduction	I can't speak Chinese. Can't you come earlier? You can't leave until I say so. This bill can't be right.

Modal	Meaning/Use	Example
<i>could</i>	past ability possibility	The shop had nothing that I could afford. There could be trouble if they try to force this measure.
<i>couldn't</i>	request past inability	Could you give me a hand? I couldn't walk until I was nearly two.
<i>could have</i>	possibility in the past	Your actions could have had serious consequences.

4 In each item below one or two options may be possible to complete the sentence. Underline those that are possible.

- 1 Might/Can/Would you mind lifting your feet for a moment while I Hoover?
- 2 May/Could/Would you be so kind as to give me some advice?
- 3 Shall/Will/Can I carry that rather heavy-looking case for you?
- 4 Will/Could/Can you possibly come back a little later?
- 5 May/Would/Might you be willing to refund the money we have already paid you?
- 6 Do you think you will/may/could stand a little further away?

5 Write a second sentence so that it has a similar meaning to the first. Use the words in brackets.

Perhaps Susan knows the address. (may)

Susan may know the address.

1 We should be careful. (ought)

2 I managed to finish all my work. (able)

3 I realize that it was a terrible experience for you. (must)

4 It's against the rules for players to have a drink. (allowed)

5 The best thing for you to do is sit down. (better)

6 The report must be on my desk tomorrow morning. (has)

7 It is possible that Joanne did not receive my message. (might)

8 It's impossible for Martin to be jogging in this weather. (can't)

9 Tessa wants a cup of coffee. (like)

10 It was not necessary for Nancy to clean the flat. (didn't)

6 Read the text and decide which word (A, B, C or D) best completes each collocation or fixed phrase.

The Natural World

When we read about the natural world nowadays, it is generally to be given dire predictions about its (1) C destruction. Some scientists go so (2) _____ as to assert that from now on, the world can no longer be called 'natural', insofar as future processes of weather, climate and all the interactions of planet and animal life will no longer carry on in their time-honoured way, unaffected by humans. There will never be such a thing as 'natural weather' again, say such writers, only weather affected by global warming. It is hard to know whether to believe such (3) _____ or doom, possibly because what they are saying seems to be terrible true. There are other equally influential scientists who argue that climate, for example, has changed many times over the (4) _____, and that what we are experiencing now may simply be part of endless (5) _____ of change, rather than a disaster on a global (6) _____.

- | | | | |
|------------------|-------------|--------------|----------|
| 1) A coming | B close | C imminent | D nigh |
| 2) A much | B deep | C long | D far |
| 3) A prophets | B champions | C warriors | D giants |
| 4) A generations | B millennia | C centuries | D eras |
| 5) A revolution | B circle | C round | D cycle |
| 6) A measure | B scale | C proportion | D extent |

(Vince, 2003)

E Skills

Taking Notes from the Video



Video

1 Watch the video: What is Climate Change?

(Source: <http://www.bbc.com/news/science-environment-24021772>)



While listening write notes to be able to answer the following questions:

- 1 What is climate change?
 - 2 What is the greenhouse effect?
 - 3 What is the evidence for warming?
 - 4 How much will temperatures rise in future?
 - 5 How will climate change affect us?
- The following table may help you.

Video Title: _____

Information from Video	My Thoughts

2 QUIZ

1 NEVER-ENDING

Which of the following processes within the water cycle is responsible for changing water from a liquid to a gas?



- A. Precipitation
- B. Condensation
- C. Evaporation
- D. Groundwater flow
- E. Surface runoff

2 COVER UP

How much of Earth's surface is covered by water?



- A. 3 percent
- B. 50 percent
- C. 70 percent
- D. 85 percent

3 IN THE DIRT

Soil moisture (wetness) is important for:



- A. Agricultural productivity
- B. Water quality
- C. Weather and climate forecasting
- D. Ecosystem health
- E. All of the above

4 COME RAIN OR SHINE

What percentage of global precipitation falls on the land compared to the oceans?



- A. 13 percent
- B. 22 percent
- C. 35 percent
- D. 48 percent

5 SPOT CHECKING

Rain gauges collect and measure the amount of rain that falls on a particular spot. If you collected all the rain gauges in the world and placed them side-by-side, they would cover an area the size of:



- A. A backyard swimming pool
- B. A basketball court
- C. A city block
- D. The state of Rhode Island

6 DRIP TRIP

How long does it take a drop of water to travel through the water cycle?



- A. 8 to 10 days
- B. 2 to 6 months
- C. 100 years
- D. Thousands of years
- E. It depends on the path the droplet takes.

7 SOLAR-POWERED

The sun is the driving force behind the water cycle. Roughly how much of the sun's energy is absorbed by the Earth's land surface and water?



- A. 48 percent
- B. 37 percent
- C. 16 percent
- D. 9 percent

8 DROPPING IN

What is the shape of a large raindrop as it falls through the air?



- A. A teardrop: round on the bottom and pointed at the top
- B. Like a hamburger bun: round on the top and flat on the bottom
- C. A perfect sphere with smooth edges
- D. Roughly a sphere, but with uneven edges and lumps

9 HOTTING UP

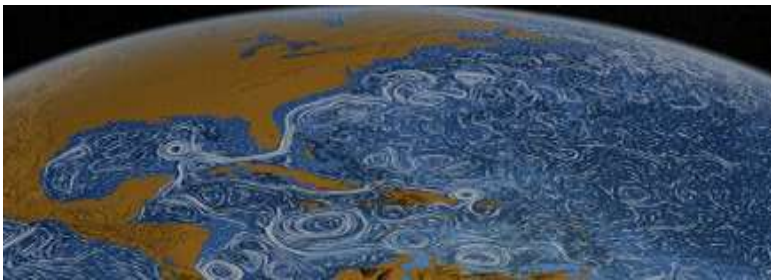
Global warming is increasing the temperature of our lower atmosphere. How will this affect the amount of moisture in the air?



- A. It will increase moisture.
- B. It will have no effect on moisture.
- C. It will decrease moisture.

10 CURRENT AFFAIRS

The only ocean current that makes an uninterrupted circle around the entire Earth without hitting land is the:



- A. Gulf Stream
- B. Japan Current
- C. Antarctic Circumpolar Current
- D. California Current

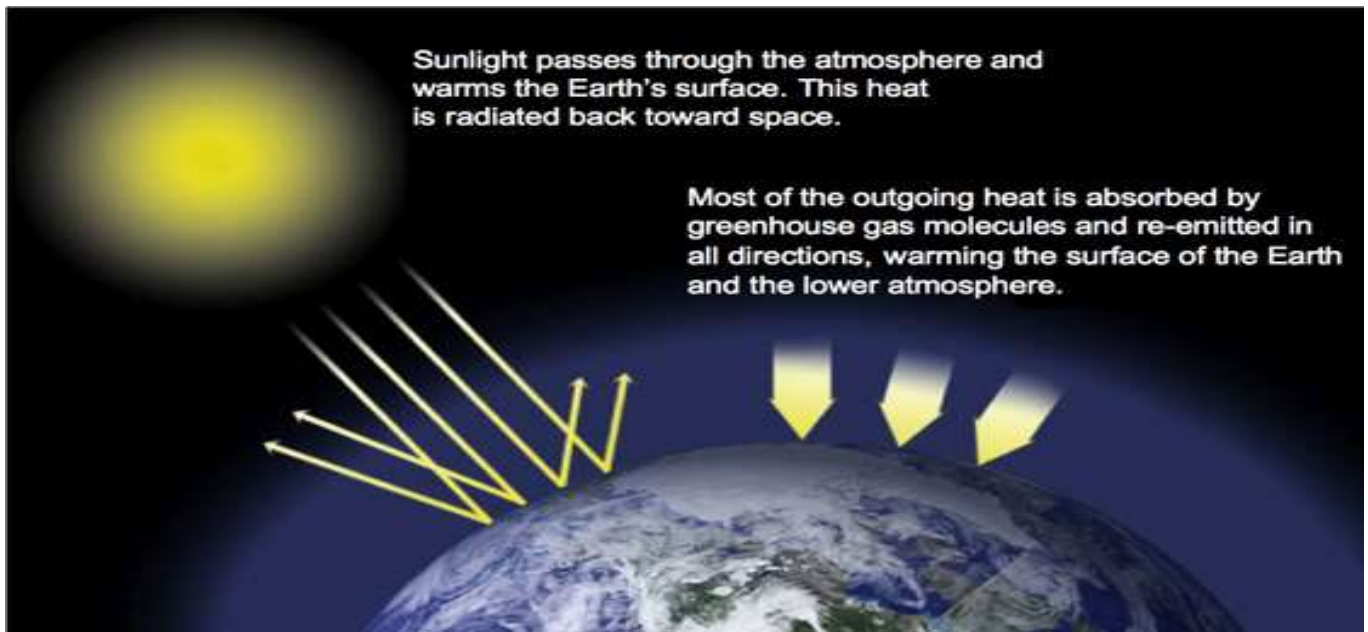
(Source: <https://climate.nasa.gov/quizzes/water-cycle/>)

F Reading and Speaking

1 Complete the text A Blanket around the Earth with the following sentences.

- 1 The consequences of changing the natural atmospheric greenhouse are difficult to predict, but certain effects seem likely:
- 2 Certain gases in the atmosphere block heat from escaping.
- 3 Gases that contribute to the greenhouse effect include:
- 4 This happens because the coal or oil burning process combines carbon with oxygen in the air to make CO₂.
- 5 Meanwhile, some crops and other plants may respond favourably to increased atmospheric CO₂, growing more vigorously and using water more efficiently.
- 6 A stronger greenhouse effect will warm the oceans and partially melt glaciers and other ice, increasing sea level.
- 7 Some regions may welcome warmer temperatures, but others may not.

A Blanket around the Earth



A layer of greenhouse gases – primarily water vapour, and including much smaller amounts of carbon dioxide, methane and nitrous oxide – acts as a thermal blanket for the Earth, absorbing heat and warming the surface to a life-supporting average of 15 degrees Celsius.

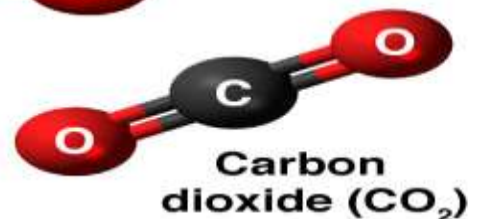
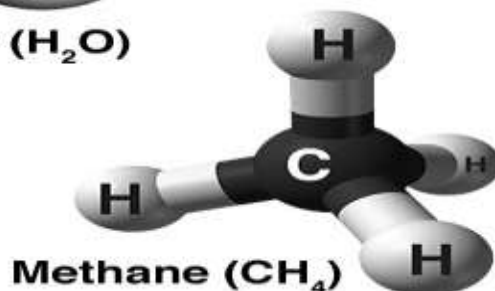
Most climate scientists agree the main cause of the current global warming trend is human expansion of the "greenhouse effect"—warming that results when the atmosphere traps heat radiating from Earth toward space.

1 _____ . Long-lived gases that remain semi-permanently in the atmosphere and do not respond physically or chemically to changes in temperature are described as "forcing" climate change. Gases, such as water vapour, which respond physically or chemically to changes in temperature are seen as "feedbacks."

2 _____ .



Nitrous oxide (N_2O)

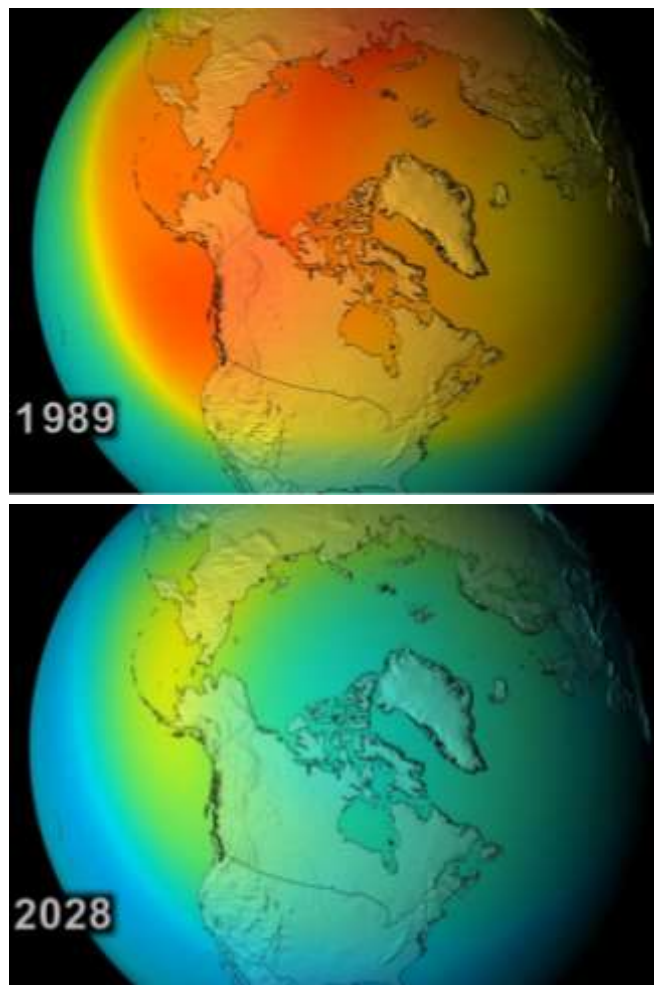


dioxide (CO₂). 3 _____ .To a lesser extent, the clearing of land for agriculture, industry, and other human activities has increased concentrations of greenhouse gases.

4 _____
On average, Earth will become warmer. 5 _____

- Warmer conditions will probably lead to more evaporation and precipitation overall, but individual regions will vary, some becoming wetter and others dryer.
- 6 _____
- _____ . Ocean water also will expand if it warms, contributing further to sea level rise.
- 7 _____
_____ . At the same time, higher temperatures and shifting climate patterns may change the areas where crops grow best and affect the makeup of natural plant communities.

(Source: <https://climate.nasa.gov/evidence/>)



(Source: https://www.nasa.gov/topics/earth/features/world_avoided.html)

2 Which of the following words and expressions can you use to talk about: warm/hot weather, wet weather and cold weather.

	Warm/hot weather	Wet weather	Cold weather
▶ blizzard			
▶ pour down			
▶ stifling			
▶ flood			
▶ hail			
▶ snowdrift			
▶ frost			
▶ thaw			
▶ drizzle			
▶ close			
▶ humid			
▶ downpour			
▶ slush			
▶ shower			
▶ heatwave			
▶ freezing			
▶ boiling			
▶ muggy			
▶ damp			
▶ torrential rain			
▶ sleet			
▶ thunderstorm			
▶ melt			
▶ scorching			
▶ chilly			

G Language Review

Adverbs

Confusing forms

Adverbs are words that modify:

- a verb (He drove slowly.)
- an adjective (He drove a very fast car.)
- another adverb (She moved quite slowly down the street.)

Adverbs frequently end in *-ly*; however, many words and phrases not ending in *-ly* serve an adverbial function and an *-ly* ending is not a guarantee that a word is an adverb. The words *lovely*, *lonely*, *motherly*, *friendly* for instance, are adjectives.

Some adverbs have the same form as adjectives:

fast, long, low, short, wide, wrong

Some adverbs are formed by adding *-ward/s* or *-wise* to a noun or preposition

after → *afterwards* *home* → *homeward*

SOME BASE ADVERBS WITH DIFFERENT MEANING

close (= not far away)	<i>They live close to us.</i>
closely (= very carefully)	<i>They watched them closely.</i>
late (= not on time/ not early)	<i>The train arrived late due to bad weather.</i>
lately (= recently)	<i>She's been rather distressed lately.</i>
hard (= with a lot of efforts/ severely)	<i>She works hard all of her life.</i>
hardly (= scarcely, almost not)	<i>We hardly know our neighbours.</i>
free (= without paying)	<i>We got into the concert free.</i>
freely (= without limitation or control)	<i>Animals roam freely over the mountain.</i>

1 Complete the second sentence so it has a similar meaning to the first. Use three or four words, including the word in brackets, as in the example.

0 Helea did really well in the exam. (highly)

Helea *was highly successful* in the exam.

1 Evolution is slower during periods of climatic stability. (happens)

Evolution _____.

2 In the UK only a few people have heard of that product. (entirely)

That product is _____ in the UK.

3 I really didn't expect to inherit such a beautiful painting. (quite)

Inheriting such a beautiful painting came _____ surprise.

2 Read the text below and decide which answer (A, B, C or D) best fits each gap. The task begins with an example.

Buying fast food

Pull open the glass door, feel the rush of cool air, walk in, queue up, place your order, **(0)** ▷ some money. Watch teenagers in uniforms pushing various buttons, and take a plastic tray full of food wrapped in a coloured paper and cardboard. The whole experience of buying fast food has become so routine, so **(1)** ___ unexceptional, that it is now taken for **(2)** ___, like brushing your teeth or stopping for a red light. During a relatively brief period of time, the fast food industry has helped transform not only our diet, but also the landscape, economy and popular culture. Fast food and its consequences have become inescapable, **(3)** ___ of whether you eat it twice a day or have never taken a single bite. The fast food industry has been a catalyst and a symptom of larger economic **(4)** ___.

Ex.	(0)	A) pay up	B) give out	C) pass on	D) hand over
	1	A) thoroughly	B) virtually	C) fully	D) greatly
	2	A) given	B) read	C) accepted	D) granted
	3	A) despite	B) because	C) regardless	D) instead
	4	A) modes	B) strains	C) streams	D) trends

3 Work in pairs and answer the following questions.

- 1 How often do you make your own meals and eat them with friends or family?
- 2 How often do you shop at a market for fresh, locally grown food?
- 3 Have you ever heard of Slow Food Movement?
- 4 What do you think the aim of this movement is?

4 Rearrange the underlined letters to make words in the extract below.

Slow Food was **(1) trateds** by Carlo Petrini and a **(2) pguor** of activists in the 1980s with the initial **(3) mia** to defend regional traditions, **(4) oogd** food, gastronomic pleasure and a **(5) wlos** pace of life. In over two decades of history, the **(6) nmevemot** has evolved to embrace a comprehensive approach to **(7) doof** that recognizes the strong **(8) ncescnontic** between plate, planet, people, politics and culture. Today Slow Food represents a **(9) blogla** movement involving thousands of projects and millions of people in over 160 **(10) unrscoiet**.

- | | |
|---------|----------|
| 1 _____ | 6 _____ |
| 2 _____ | 7 _____ |
| 3 _____ | 8 _____ |
| 4 _____ | 9 _____ |
| 5 _____ | 10 _____ |

H Reading and Language

1 Read the text below and find words that mean the following:

- 1 a person who knows a lot about good food and wines and who enjoys in them
- 2 one of the areas that some countries are divided into with its own local government
- 3 situation in which a plant, an animal, a way of life, etc. stops existing
- 4 a sudden increase in trade and economic activity; a period of wealth and success
- 5 an Italian restaurant serving simple food
- 6 a person sent by God to teach the people and give them messages from God
- 7 food prepared in a particular way as a part of a meal
- 8 to succeed in dealing with or controlling a problem that has been preventing you from achieving sth
- 9 the process of planning sth or putting a plan into operation in a skilful way
- 10 a person who starts an organization, institution, etc.

- | | |
|---------|----------|
| 1 _____ | 6 _____ |
| 2 _____ | 7 _____ |
| 3 _____ | 8 _____ |
| 4 _____ | 9 _____ |
| 5 _____ | 10 _____ |

Carlo Petrini: The Slow Food Gourmet Who Started a Revolution

Carlo Petrini describes himself as a professional gourmet who has lived all his life in the northern Italian town of Bra, in Piedmont. He is the founder, prophet and guiding light of the Slow Food Movement, which he brought into being almost thirty years ago.

Today it girdles the earth and has tens of thousands of members, but Slow Food began as an informal talking shop for young foodies in Bra, who assembled in out-of-the-way pubs and trattorias around the town to eat what was provided and drink the local wine.

It was pleasant to sit for hours in tiny, primitive trattorias perched in the mountains and eat the simple yet magnificent dishes produced by the mamma of the establishment; yet pleasure gave way to alarm as Petrini and his friends digested the fact that within a few years such places might no longer exist.

Outside the major cities, great swathes of Italy had remained virtually unchanged for centuries. But as a result of the prolonged economic boom that followed the Second World War, the vast culinary heritage of these areas, taken for granted for so long, was in jeopardy.

Two events in 1986 convinced Petrini that Italy was at crisis point. One was the opening of a branch of McDonald's in Piazza di Spagna, in the heart of Rome. The other was the death of 19 people and the poisoning of hundreds of others by cheap wine cut with methanol.

The arrival of America's most famous hamburger chain was greeted, in Italy as in France and elsewhere, by angry demonstrations. "The strategy of penetration of McDonald's in Italy," Petrini wrote, "brought its own antidote." In other countries McDonald's began setting up shop in the provinces. In Italy on the other hand the chain began from the metropolitan centres, "appealing to a public that was already Americanised" – with the result that out in the provinces, people saw the danger and began to wake up to the fact that the foods and pubs they held so dear might soon be at risk.

And so it was that on 10 December 1989, the Slow Food Manifesto was released in a Paris theatre. It was a call to arms for gourmets everywhere. "Against the universal madness of the Fast Life," the Manifesto declared, "we need to choose the defence of tranquil material pleasure. Slow Food launched courses to put consumers in touch with the producers of the food and wine they enjoyed, recreating the umbilical cord that was cut when supermarkets invaded the market place. He established "presidii", a steadily growing catalogue of foods or animal breeds that were at risk of extinction. In 1996 he launched the "Salone del Gusto", a huge showcase for foods of excellence from all over the world; the second edition, held in a former Fiat factory on the outskirts of Turin in 1998, was arguably the decisive moment in the Slow Food Movement's history, when it became clear that it had global appeal.

How will the Slow Movement grow in the future? "Every generation has to start again from zero," says Petrini today. "There are no certainties about the future. We must always have our antennae alert to the way things are changing. The idea of the modern has been superseded; the challenge today is to return to the small scale, the hand made, to local distribution – because today what we call 'modern' is out of date. The crisis we have been facing in the past year is not merely a financial crisis but also a crisis of systems and values. To overcome it we need to change our behaviour."

The defining myth of the modern world, he says, was that of Prometheus, who stole fire from the gods. "For two centuries humanity has done everything in its power to become the master of the world. But in the third millennium, the myth of Prometheus no longer corresponds to the aspirations of contemporary man. Instead we should turn to the figure of Noah. Faced with the excesses of modernisation, we should no longer seek to change the world, but to save it."

(Source:<http://www.independent.co.uk/life-style/food-and-drink/features/carlo-petrini-the-slow-food-gourmet-who-started-a-revolution-1837223.html>)

2 Read the following text and give it a title. Pose questions covering the topic sentence and supporting details.

Slow Food which is Petrini's word is used to signal awareness of a food's origin, on the part of the producer and "co-producer", the movement's name for the consumer. Slow Food shies away from the word "consumer" because "by being informed about how our food is produced and actively supporting those who produce it, we become a part of and a partner in the production process".

Promoted by members of the organisation, the term stipulates that the food should "taste good, that it should be produced in a clean way which fully respects the environment, human health and animal welfare" and that "food producers are paid a fair wage".

Slow Food is necessarily regional, promoting and protecting local produce. Its aim is to counteract fast food and fast life, the disappearance of local food traditions and people's dwindling interest in the food they eat, where it comes from, how it tastes and how food choices affect the rest of the world.

3 Rearrange the underlined letters to make words in the extract below.

European Food Safety Control Systems: New Perspectives on a Harmonized Legal Basis

Effective food control systems are essential to protect the health of **(1) osumcrsen** . They are also vital in enabling countries to assure safety and quality of food products for international trade and to verify that imported **(2) dfoo** products meet national requirements. The legal framework for food **(3) aesfyt** in the European Union Member States is currently in process. In 2000 the European Union launched its White Paper on Food Safety as a start for a new legal basis for appropriate food and animal feed production and food safety **(4) oortlnc**. The Codex Alimentarius Commission continues to develop international standards, guidelines and recommendations to **(5) eeucdr** food safety risks. The Codex Alimentarius developed risk analysis, the integrated food chain approach and HACCP. The risk analysis paradigm, including **(6) sikr** assessment, risk management and risk communication have been incorporated as general principles in EU **(7) wal** and form the legal basis of the food safety systems in the Member States.

In the White Paper of the EU the entire food production **(8) nahic** (including animal feed) is held responsible for the safety of food. The Governments of the **(9) eembrM** States verify that this responsibility is adequately met by the producers to protect the health and well-being of consumers. Within this framework, the EU introduced the General Food Law in 2002, defining general food safety principles and food safety procedures. Once this Regulation was in place, the European Food Safety Authority was set up. This **(10) aaoizntrgni** started its activities in 2003, by focusing on risk assessment and scientific advice in the field of food safety questions. The White Paper has helped to strengthen and synchronize hygienic conditions and practices throughout all the EU Member States.

(Source: <http://www.fao.org/docrep/meeting/008/y5871e/y5871e0l.htm>)

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

- 6 _____
- 7 _____
- 8 _____
- 9 _____
- 10 _____

4 Translate the following text.

Sigurnost hrane

Europska je unija sigurnost hrane učinila jednim od svojih glavnih prioriteta i ona je dio nekoliko područja u nadležnosti Zajednice, među kojima su zajednička poljoprivredna politika i ruralni razvoj, okoliš, javno zdravstvo, zaštita potrošača i unutarnje tržište. Europska komisija je 2000. godine objavila Bijelu knjigu o općim načelima sigurnosti hrane, kojom je najavila razvoj zakonodavnog okvira koji pokriva cijeli hranidbeni lanac „od farme do tanjura“. U skladu s tim pristupom sigurnost hrane odnosi se na: hranu za životinje i zdravlje životinja, zaštitu i skrb o životinjama, veterinarske preglede, mjere zdravstvene skrbi o životinjama, zdravstvene provjere biljaka, pripremu i higijenu prehrambenih proizvoda. U 2002. godini započela je izrada zakonodavnog okvira o sigurnosti hrane, koji je utemeljen na šest općih načela: potvrda integrirane prirode hranidbenog lanca; analiza rizika; razgraničenost analize i upravljanje rizikom; odgovornost operatera u ovome sektoru; mogućnost praćenja proizvoda na svakom stupnju hranidbenog lanca; pravo građana na jasne i točne informacije. Osnovano je ovlašteno Europsko tijelo za sigurnost hrane (EFSA).

Čime se EFSA bavi?

Europska agencija za sigurnost hrane (EFSA) daje savjete o postojećim i novim rizicima povezanim s hranom. Ti se savjeti uzimaju u obzir prilikom donošenja europskih propisa, pravila te prilikom donošenja politika, čime se pomaže u zaštiti potrošača od rizika u prehrambenom lancu. U njezinoj su nadležnosti:

- ▶ sigurnost hrane i hrane za životinje
- ▶ prehrana
- ▶ zdravlje i dobrobit životinja
- ▶ zaštita biljaka
- ▶ zdravlje biljaka.

Aktivnosti EFSA-e uključuju:

- ▶ prikupljanje znanstvenih podataka i stručnih znanja
- ▶ pružanje neovisnih, najnovijih znanstvenih savjeta o pitanjima sigurnosti hrane
- ▶ informiranje javnosti o njezinu znanstvenom radu
- ▶ suradnju s državama članicama EU-a, međunarodnim tijelima i ostalim dionicima
- ▶ jačanje povjerenja u EU-ov sustav sigurnosti hrane pružanjem pouzdanih savjeta.

(Sources:https://europa.eu/european-union/about-eu/agencies/efsa_hr,
<http://www.dei.gov.ba/dokumenti/default.aspx?id=5941&langTag=bs-BA>)



Video

5 Watch the video: Insects: Food of the Future

(Source: <http://www.cnbc.com/2016/03/17/insects-food-of-the-future.html>) or

Recipe for Safer Food

(Source: http://ec.europa.eu/chafea/food/recipe-safer-food-videos_en.html)



6 Write a summary of what you have watched.

The following stages may be useful:

- 1 Watch and listen carefully.
- 2 Think about the purpose of the video.
- 3 Select the relevant information.
- 4 Detect the main ideas and write them down.
- 5 Rewrite the main ideas in complete sentences.
- 6 Use conjunctions and adverbs to show connections between the ideas.
- 7 Proofread your summary.

Summary

I Reading and Speaking

1 Work in pairs and answer the following questions before you read the articles.

- 1 What is fair trade?
- 2 Which countries traditionally export: a) bananas? b) coffee? c) sugar?
- 3 What is the World Trade Organization (WTO)?
- 4 To what extent do you have fair trade in your country?
- 5 What is the World Fair Trade Organization (WFTO)?

Fair Trade

Fair trade is a social movement whose stated goal is to help producers in developing countries achieve better trading conditions and to promote sustainable farming. Members of the movement advocate the payment of higher prices to exporters, as well as improved social and environmental standards. The movement focuses in particular on commodities, or products which are typically exported from developing countries to developed countries, but also consumed in domestic markets (e.g. Brazil, India and Bangladesh) most notably handicrafts, coffee, cocoa, wine, sugar, fresh fruit, chocolate, flowers and gold. The movement seeks to promote greater equity in international trading partnerships through dialogue, transparency, and respect. It promotes sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers in developing countries. Fair trade is grounded in three core beliefs; first, producers have the power to express unity with consumers. Secondly, the world trade practices that currently exist promote the unequal distribution of wealth between nations. Lastly, buying products from producers in developing countries at a fair price is a more efficient way of promoting sustainable development than traditional charity and aid.

(Source: https://en.wikipedia.org/wiki/Fair_trade, <http://wfto.com/fair-trade/definition-fair-trade>)

Fair Trade Movement

The modern Fair Trade Movement began in the 1950s with Alternative Trade Organization (ATO). Their aim was to help reduce poverty in developing nations. The goal was achieved by cutting the middleman out of trade between small producers in the Northern Hemisphere and small businesses in the Southern Hemisphere. This resulted in more direct profits for workers in developing nations.

The Fair Trade Movement today is a global movement representing over two million marginalised producers and workers that are organized in nearly 1000 producer organisations across 70 countries in the South. The Fair Trade Movement believes that trade can be a fundamental driver of poverty reduction and greater sustainable development, but only if it is managed for that purpose with greater equity and transparency than is currently the norm. It believes that marginalised and disadvantaged farmers, workers and artisans can develop the capacity to take more control over their work and their lives if they are better organised, resourced and supported, and can secure access to mainstream markets under fair trading conditions.

(Sources: <http://www.fairtrade-advocacy.org/about-fair-trade/the-fair-trade-movement>, <http://money.howstuffworks.com/fair-trade1.htm>)

2 Put the verbs in brackets in the correct tense to form either the first, second, third or zero conditional. There are also some examples of mixed conditionals.

- 1 If I still _____ (feel) sick, I _____ (not go) on holiday next weekend.
- 2 You make such delicious chocolate cakes! If you _____ (sell) them, you _____ (make) a fortune.
- 3 Hello, Tom. Are you still looking for Donald? If I _____ (see) him, I _____ (tell) him you want to speak to him.
- 4 If Alice _____ (go) to Exeter University, she _____ (not meet) her husband, Andrew.
- 5 A Does she love him?
B Of course she does. If she _____ (not love) him, she _____ (not marry) him.
- 6 If you _____ (buy) two apples, you _____ (get) one free.

Finish the sentences by ticking the correct option (a-c)

- 1 If you'd told me you were coming,
a I can get some food in.
b I'd have found us something to eat.
c I made a lovely dish.
- 2 If you're too ill to come,
a I'll come over and see you.
b I wouldn't have done all this for you.
c I asked someone else.
- 3 If I'd known you weren't coming,
a I wouldn't be very upset.
b I would like to know why.
c I wouldn't have gone to so much trouble.



3 Work in pairs and take turns in discussing WFTO's Top Ten Priorities and the importance of each for farmers.

WFTO's Top Ten Priorities



1. Creating Opportunities for Economically Disadvantaged Producers
2. Transparency and Accountability
3. Fair Trading Practices
4. Payment of a Fair Price
5. Ensuring no Child Labour and Forced Labour
6. Commitment to Non Discrimination, Gender Equity and Freedom of Association
7. Ensuring Good Working Conditions
8. Providing Capacity Building
9. Promoting Fair Trade
10. Respect for the Environment

(Source: <http://wfto.com/fair-trade/10-principles-fair-trade>)

Fair Trade Day



Fair Trade Day is a global event that aims to draw attention to the objectives and achievements of the Fair Trade movement. World Fair Trade Day was first created by the World Fair Trade Organization (WFTO) in 2004. Fair Trade Day takes place on the second Saturday of May of each year, and it is an inclusive worldwide festival of events celebrating Fair Trade as a tangible contribution to the fight against poverty and exploitation, climate change and the economic crisis that has the greatest impact on the world's most vulnerable populations.

Fair Trade Day is observed in countries across the world by various events in which local producers and artisans mark the contribution that has been made by Fair Trade initiatives. Often involving food and art, the events are intended to be a colourful and enjoyable reminder of the success of the movement to date, and a prompt for consumers to consider Fair Trade options within their shopping. If you want to take part in this special day, researching the work conditions of people around the world would be a good place to start. The next step would be to raise awareness among your family and friend. Last but not least, you could make the simple but effective promise to only buy certified Fair Trade products, thereby giving your hard-earned money to only those companies that truly care about the well-being of those less fortunate.

(Source: <https://www.daysoftheyear.com/days/fair-trade-day/>)

Conditional Clauses

4 Complete the following sentences.

1 If farmers are better organized, _____

2 If the formulas of chemical fertilizers weren't developed, _____

3 If you don't like heat, _____

4 I wouldn't have asked if _____

5 If I were the Minister of Agriculture , _____

J Language Review

Discourse Markers as Sentence Openers

1 The table below lists eight functions. Decide which one each of the words or expressions in the box fulfils and add it to the table.

As a consequence, As a next step, Besides, Finally, First of all,
 For example, For instance, Formerly, In addition, In contrast,
 In fact, In particular, In short, On the other hand, Previously,
 Secondly, Specifically, Summing up, Therefore, Thus,
 To begin with, To conclude

Function	Examples
Establishing a sequence	
Expanding on a point	
Contrasting	
Referring to the past	
Drawing a conclusion or inference through reasoning	<i>As a consequence,</i>
Emphasising	
Giving an example	
Summarising	

2 Go back to the text *Fair Trade Day*. Look for any discourse markers used at the beginning of a sentence and add these to the table above.

K The Lighter Side

Food Idioms

The exam was a piece of cake.

1 Here are some common idioms based on food and foods. Connect the idioms (1-15) with their meaning (a-o).

- 1 bad egg
- 2 big cheese
- 3 bring home the bacon
- 4 butter someone up
- 5 carrot top
- 6 cool as a cucumber
- 7 full of beans
- 8 hard nut to crack
- 9 hot potato
- 10 in a nutshell
- 11 out to lunch
- 12 piece of cake
- 13 put all of ones eggs in one basket
- 14 take something with a pinch (grain) of salt
- 15 use your noodle

- a earn the income
- b very relaxed
- c very important person (VIP)
- d person with red or orange hair
- e be extra nice to someone (usually for selfish reasons)
- f a person who is often in trouble
- g have a lot of (silly) energy
- h rely on one single thing
- i use your brain
- j crazy or mad
- k don't consider something 100% accurate
- l very easy
- m difficult to understand (often a person)
- n a controversial or difficult subject
- o simply

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10 ___
11 ___ 12 ___ 13 ___ 14 ___ 15 ___

2 Complete the following sentences with the idioms from the previous exercise.

- 1 The kids are always _____ after sleeping.
- 2 Choosing a location for our new vineyard was _____ .
- 3 I thought I was afraid of interviews, but I was _____ when it started.
- 4 My husband has had to _____ ever since I lost my job.
- 5 Parents don't want their children hanging around with the _____ on the street.

Q: How are Republicans planning to reduce record heating bills this winter?

A: Global Warming!

Q: What's the name of the new Tom Cruise eco-thriller?

A: Mission Compostable!

(Source: <http://www.jokes4us.com/miscellaneousjokes/greenjokes.html>)

UNIT 2

Sowing the Seeds of Change



Source: https://pixabay.com/p-1249414/?no_redirect

„Whoever makes two blades of grass or two ears of corn grow where only one grew before serves mankind better than the whole race of politicians.“

Jonathan Swift (1667-1745), Irish author

A Starting up

1 Work in groups and answer the questions.

Earth Quiz

1 How old is the earth?

- a 4.6 billion years b 6.7 billion years c 10.5 billion years

2 The earth is considered to have a maximum of seven continents. What are they?

3 How many countries are there in the world?

- a 123 b 146 c 196

4 Which continent has most countries?

5 What is the population of the world?

- a 4.1 billion people b 5.1 billion people c 6.1 billion people

6 Which country has the largest population?

7 What proportion of the earth is covered by water?

- a 61% b 71% c 81%

8 How many oceans are there? What are they?

9 How much of the earth's land surface is used to grow food?

- a 11% b 16% c 21%

10 What is the difference between a political and a physical map?



(Source: https://upload.wikimedia.org/wikipedia/en/6/6b/Terrestrial_globe.svg)

**2 Read these 'howlers' (funny mistakes) from some students' geography exams.
Explain them.**

- 1 The chief animals of Australia are kangaroo and the boomerang.
- 2 The inhabitants of Moscow are called Mosquitoes.
- 3 The Mediterranean and the Red Sea are connected by the Sewage Canal.
- 4 The Pyramids are a range of mountains between France and Spain.
- 5 In the West, farming is done mostly by irritating the land.

(Soars, 2005)

3 Words ending with culture

Match the definitions with the words listed below:

floriculture subculture viticulture pisciculture
agriculture horticulture arboculture

- 1 the science, art, or practice of cultivating the soil, producing crops, raising livestock, and to varying degrees, the preparation and marketing of the resulting products
- 2 the cultivation of trees and shrubs especially for ornamental purposes
- 3 the cultivation and management of ornamental and especially flowering plants
- 4 the science and art of growing fruits, vegetables, flowers, or ornamental plants
- 5 an ethnic, regional, economic, or social group exhibiting characteristic patterns of behaviour sufficient to distinguish it from others within an embracing culture or society
- 6 the cultivation or culture of grapes especially for wine making
- 7 the cultivation of fish

1 _____ 2 _____ 3 _____ 4 _____
5 _____ 6 _____ 7 _____

B Reading and Speaking

1 Student A reads Case 1 and answers the questions.

Student B reads Case 2 and answers the questions.

Case 1

Agriculture

The science or practice dealing with the production, processing, marketing and use of food, fibres and by-products from plant crops and animals is called agriculture. Accompanied by the husbandry of domesticated animals and plants, it was the key element that led to the rise of human civilisation. Food surpluses enabled the development of densely populated stratified societies.

By means of a wide variety of techniques such as expanding the lands suitable for raising plants by digging water-channels and other forms of irrigation, agriculture changes the world.

The cultivation of crops on arable land and the pastoral herding of livestock on rangeland, however, remain at the foundation of agriculture. Various forms of agriculture have been identified. The developed world most frequently deals with sustainable agriculture and intensive farming.

The major agricultural products can be broadly grouped into foods, fibres, fuels and raw materials. Foods include cereals, vegetables, fruits and meat. Fibres include cotton, wool, hemp, silk and flax. Biofuels include methane from biomass, ethanol and biodiesel. Raw materials include lumber and bamboo.

1 What is agriculture?

2 How would you define sustainable agriculture?

3 Which are the main agricultural products?

4 Name some biofuels.



Case 2

Agriculture in Croatia

Croatia is divided into three geographic and climatic zones: the lowland zone in the north of the country (the Pannonian region), the Mediterranean coastal zone in the south, and the mountainous zone stretching across the central part of the country. With regard to the resources and to agricultural production, the most important is the Pannonian region, while the other two regions are important in such types of production which are possible in these regions because of their climatic and pedological properties. Various types of climate, relief and soil have enabled the production of a wide range of agricultural products, ranging from field and industrial crops to vineyards, continental as well as Mediterranean fruits and vegetables. 8.1% of Croatian GDP is generated from agriculture and fishing.

Of a total of 3.15 million hectares of agricultural land, 63.4% is cultivated and the rest is pasture land. 83.3% of the cultivated land is privately owned. Out of the total agricultural area in Croatia, the largest portion is in the Pannonian region (46.3 percent), a smaller one in the Mediterranean region (34.1 percent), and the smallest in the mountain region (19.6 percent).

The Agricultural Land Act regulates concessions for the exploitation of agricultural land owned by the state. Farming covers domestic needs for cereals and sugar, as well as industrial crops to a large extent. The total area used for vineyards amounts to 59,000 hectares. Wine production is represented by 30 larger winemaking companies, 35 production co-operatives and about 250 family businesses. Wines made of indigenous grape varieties are becoming increasingly popular on the European and world markets.

(Sources: Wikipedia: The Free Encyclopedia. FL. Wikipedia Foundation, Inc. <http://wikipedia.org/wiki/Agriculture>., <http://www.worldbank.org/rural>. <http://www.hr/croatia/economy/agriculture> and http://www.ec.europa.eu/agriculture/enlargement/countries/croatia/profile_en.pdf)

1 How many geographic and climatic zones does Croatia have? Name them.

2 How many hectares of agricultural land are there in Croatia?

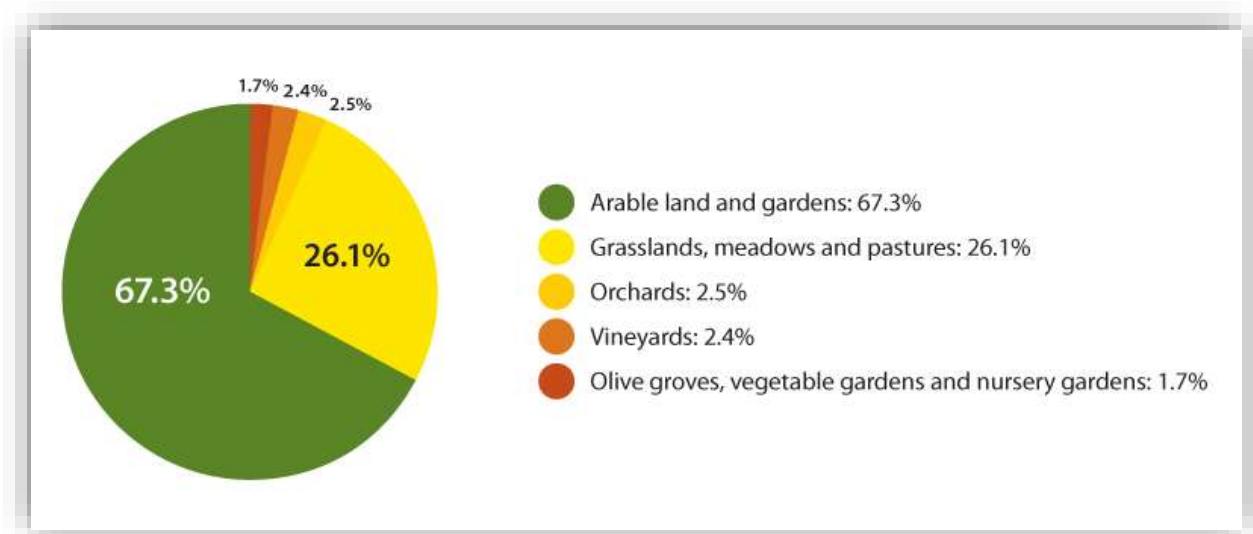
3 What does the Agricultural Land Act regulate?

4 What is the percentage of privately owned cultivated land?

2 Now work in pairs and share information about your case with your partner.



3 Study this pie chart and explain it.



(Source: <https://www.google.hr/search?q=Agriculture+in+Croatia&client=firefox-b&tbo=u&source=univ&sa=X&ved=0ahUKEwjF5pOhoLFSAhWnd5oKHUK-AtQQsAQIPw&biw=1600&bih=737#imgrc=oFvFEYc2bBeVaM>)

4 Read from the Agricultural Land Act General Provisions Article 3, paragraphs 1-4 and name what is considered to be agricultural land according to this Law.

Go to: <http://www.zakon.hr/z/133/Zakon-o-poljoprivrednom-zemlji%C5%A1tu>.

5 Read the Article 4 on:

Održavanje, zaštita i korištenje poljoprivrednog zemljišta

and translate it.

II. Održavanje, zaštita i korištenje poljoprivrednog zemljišta

Članak 4.

- (1) Poljoprivredno zemljište mora se održavati pogodnim za poljoprivrednu proizvodnju.
- (2) Pod održavanjem poljoprivrednog zemljišta pogodnim za poljoprivrednu proizvodnju smatra se sprječavanje njegove zakorovljenosti i obrastanja višegodišnjim raslinjem, kao i smanjenje njegove plodnosti.
- (3) Katastarske čestice zemljišta unutar granice građevinskog područja površine veće od 1000 m² i katastarske čestice zemljišta izvan granice građevinskog područja planirane dokumentima prostornog uređenja za izgradnju koje su u evidencijama Državne geodetske uprave označene kao poljoprivredna kultura, a koje nisu privedene namjeni, moraju se održavati pogodnim za poljoprivrednu proizvodnju i u tu se svrhu koristiti do izvršnosti akta kojim se odobrava građenje, odnosno primitka potvrde glavnog projekta.
- (4) Vlasnici i posjednici poljoprivrednog zemljišta dužni su poljoprivredno zemljište obrađivati primjenjujući potrebne agrotehničke mjere ne umanjujući njegovu vrijednost.
- (5) Agrotehničke mjere iz stavka 4. ovoga članka pravilnikom propisuje ministar nadležan za poljoprivredu.

6 Farming terms

Example:

Man has been **breeding** new species.

Which verbs can these nouns go with?

the land potatoes wheat a field horses

1	to breed		6	to plough	
2	to cultivate		7	to raise	
3	to grow		8	to reap	
4	to harvest		9	to sow	
5	to plant				

(Doolan,1999)

C Language Review

Numbers

Numbers written out

General rule

Both cardinal and ordinal numbers one to nine inclusive are written out in full,

one, two, three, four, five, six, seven, eight, nine

first, second, third, fourth, fifth, sixth, seventh, eighth, ninth

Except in ranges:

9-12

Articles 10-21

This rule does not apply to statistical documents, where figures are preferred. Ordinal numbers 10 and above are expressed by means of superscript letters: 10th, 11th 22nd, 43rd, 54th, etc.

Consistency

In deciding whether to write numbers as words or figures, the first consideration should be consistency within a document.

For series of numbers in running text, use figures.

If there are several numbers applicable to the same category in a paragraph and numerals must be used for one of them then, for consistency's sake, numerals should be used for all the numbers in the paragraph.

With symbols and abbreviations

Always use figures with units of measurement denoted by symbols or abbreviations:

EUR 10 or ten euro

Currencies

The kuna

In legal texts according to the ISO code only this form should be used: HRK +the amount.

NB: The name of the currency kuna is invariable (no plural)

Currency abbreviation

The currency abbreviation precedes the amount and is followed by a space:

EUR 5 million

The currency symbol, however, if it must be used is closed up:

€5m

Currency written out

In running text, currencies are written in lower case:

Five million euro

Compound numbers

Compound numbers that are to be written out (e. g. in treaty texts) take a hyphen, whether cardinal or ordinal:

The twenty-second day of May, nineteen hundred and seventy-nine.

Inclusive numbers

Patterns

from 1978 to 1981

not from 1978-81

between 1978 and 1981

not between 1978-81

1978 to 1981 inclusive

not 1978-81inclusive

Years

For a series of consecutive years, use a closed-up hyphen, after which the decade is repeated. If more than two figures change, use all four:

1652-1843 1956-95 1999-2009 2008-10

Dates

Month written out

Within a sentence, write out the month, preceded by a simple figure for the day, e.g. 19 September 2013, not September 19, 2013.

Note: In the international dating system 19 September 2013 is 2013-09-19.

(In American usage it is 9:19:13)

1 Write these figures the way they are said.

- 1) 8.04 % _____
- 2) 2 $\frac{2}{3}$ _____
- 3) 12.3 % _____
- 4) 780 _____
- 5) 3, 432 _____
- 6) 09/09/2022 _____

2 Right (R) or wrong (W)?

- A. 17 September 2011 _____
- B. 17 September, 2011 _____
- C. 17th September 2011 _____
- D. September 17, 2011 (*American English*) _____

3 Which of these ways of writing dates in figures is/are correct?

- A. 14/2/09 _____
- B. 14-2-09 _____
- C. 14,2,09 _____
- D. 14.2.09 _____

4 What do these numbers from the article refer to?

a) 5 500 b) 40.2 % c) 179 290 d) 25.7 % e) 229 200 f) 49.7 %

Agricultural Labour Force in Croatia

According to the EU's labour force survey, agriculture, forestry and fishing employed 229200 persons aged over 15 in Croatia in 2010, the equivalent of 14.9 % of the total workforce over 15 years old.

The farm structure survey carried out in 2010 suggests that a much higher number of people worked regularly in the Croatian agricultural industry (513 680 people). Many of these people were family helping out on the farm but having their main employment elsewhere. After taking into account the amount of time actually worked, the regular agricultural labour force in Croatia was estimated to be the equivalent of 179 290 people working full-time (in annual work units). With the equivalent of an additional 5 500 full-time workers coming from non-regular agricultural labour and persons not directly employed by the holding, the total workforce in Croatian agriculture was equivalent to 184 480 full-time workers.

Farming in Croatia is very much a family affair; on average 90.7 % of the labour input for agriculture (measured in annual work units) was carried out by the farmer and/or a member of his/her family in 2010. Two in every five (40.2 %) regular agricultural workers in Croatia was female. A relatively small proportion (6.0 %) of holdings in Croatia had another gainful activity in addition to farming. Of the holdings with another gainful activity, about one half (49.7 %) were involved in the processing of farm products with a further quarter (25.7 %) involved in tourism.

(Source: http://ec.europa.eu/eurostat/statistics-explained/index.php/Structure_of_agriculture_in_Croatia)

D Reading and Language

1 Read the article and answer these questions.

- 1 What is CAP?
- 2 What is the aim of the EU research budget?

Meeting New Needs of EU Farmers

Europe's land is covered with farms and forests which are vital for the economy as well as the health of Europeans. The EU's common agricultural policy ensures that farming and the preservation of the environment go hand in hand by monitoring the development of rural communities and confronting emerging challenges - some of which are climate change, water management, bioenergy and biodiversity.

The policy of the EU is to enable producers of all forms of food - from crops and livestock to fruit and vegetables or wine - to survive by themselves in the EU and world markets. Financial safety nets are used selectively, for example, the common agricultural policy (CAP) gives financial support to farmers hit by natural disasters or outbreaks of animal diseases, such as foot-and-mouth or bluetongue. If necessary the CAP supplements farm income to ensure a decent standard of living for farmers and their families.

EU research budgets support innovation in agriculture, but at the same time promote environmentally friendly farming. Different projects have included research into how to use agricultural crops to produce energy without detracting from the primary purpose of producing food and animal feed, e.g. by using by-products and waste products.

(Source: Europa Portal: Agriculture. http://europa.eu/pol/agr/index_en.htm.)

2 Crops/product/yield

Match the words and definitions and complete the sentences.

- | | |
|-----------|--|
| 1 yield | a) a thing that is grown or produced |
| 2 product | b) plants grown regularly and in large quantities on farms |
| 3 crops | c) to produce or provide sth |

4 All farmers have to spray their _____ these days.

5 This new type of wheat provides a better _____ .

6 The country is an exporter of agricultural _____ .

E Language Use

Collocations

Collocation is a sequence of words or terms that co-occur more often than would be expected by chance. In phraseology, **collocation** is a sub-type of phraseme. There are about six main types of collocations: adjective + noun, noun + noun (such as collective nouns), verb + noun, adverb + adjective, verbs + prepositional phrase (phrasal verbs), and verb + adverb.

*1 Which of the following words can form a collocation with
a) crop, b) policy and c) farm.*

1 100-acre 2 harvest 3 educational 4 agricultural 5 damage
6 collective 7 grow 8 large 9 national 10 foreign
11 produce 12 arable

- a) _____
b) _____
c) _____

Communicating

Collocations with *say, speak, talk and tell*

She always **speaks very highly** of you. (says good things about you)

Helea, stop mumbling and **speak properly**. I can't understand a word you are saying.

Needless to say/ It goes without saying that the workers voted in favour of the strike.

Gabriel **didn't say a word** when I told him I was leaving.

Generally speaking, people are aware of the consequences of climate change.

I wouldn't say no to a cup of coffee.

At first, Andrew appeared to be **talking nonsense** but after a while we realised he was actually **talking a lot of sense**.

Strictly speaking, a tomato is a fruit and not a vegetable because it contains seeds.

2 Complete each sentence with the appropriate form of say, speak, talk or tell.

1 It's so hot. I wouldn't _____ no to an ice cream.

2 The professors always _____ very highly of my daughter's abilities.

3 Strictly _____, you shouldn't be here.

4 Generally _____ it is better to go on holiday by plane.

5 It goes without _____ that you will be offered the job.

3 All these adjectives collocate with a noun. What is it?

clean

controlled

natural

harmful

perfect

healthy

ideal

E _____ **T**

(Doolan, 1999)

4 Collocation

In what order should these “dominoes“ come so that the second word of each pair collocates with the first word of the next?

1		harmful	4	plants	sufficient	7	testing	healthy
2	farming	rigorous	5	goods	classical	8	profit	expensive
3	quantities	high	6	effects	organic	9	breeding	

5 Choose the best word to fill each gap from the alternatives given below.

Put a circle around the letter A, B or C, of the word you choose.

‘My name is Michael Brown. I manage the Blue Planet (1) _____ investment fund. We follow a very clear (2) _____ of conduct when we choose stocks. We only invest in companies that are socially (3) _____ so we don’t put money into tobacco companies or arms manufacturers. Green (4) _____ are very important to us. We check that our companies are not damaging the (5) _____. We invest in some companies that make their products in countries where (6) _____ is cheaper, and we make sure that they do not (7) _____ their workers. Some expensive, famous brand clothing is made in (8) _____ where people work long hours for very low wages. We think that is completely (9) _____ .

- | | | |
|-----------------|---------------|--------------|
| 1 A honesty | B ethical | C rights |
| 2 A note | B list | C code |
| 3 A responsible | B spectacular | C interested |
| 4 A issues | B actions | C indexes |
| 5 A neighbours | B environment | C local |
| 6 A work | B job | C labour |
| 7 A export | B employ | C exploit |
| 8 A sweatshops | B sweatshirts | C sweetshops |
| 9 A moral | B unethical | C social |

F Reading and Speaking

1 Work in groups of three (A, B and C).

Each group reads its part of the text and does the corresponding exercises.

CAP at a Glance

A

The common agricultural policy (CAP) is aimed at helping European farmers meet the need to feed more than 500 million Europeans. Its main objectives are to provide a stable, sustainably produced supply of safe food at affordable prices for consumers, while also ensuring a decent standard of living for 22 million farmers and agricultural workers.

The EU agriculture sector has roughly 11 million farms, which provide work for roughly 22 million agri-workers. But this figure doubles to 44 million if you include also the jobs created in the food processing, food retail and food services, making the EU agri-food sector the largest employment sector in the economy.

It is also a sector that has performed particularly well in recent years, despite the recession and the increasing challenges to farming caused by climate change, water scarcity, soil fertility, energy costs, etc. The agri-food sector accounted for 6% of EU GDP.

Moreover, the EU has become a net exporter of food and drink, with an average annual 8% growth in the value of exports over the past 10 years, reaching €129 billion in 2015.

Concerns about climate change and issues such as biodiversity loss, water and soil quality mean that agriculture also plays an increasingly important role in the sustainable management of natural resources.

1 Match the items which are similar in meaning.

1 aim at	A decline
2 ensure	B provide
3 roughly	C target
4 recession	D approximately
5 growth	E increase

1 ___ 2 ___ 3 ___ 4 ___ 5 ___

2 Translate the first paragraph.

B

As EU Commissioner Phil Hogan has said on many occasions: “*By producing steady supplies of safe food, European agriculture provides the bedrock on which the EU's dynamic agri-food industry is built and remains a vital motor for the wider rural economy.*” With an annual budget of roughly €59 billion, the CAP strengthens the competitiveness and sustainability of agriculture in Europe by financing a range of support measures through the European Agricultural Guarantee Fund (EAGF) and the European Agricultural Fund for Rural Development (EAFRD), notably:

- Direct payments provide an important support for farmers in order to help stabilise their incomes, linked to complying with safety norms, environmental and animal welfare standards. With these annual payments predominantly "decoupled" from production – i.e. farmers choose what to produce on the basis of the likely return from the market, rather than on the basis of public support -they support the long-term viability of farms in the face of volatile markets and unpredictable weather conditions, and recognise the environmental contribution and public goods that farmers provide to society. These payments are fully financed by the EU, and account for over 70% of overall CAP spending. With the 2013 reform, 30% of direct payments are linked to respecting three sustainable agricultural practices which are beneficial to environmental and climate change concerns, notably soil quality, biodiversity and carbon sequestration – the so-called "Greening" measures. For the rest, the 2013 reform also introduced a 25% top-up to the basic payment scheme for young farmers in all Member States, and different options for how Member States make their internal allocations including a limited amount of "coupled" payments, a possible ceiling on the amount received per individual beneficiary, and a simplified scheme for small farmers.

1 Match the items which are similar in meaning.

1 volatile	A activity
2 viability	B share
3 beneficial	C unstable
4 allocation	D uncertain
5 unpredictable	E useful

1 ___ 2 ___ 3 ___ 4 ___ 5 ___

2 Translate the first paragraph.

C

- Market measures provide a range of tools including measures to address the situation if normal market forces fail. For example, if there is a sudden drop in demand because of a health scare or a fall in prices because of a temporary oversupply on the market, the European Commission can activate market support measures. Such spending, also from the EAGF, is by its nature rather unpredictable, but tends to account for around 5% of overall CAP spending. This part of the budget also includes elements such as promotion of EU farm products and the EU school schemes.
- Rural development programmes provide a framework to invest in individual projects on farms or in other activities in rural areas on the basis of economic, environmental or social priorities designed at national or regional level. Funded through the EAFRD, this covers projects such as on-farm investment & modernisation, installation grants for young farmers, agri-environment measures, organic conversion, agri-tourism, village renewal, or providing broadband internet coverage in rural areas. Accounting for almost 25% of CAP funding, these measures are generally co-financed by national, regional or private funds and generally extend over several years.

(Source: http://ec.europa.eu/agriculture/cap-overview/index_en.htm)

1 Match the items which are similar in meaning.

1 demand	A switch on
2 investment	B need
3 activate	C funds
4 budget	D financing
5 project	E task

1 ___ 2 ___ 3 ___ 4 ___ 5 ___

2 Translate the first paragraph.

G Language Use

Abbreviations

There are two kinds of abbreviations. The first kind is the acronym. An acronym is made from the initial letters or parts of a phrase or compound terms. It is usually referred to as a single word. For example, *radar*→radio detection and ranging.

The second kind is an initialism, which is made from the initial letters or parts of a phrase or compound term. These are usually referred to, and pronounced, letter by letter rather than as a single word, e.g., USA →United States of America.

In general, those abbreviations which refer to an entity, such as UK, USA, NATO should be capitalised without dots between the letters.

Those abbreviations which are used as grammatical shorthand such as eg, and ie, are usually written in lowercase letters, and it is acceptable to either include or leave out dots between the letters.

There are also certain terms which are referred to in speech as a single word but which are capitalised in writing. For example NATO→North Atlantic Treaty Organisation.

Here is a list of some common abbreviations and their usages:

CAP	<i>Common Agricultural Policy</i>
CEA	<i>Confederation of European Agriculture</i>
COPA	<i>Committee of Professional Agricultural Organisation in the EC</i>
EC	<i>European Communities</i>
EFTA	<i>European Free Trade Association</i>
ENC	<i>enclosed</i>
EUROSTAT	<i>Community's Statistical Office</i>
GATT	<i>General Agreement on Tariffs and Trade</i>
GNP	<i>Gross National Product</i>
GDP	<i>Gross Domestic Product</i>
HR	<i>Human Resources</i>
IEEP	<i>Institute for European Environmental Policy</i>
IT	<i>Information Technology</i>
MAFF	<i>Ministry of Agriculture, Fisheries and Food</i>
MEP	<i>Member of the European Parliament</i>
OECD	<i>Organisation for Economic Cooperation and Development</i>
VAT	<i>Value Added Tax</i>

The following abbreviations are often found in emails and other informal communications:

ASAP	as soon as possible
BR	best regards
BTW	by the way
c/w	comes with
FYI	for your information
POV	point of view
TOC	table of contents
w/e	weekend



(Source: <http://edumuch.com/wp-content/uploads/2015/03/Dont-hate-abbreviate.jpg>)

1 QUIZ

Q1 - Which abbreviation do you use when you want someone to reply to an invitation?

- PS
- RSVP
- PTO

Q2 - Which abbreviation do you use when you want to add something at the end of a letter?

- PS
- PM
- PTO

Q3 - Which abbreviation is used for times in the morning?

- AM
- PM

Q4 - Which abbreviation is used for times in the afternoon and evening?

- AM
- PM

Q5 - Which abbreviation do you use when you want someone to do something quickly?

- RSVP
- ASAP

Q6 - Which abbreviation is used when someone is prepared to negotiate a price for something?

- OPEC
- ono

Q7 - Which abbreviation is used for dead people?

- RSVP
- RIP

Q8 - If you're not exactly sure when you will get somewhere, you might give...

- an ETA
- a DOA

Q9 - Which is a sandwich?

- TLC
- BLT

Q10 - If a company uses a ____ box, they don't have to use their address for mail.

- PM
- PO

Q11 - In an email sent to more than one person, use 'Bcc' when you don't want to display the second address.

- True
- False

(Source: www.acronymfinder.com)

H Reading and Speaking

Mythological Creatures

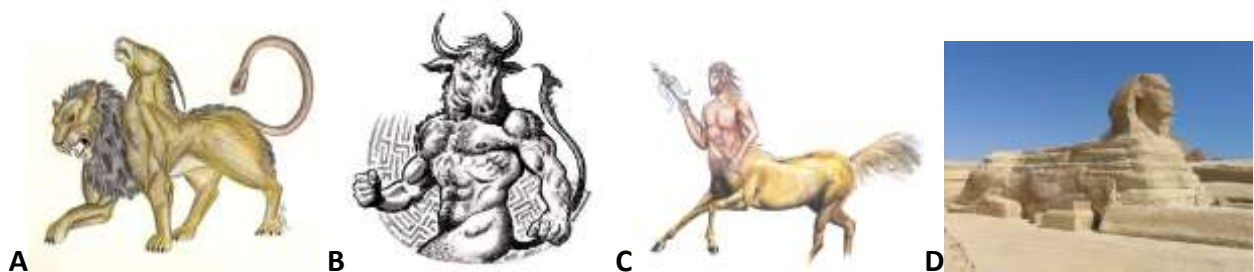
1 Answer the following questions:

- 1 What do you get if you cross a man and a bull?
- 2 What do you get if you cross a woman and snakes?
- 3 What do you get if you cross a man and a horse?
- 4 What do you get if you cross a man and a goat?
- 5 What do you get if you cross a horse and a bird?
- 6 What do you get if you cross a woman and a lion?
- 7 What do you get if you cross a woman and a bird?
- 8 What do you get if you cross a woman and a fish?
- 9 What do you get if you cross a lion, a goat and a snake?

Use the following words for your answers.

Centaurus Medusa Minotaur Satyr Mermaid
Chimera Pegasus Harpy the Sphinx

2 Connect your answers with the following images.



<http://1.bp.blogspot.com/>

<http://www.chaztruog.com/>

<http://www.elfwood.com/>

<http://z.about.com/>



<http://t1.gstatic.com/>

<http://artstyleonline.com>

<http://www.sito.org/>

<http://www.kjv-only.com>

<http://www.the-last-unicorn.net/>

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____
- 8 _____
- 9 _____

Shining Path or Perilous Road?

"No experiment is ever a complete failure.

It can always be used as a bad example."

Paul Dickson, American author

3 Before you read the article try to answer these questions:

- 1 What is Genetic Engineering?
- 2 What do you think about genetically modified food?
- 3 What is the greatest benefit of genetic modification?
- 4 What is the biggest threat of genetic modification?

4 As you read underline the words you are not familiar with.

Genetic Engineering (GE) is a technology designed to create new organisms by combining species. It involves the manipulation of genes – units of DNA, the 'code' that defines the make-up of living organisms – where scientists are able to transfer these genes between totally unrelated species. All creatures on earth are made up of the same basic units – cells, and the DNA that every cell contains, so scientists can combine these basic units in any way. The major difference between GE and “natural” reproduction is that it occurs across species of organisms - a type of breeding nature never allows.

GE technology can have many different uses, from medical to environmental to the everyday. For example, because DNA is unique to each person, GE and genetic analysis can help solve crime. It can also be used to positively identify people or prove that someone is the father or mother of a child.

GE is widely used in the production of food. Genes from bacteria, viruses, insects, nuts, fish and animals are presently being spliced (or mixed) into common food crops. This is done for many reasons, such as to increase the output of crops by making plants grow faster or to allow crops to grow in areas where they wouldn't normally. GE also helps to make plants become more resistant to parasites, disease or pesticides.

Genetically Modified organisms (GMO) are organisms whose genetic material has been altered by genetic engineering techniques generally known as recombinant DNA technology. Since there are many unanswered questions regarding the safety and risks associated with GMO foods, the public should have the freedom to choose and know what they are eating and to require that GMO products be labelled.

Approximately two-thirds of the processed foods sold today contain genetically modified organisms. While the US promotes such foods, many countries have been enacting laws and policies that restrict the use of GE products in their foods. The EU currently requires all GMO foods to be labelled, whereas the US does not require transparent labelling of GMO foods.

GE is also used in farming animals: scientists can give an animal a new, often unnatural, characteristic by changing its DNA. This is often done to save time and money, such as cultivating livestock to have larger muscles to make them meatier. Farm animals can now be given genes from or donate genes to completely unrelated species such as humans. These animals are called 'transgenic'.

GE is a highly controversial topic. Those against it point to unknown factors that can lead to problems such as abnormalities in cloned plants and animals. They also highlight potential ecological problems such as insects carrying genetically modified pollen or seeds to organically grown crops, suggesting that GE will permanently alter the basis of life on earth unless controlled. Supporters of the technology say GE can be used in many beneficial ways, from providing offspring to childless couples to reducing the chance of famine in needy areas, or even to bring back someone who has died. GE is changing the way we live our lives, affecting everything from medicine to technology, and agriculture to criminal justice.

(Sources: <http://www.gmsciencedebate.org.uk/report/default.htm#first>, Wikipedia: The Free Encyclopedia. FL. Wikipedia Foundation, Inc. http://en.wikipedia.org/wiki/Genetic_engineering)

5 Speaking

Paraphrasing and Expressing Opinions

When expressing an opinion, it is common to begin the statement with a phrase which indicates that it is an opinion.

Complete the phrases below using the words in the box.

**would ask think point see seems mind
opinion concerned firmly me my**

- 1 In _____ view _____
- 2 In my _____, _____
- 3 I _____
- 4 I _____ argue that _____
- 5 It _____ to me that _____
- 6 From my _____ of view, _____
- 7 To my _____, _____
- 8 The way I _____ it, _____
- 9 If you _____ me, _____
- 10 As far as I am _____, _____
- 11 I _____ believe _____
- 12 For _____, _____

6 Work in groups of three (A, B and C). Each group reads its article and prepares a short presentation on the topic.

Article A

Genetic Engineering in Agriculture Environmental and Health Risks

Few topics in agriculture are more polarizing than genetic engineering (GE), the process of manipulating an organism's genetic material—including genes from other species—in an effort to produce desired traits such as pest resistance or drought tolerance.

GE has been hailed by some as an indispensable tool for solving the world's agricultural problems, and denounced by others as an example of human overreaching fraught with unknown, potentially catastrophic dangers.

UCS (Union of Concerned Scientists) experts analyze the applications of genetic engineering in agriculture—particularly in comparison to other options—and offer practical recommendations based on that analysis.

Supporters of genetic engineering in agriculture point to a multitude of potential benefits of engineered crops, including increased yield, drought tolerance, reduced pesticide use, more efficient use of fertilizers, and ability to produce drugs or other useful chemicals. UCS analysis shows that actual benefits have often fallen far short of expectations.



(Source: <http://upstreamdownstream.org/wp-content/uploads/2016/08/Genetically-Engineered-Crops.jpg>)

While the risks of genetic engineering are often exaggerated or misrepresented, GE crops do have the potential to cause a variety of health problems and environmental impacts. For instance, they may spread undesirable traits to weeds and non-GE crops, produce new allergens and toxins, or harm animals that consume them. At least one major environmental impact of genetic engineering has already reached critical proportions: overuse of herbicide-tolerant GE crops has spurred an increase in herbicide use and an epidemic of herbicide-resistant "superweeds," which will lead to even more herbicide use.

How likely are other harmful GE impacts to occur? This is a difficult question to answer. Each crop-gene combination poses its own set of risks. While risk assessments are conducted as part of GE product approval, the data are generally supplied by the company seeking approval, and GE companies use their patent rights to exercise tight control over research on their products. In short, there is a lot we don't know about the long-term and epidemiological risks of GE—which is no reason for panic, but a good reason for caution, particularly in view of alternatives that are more effective and economical.

Article B

What other choices do we have?



Photo courtesy of J. Mesic

All technologies have risks and shortcomings, so critics must always address the question: what are the alternatives?

In the case of GE, there are two main answers: crop breeding, which produces traits through the organism's reproductive process; and agroecological farm management, which optimizes the performance of the entire system of biophysical components—in contrast to the industrial strategy of optimizing the output of a crop, one system component, by intensive use of purchased inputs.

While industrial agriculture has proven highly productive, it has simultaneously generated environmental and social impacts of global concern (Kremen and Miles, 2012). Agriculture affects everything from greenhouse gas emissions to biological diversity, water quality, soil erosion, pollination services, carbon sequestration, human health, livelihoods and food security (Zhang et al., 2007, Perfecto and Vandermeer, 2010, Tilman et al., 2011, Hayes et al.,

2011 and Tschamntke et al., 2012).

Agroecological farming systems, including biologically diversified systems, have been found to be capable of meeting global food needs sustainably and efficiently (Gliessman, 2014). Indeed, in some instances, agroecological farming systems can produce equivalent or higher yields than conventional and monoculture agriculture while enhancing ecosystem services and profitability (Davis et al., 2012, Kremen and Miles, 2012, Seufert et al., 2012, Skinner et al., 2014, Ponisio et al., 2015 and Prieto et al., 2015).

These approaches are generally far less expensive than GE, and often more effective. The biotechnology industry acknowledges that GE is a complement to breeding, but markets their seed on the strength of its GE traits. The industry has used its formidable marketing and lobbying resources to ensure that its products—and the industrial methods those products are designed to support—continue to dominate both the seed marketplace and the policy conversation, at the expense of ecologically based, diverse farming systems.

Article C

Does UCS Have a Position on GE?

Yes. We understand the potential benefits of the technology, and support continued advances in molecular biology, the underlying science. But we are critics of the business models and regulatory systems that have characterized early deployment of these technologies. GE has proved valuable in some areas (as in the contained use of engineered bacteria in pharmaceutical development), and some GE applications could turn out to play a useful role in food production.

Thus far, however, GE applications in agriculture have only made the problems of industrial monocropping worse. Rather than supporting a more sustainable agriculture and food system with broad societal benefits, the technology has been employed in ways that reinforce problematic industrial approaches to agriculture. Policy decisions about the use of GE have too often been driven by biotech industry public relations campaigns, rather than by what science tells us about the most cost-effective ways to produce abundant food and preserve the health of our farmland.

These are a few things policy makers should do to best serve the public interest:

1. Expand research funding for public crop breeding programs, so that a broad range of non-GE as well as GE crop varieties will remain available.
2. Expand public research funding and incentives to further develop and adopt agro ecologically based farming systems.
3. Take steps—such as changes in patent law—to facilitate independent scientific research on GE risks and benefits.
4. Take a more rigorous, independently verified approach to GE product approvals, so that products do not come to market until their risks and benefits are understood through non-biased review.
5. Support food labelling laws that require foods containing GE crops to be clearly identified as such—not because GMOs represent a significant health risk, but so consumers can make informed decisions about which agricultural products and practices they support.

(Sources: <http://www.ucsusa.org/our-work/food-agriculture/our-failing-food-system/genetic-engineering-agriculture#.WBGjMSTFlnl>; http://www.bbc.co.uk/schools/gcsebitesize/science/aqa_pre_2011/evolution/reproductionrev1.shtml)



(Source: https://upload.wikimedia.org/wikipedia/commons/a/a8/Bees_Collecting_Pollen_2004-08-14.jpg)

I Language Review

Parts of Speech

1 Which grammatical term can you use to describe the words or phrases in bold type in the sentences below? Choose from the following. There is an example at the beginning (0).

- | | |
|---|---|
| 0 Put the book on the table, please. | 8 Did your brother really paint this himself ? |
| 1 A BMW is more expensive than a Fiat. | 9 Is this the DVD you borrowed from me? |
| 2 My aunt is an accountant. | 10 She couldn't go to the party because she was feeling ill. |
| 3 Where were you the night before last ? | 11 'Whose pen is this?' 'It's mine .' |
| 4 She was wearing a beautiful dress. | 12 He always drives very carefully . |
| 5 He met his wife at a party. | 13 'I love you ,' he whispered. |
| 6 We usually play golf at weekends. | 14 My brother got the sack last week. |
| 7 Whose are these keys? | 15 He's English, isn't he ? |

adjective ____

adverb of frequency ____

conjunction ____

idiom ____

interrogative pronoun ____

personal pronoun ____

preposition ____

reflexive pronoun ____

adverb of manner ____

comparative ____

definite article ____

indefinite article ____

noun o

possessive pronoun ____

question tag ____

time expression ____

J Skills

Summarising a Written Text

A summary is a shortened version of a text. It should contain the main points of the text written in your own words. When reducing a long text it is important to select the relevant information. A good summary indicates that you have understood the text.

Here are some tips for summarising a text:

- Read the text thoroughly to be sure you understand its overall meaning.
- Use a relevant dictionary to find the meaning of any unfamiliar words.
- Read the text again and underline the main points of the text. Make a note of the most important details. Combine your notes into a piece of easily readable writing.
- Connect the key points using sentences or paragraphs.
- If the text is long you may use heading or sub-headings.

Don't forget that:

- A written summary is a short version of a longer text.
- A summary should be written in your own words. You must not use another person's words as if they are your own. That is plagiarism.
- Write your summary using correct grammar, punctuation and sentences.

1 Reduce the following complex sentences into simple sentences.

1 Wine, whether of domestic producers or imported, is well known to be high on the list of those drinks which are most frequently drunk by the inhabitants of Dalmatia.

2 The climatic conditions prevailing in the continental part of Croatia show a pattern of alternating unpredictable periods of dry and wet weather, accompanied by a similarly irregular cycle of temperature change.

2 Text summary

Summarise the following text.

Mission

Agriculture, forestry and fisheries industries, as an important sector of Japan's economic structure, contribute outstandingly to the development of national economy and stabilization of national life through their role of providing stable supply of foods indispensable to our daily life.

Farmland and forest, also play the role of cleaning air and water, fostering water resources and conserving national land resources. Furthermore, nature and verdant scenic sights abundant in the rural communities is closely related to the national life as they provide mental tranquillity for the people through communion between man and nature.

The circumstances surrounding the agriculture, forestry and fisheries industries of Japan are severe, due to such factor as imbalance between supply and demand in agricultural products (e.g. rice), delay in the management scale expansion in the so-called 'land-extensive agriculture' like rice cultivation, and the escalating pressure for opening up the market from various overseas countries.

And in order to promote the harmonious development of economic society and stability of national life sound development of the agriculture, forestry and fisheries industries and advancement of the welfare of the people engaged in these industries would be indispensable.

In order to assure healthy and abundant dietary life for the people, moreover, it is necessary to strive towards maintenance and reinforcement of the ability to attain self-sufficiency in food supplies at all times, maintaining, on the other hand, an appropriate combination of import and domestic production.

From these viewpoints, the Ministry comprehensively undertakes administration related to agricultural, forestry and fisheries products, covering from production to consumption and also to

rural development and promotion of the welfare of rural inhabitants with a view to achieving stable supply of food, sound development of the agriculture, forestry and fisheries industries and upgrading of the welfare of rural inhabitants.

(Source: <http://www.maff.go.jp/e/about/mission/index.html>)



Video

3 Watch the video: The History of Agriculture

(Source: <https://www.youtube.com/watch?v=Uv3lMRyOUus>)

4 Write a summary of what you have watched.



Summary

K The Lighter Side

The GREEN Game

Test your knowledge of the word GREEN.

1 Match the expressions or phrases from 1 to 9 to the correct meaning a) to i).

- | | |
|---------------------|----------------------------|
| 1 greenhorn | a) a vegetable vendor |
| 2 green with envy | b) a gardening virtuoso |
| 3 green thumb | c) advocacy group |
| 4 Greenpeace | d) someone new on the job |
| 5 Greenland | e) New York City's Bohemia |
| 6 green grocer | f) Danish island |
| 7 Greenwich Village | g) city in North Carolina |
| 8 greenback | h) slang for U.S. money |
| 9 Greensboro | i) to be jealous |

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ 9 ____

A Texan farmer goes to Australia for a vacation. There he meets an Aussie farmer and gets talking. The Aussie shows off his big wheat field and the Texan says, "Oh! We have wheat fields that are at least twice as large." Then they walk around the ranch a little, and the Aussie shows off his herd of cattle. The Texan immediately says, "We have longhorns that are at least twice as large as your cows." The conversation has, meanwhile, almost died when the Texan sees a herd of kangaroos hopping through the field. He asks, "And what are those?" The Aussie, fed up with the Texan's bragging replies with an incredulous look, "What, don't you have any grasshoppers in Texas?"

(Source: www.retrojunkie.com/jokes/farming.htm)



(Source: <http://tasermiutgreenland.com/wp-content/uploads/2014/03/greenland-northern-lights-c.jpg>)

UNIT 3

Selection of the Fittest



Source: <https://upload.wikimedia.org/wikipedia/commons/thumb/>

*"I give you one health in the juice of the vine,
The blood of the vineyard shall mingle with mine;
Thus let us drain the last few drops of gold,
And empty our hearts of the blessings they hold."*

Oliver Wendell Holmes (1841-1935), American journalist

A Starting up

1 Work in pairs.

Which of these statements are true? Correct the false ones.

- 1 Fossilized grape seeds have been found to date back 10 million years.
- 2 Between 15 and 25 percent of grape juice consists of sugar that is available for fermentation.
- 3 The principal roots of grapevines can penetrate six meters deep to reach moisture.
- 4 The more you fertilize your grapevines, the more vulnerable they become.
- 5 Grapevines tend to build a weak root system.
- 6 The bunch or cluster of grapes is the fruit of grapevine.
- 7 Of all the fruit-bearing plants in the world, the grapevine is the best at accumulating sugar.
- 8 As a rule, red grapes contain less phenols than white varieties.
- 9 In Europe, winegrowing regions are located between the 30th and 40th parallels.
- 10 White wines can be made from red grapes.

2 Complete the text with the words from the box.

environment vineyard demonstrated study Antarctica
date pests tasks management winter

Viticulture is nearly as old as civilization. It is the science, production and 1 _____ of grapes which deals with the series of events that occur in the 2 _____. When the grapes are used for winemaking it is also known as viniculture.

Wild vines that bore grapelike fruit and fossilized grape seeds have been found to 3 _____ back 60 million years. The native territory of *Vitis vinifera*, the common grapevine is the area from Western Europe to the Persian shores of the Caspian Sea. However, the vine has 4 _____ high levels of adaptability and will sometimes mutate to accommodate a new 5 _____. For this reason, viticulture can be found on every continent except 6 _____.

Viticulturists perform many 7 _____ such as: monitoring fruit development and characteristics, monitoring and controlling 8 _____ and diseases, irrigation, fertilizing, canopy management, deciding when to harvest, and vine pruning during the 9 _____ months. Viticulturists co-operate with winemakers because vineyard 10 _____ and the resulting grape characteristics form the basis from which winemaking begins.

(Sources: Wikipedia: The Free Encyclopedia. FL. Wikipedia Foundation, Inc. <http://wikipedia.org/wiki/Agriculture>
<http://www.worldbank.org/rural>. <http://www.hr/croatia/economy/agriculture>
, and http://www.ec.europa.eu/agriculture/enlargement/countries/croatia/profile_en.pdf)

B Reading and Speaking

1 Read the article and answer these questions.

- 1 What did early wine producers start out with?
- 2 How did they change grapevines in the course of domesticating them?
- 3 How does the evolutionary history of grapevines affect grape-growers today?

The History of Grapevine Cultivation

The history of grapevine cultivation goes back almost to the dawn of agriculture. It is certain that wild grapes grew in many regions of the world, but wine was made only in some of them. There is evidence that some of the earliest domestication of *Vitis vinifera* occurred in the area of modern day Georgia on the eastern shore of the Black Sea. Archaeologists found shards of clay pitchers decorated with a relief of grapes and dated them back to about 6000 BC.

In the Neolithic period, man knew how to make wine in the region between the Euphrates and the Tigris, in the southern Caucasus, along the Nile and later in Palestine.

Grapes were cultivated systematically around the Mediterranean with the rise of the Greek civilization after about 1600 BC. The main centres of wine production were Sparta and Mycenae. Methods of wine production were well developed and wine was used on many occasions as a ritual drink to honour the gods, to celebrate victories or to enhance festivities. At the end of the 5th century BC, the Greek historian Thucydides wrote: "The people of the Mediterranean began to emerge from barbarism when they learnt to cultivate the olive and the vine."

Greek colonists brought grapes and wine to Syria, Egypt, Cadiz and Marseilles around 600 BC, and to Sicily a hundred years later.

The Roman Empire accepted the cult of wine from the ancient Greeks after the decline of their power. For Romans, wine turned into a status symbol. It became a form of medicine, a medium of exchange and a ritual offering. Virgil wrote that there were as many grape varieties as there are grains of sand on the beach. Skilful winemakers were experimenting with different ways of storing and making wine.

Roman expansion across Western Europe brought Roman viticulture to the areas that became some of the world's best known wine-growing regions: the Spanish Rioja, the German Mosel and the French Bordeaux, Burgundy and Rhône.

In the Middle Ages, Catholic monks were the pioneers of wine production. The Benedictines brought the cultivation of the vine and manufacture of wine to a very high level.

In the period of Renaissance, grape cultivation moved into the hands of rulers and rich burghers. Two Italian families the Antinori and the Frescobaldi were the best known. The 16th century is the golden period of grape growing in Europe. The total area planted in grapes was almost four times what it is today. Unfortunately, it soon came to an end as the plague, wars and the cooling down of the climate reduced the vineyard areas of Europe to the regions we have today.

(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. <http://wikipedia.org/wiki/Viticulture>)

2 Put the following titles in chronological order according to their appearance in the text.

- _____ The Romans' knowledge of the grapevine
- _____ Wine in Ancient Greece
- _____ The earliest records
- _____ From the Middle Ages into our times

3 Re-read the text above and find words and expressions that mean the following.

- 1 produce _____
- 2 infectious disease that kills a lot of people _____
- 3 celebrated, famed _____
- 4 decrease _____
- 5 present (n) _____
- 6 to glorify _____
- 7 area, zone _____
- 8 breeding _____
- 9 receive, take _____
- 10 seed, sow (v) _____

4 Before you read the article do the quiz.

Quiz

- 1) Where was Leonardo da Vinci born?
 - a) Milan
 - b) Genoa
 - c) Venice
 - d) Vinci
- 2) Under whom was Leonardo da Vinci an apprentice?
 - a) Michelangelo
 - b) Giovanni Boccaccio
 - c) Andrea del Verrocchio
 - d) Petrarch
- 3) Which painting of Leonardo da Vinci is also known as La Gioconda?
 - a) The Adoration of the Magi
 - b) The Last Supper
 - c) Mona Lisa
 - d) Benois Madonna
- 4) From 1482 to 1499 Leonardo da Vinci worked under Ludovico Sforza. Who was Ludovico Sforza?
 - a) Duke of Burgundy
 - b) Duke of Milan
 - c) King of France
 - d) King of Austria

- 5) When did Leonardo da Vinci paint The Last Supper?
 - a) 1452
 - b) 1466
 - c) 1477
 - d) 1495

- 6) Who on 18 August 1502 appointed Leonardo da Vinci as Military Engineer General?
 - a) Cesare Borgia
 - b) Niccolo Machiavelli
 - c) Leo X
 - d) Julius II

- 7) Who offered the title of Premier Painter to Leonardo da Vinci?
 - a) Francis I
 - b) Charles II
 - c) James II
 - d) Edward III

- 8) Where did Leonardo da Vinci die?
 - a) Cloux
 - b) Mantua
 - c) Florence
 - d) Naples

(Source: <http://go4quiz.com/422/leonardo-da-vinci-quiz/>)

5 You are going to read an article about Leonardo da Vinci. Six sentences have been removed from the article. Choose from the sentences A- F the one which fits each gap.

- A** He conceptualised flying machines, a type of armoured fighting vehicle, concentrated solar power, an adding machine and the double hull.
- B** He has been variously called the father of palaeontology and architecture and is widely considered one of the greatest painters of all time.
- C** Both men believed that the same principles should be used when designing buildings.
- D** Leonardo was, and is, renowned primarily as a painter.
- E** Each separate part was a simple fraction of the whole.
- F** Today, Leonardo is widely considered one of the most diversely talented individuals ever to have lived.



Leonardo di ser Piero da Vinci more commonly **Leonardo da Vinci** or simply **Leonardo** (15 April 1452 – 2 May 1519), was an Italian polymath whose areas of interest included invention, painting, sculpting, architecture, science, music, mathematics, engineering, literature, anatomy, geology, astronomy, botany, writing, history, and cartography. 1 _____

Sometimes credited with the inventions of the parachute, helicopter and tank, he epitomised the Renaissance humanist ideal.

Many historians and scholars regard Leonardo as the prime exemplar of the "Universal Genius" or "Renaissance Man", an individual of "unquenchable curiosity" and "feverishly inventive imagination".

2 _____. Among his works, the *Mona Lisa* is the most famous and most parodied portrait, his drawing of the *Vitruvian Man* is also regarded as a cultural icon and *The Last Supper* is the most reproduced religious painting of all time. Leonardo is revered for his technological ingenuity.

3 _____. Relatively few of his designs were constructed or even feasible during his lifetime, as the modern scientific approaches to metallurgy and engineering were only in their infancy during the Renaissance. He made substantial discoveries in anatomy, civil engineering, optics, and hydrodynamics, but he did not publish his findings and they had no direct influence on later science.

4 _____. This sketch, and the notes that go with it, show how Leonardo understood the proportions of the human body. 5 _____. For example, the head measured from the forehead to the chin was exactly one tenth of the total height, and the outstretched arms were always as wide as the body was tall. These ideas were not Leonardo's, but were taken from the writings of the Roman architect Vitruvius. 6 _____.

(Source: <https://www.britannica.com/biography/Leonardo-da-Vinci>)

6 Match the items which are similar in meaning.

- | | |
|---------------|-----------------|
| 1 polymath | A admired |
| 2 epitomise | B well educated |
| 3 regard | C achievable |
| 4 renowned | D intelligent |
| 5 revered | E symbolize |
| 6 ingenuity | F dimension |
| 7 feasible | G view |
| 8 infancy | H brilliance |
| 9 talented | I childhood |
| 10 proportion | J distinguished |

1 __ 2 __ 3 __ 4 __ 5 __ 6 __ 7 __ 8 __ 9 __ 10 __

C Writing Skills

Writing Sentences

When writing, try to have only one main idea per sentence. If you can cut words out without affecting the meaning of the sentence, do it. In particular, pay attention to phrases which introduce new pieces of information or argument. These can often be reduced to single words.

1 Use the single word equivalent from the box to complete the table.

despite/although	because	think(that)	tend	contact
cause	perhaps	harm	concerning/regarding	
affect/influence				

Commonly used phrase	Single word equivalent
be a significant factor in	
be inclined to the view that	
give rise to	
have a detrimental effect upon	
have a tendency to	
in view of	
it is arguable that	
make contact with	
notwithstanding the fact that	
with regard to the question of	

D Reading and Speaking

The Last Supper

1 Read the text below.

Whenever possible, make use of phrases for expressing opinions.



(Source: <https://upload.wikimedia.org/wikipedia/commons/1/11/Giampietrino-Last-Supper-ca-1520.jpg>)

Christians around the world celebrate Easter, the day when tradition says Jesus rose from the dead three days after his crucifixion. According to the Bible, the night before his death, he gathered his inner circle, the 12 men known as his disciples, for a Passover meal. That meal has become known as the Last Supper.

Even those unfamiliar with the details of the meal and the days that followed are probably familiar with Leonardo da Vinci's painting, "The Last Supper." In da Vinci's masterpiece, Jesus is reaching for bread with his left hand and wine with his right hand. Symbolically, according to Luke 22:19-20, the bread and the wine represent the sacrifice that Jesus will make the next day on the cross. He tells his disciples the bread represents his body, which will be broken. The wine represents his blood, which will be shed.

What kind of wine would have been served at the Last Supper?

Religious expert Father Daniel Kendall of the University of San Francisco and Dr. Patrick McGovern, scientific director of the Biomolecular Archaeology Project for Cuisine, Fermented Beverages and Health at the University of Pennsylvania Museum think that the wine would have been similar to modern-day Amarone, an Italian red wine made from grapes that have been dried before fermentation. It's basically wine made from raisins.



(Source: <https://upload.wikimedia.org/wikipedia/commons/thumb/>)

What styles of wine, grapes and winemaking techniques were available at this time?

Very little is known about the kind of grape varieties available – or if grape varieties were even a concept – at the time of the Last Supper. "It's not until relatively recently in history, about 1,000 years or less, that we have any written evidence of named grape varieties," says Dr. Sean

Myles, an adjunct professor at Dalhousie University in Nova Scotia and a researcher in agricultural genetics.

However, we do have a good amount of evidence on winemaking during the era and the styles of wines people of Jesus' time would make and enjoy. By the night of the Last Supper, the Holy Land already had a long history of winemaking.

In an inland city of Judah, archaeologists found a jar with the inscription, "Wine made from black raisins." Winemakers may have dried out grapes on the vine or on mats in the sun to concentrate the grapes and create a very sweet and thick wine. Elsewhere in the region, archaeologists have found jars with inscriptions like "smoked wine" and "very dark wine." Mixing wine with spices, fruits and especially tree resin was common practice. They'd also add things like pomegranates, mandrakes, saffron and cinnamon to enhance the flavour of the wine. Kendall and McGovern provided other details about the wine of Jesus' time and the type of wine that would have been served at The Last Supper:

- Winemaking was present since at least 4000 BC in Jerusalem. Vintners planted vines along rocky hillsides and carved out vats in the bedrock to serve as wine presses.
- The people of Jerusalem preferred rich, concentrated wines and were critical of watering down wine, which was common practice at the time.
- Wine was strong and frequently mixed with spices, fruits and especially tree resin as winemakers believed myrrh, frankincense and terebinth preserved wine and prevented spoilage.

It can be concluded that there was a skilled winemaking culture present during the time of the Last Supper and that around Jerusalem, vintners made strong wines, often mixed with tree resins, spices and fruits.

How does this style translate into modern-day wine?

Recreating the Wine of the Last Supper

"They may have been drinking something like a modern-day Amarone, though we can't know for sure," says Dr. McGovern.

Winemakers in Northern Italy make Amarone by drying their grapes on straw mats before they press the grapes to make wine. The end result is a sweet, rich and dark wine, much like the wines they enjoyed in the Holy Land during the biblical era.

However, due to modern technology two distinct styles have emerged. There are those who practice the traditional method of naturally drying their grapes and using neutral oak or chestnut barrels to age them and there are those who use a modern method of quickly drying grapes using temperature and humidity-controlled rooms and aging their wines in new oak barrels.

Technically, there is only one way to make Amarone wine:

1. pick grapes
2. dry grapes until there is 40% less liquid (can take as long as 120 days)
3. slowly press dried grapes
4. slowly ferment grapes into wine over a period of 35–50 days

The Taste of Amarone Wine

Expect bold aromas of cherry liqueur, black fig, carob, cinnamon and plum sauce along with subtle notes of green peppercorn, chocolate and crushed gravel dust. Sound intriguing? On the palate Amarone wines often have medium-plus to high acidity balanced with high alcohol and flavours of black cherry, brown sugar and chocolate. The older the wine the more it will offer flavours of brown sugar, molasses and fig. What might surprise about this wine is the presence of a touch of natural residual sugar (RS) in the wine, usually around 3–7 g/L (or about a 1/4 teaspoon per serving). The RS helps compliment the wine's natural high acidity and adds to its boldness.

(Source: <http://www.mnn.com/food/beverages/blogs/what-wine-did-jesus-drink-last-supper>)

2 Are these uses of *most* right *R* or wrong *W*?

- | | |
|---|-------|
| 1 The Romans conquered most of Europe. | _____ |
| 2 The Romans conquered the most of Europe. | _____ |
| 3 Most students like learning. | _____ |
| 4 The most students like learning. | _____ |
| 5 Most of students like learning. | _____ |

3 Which of the following expressions are *NOT* normal?

- | | |
|---------------------------|-------|
| A a fallen leaf | _____ |
| B a developed country | _____ |
| C a started race | _____ |
| D an arrived bus | _____ |
| E a slept child | _____ |
| F a vanished civilisation | _____ |

Grapevine

The grapevine is one of the most undemanding and most adaptable plants in the world. It is a long-living, perennial plant which can exist in one spot for a number of years – around 30, on average. Grapes are produced at the end of its yearly life cycle.

The vine is a woody plant with herbaceous elements. Its perennial structures (the stock, scion and roots) store starch, carbohydrates, and other supplies. These energy reserves enable the plant to survive the winter and ensure growth in the spring, producing new leaves to take over the role as an energy provider.

Grapevines build a strong root system which not only anchors them firmly in the soil but also draws water and minerals from the soil. With the first rise of temperatures in spring, sap can be seen flowing where the canes have been pruned.

The part of the vine that grows above ground is woody and consists of the trunk (stock and scion) and biennial canes. The latter can be long or short, depending on pruning, and their buds sprout the annual shoots, some of which will bear grapes. Photosynthesis occurs in the vine leaves. The result is energy which is used to produce a variety of different substances in the course of the vegetative process. These include hundreds of aroma compounds which are stored in the grape.

Numerous factors influence the quality of the grape harvest. The nutrients essential for growth and fruit production are drawn from the air and the soil. Light, which is indispensable to photosynthesis, is reached by tendrils. The fact is that many vine regions are located along rivers and lakes, where the water surface reflects the light.

Grapevines carry a lot of leaves but the amount of foliage exposed to the sun, through which photosynthesis occurs, is of central importance. Vine-growers help the process by forming an optimal canopy surface area and thus a balanced leaf to fruit ratio. Vine density, row orientation, and the height of the trellises can be tailored to achieve this.

The end of the vine's vegetative growth, the period when the grapes start to change colour is when sugar starts to accumulate in the fruit. The end of vegetative growth is a natural process accelerated by lack of water while heavy rain in this period can slow down the ripening process.

(Source: Encyclopedia Britannica. Grape, from Encyclopedia Britannica 2010 Ultimate Reference Suite DVD)

4 Translate the following words and expressions.

- 1 the most undemanding _____
- 2 adaptable plant _____
- 3 herbaceous elements _____
- 4 perennial plant _____
- 5 biennial canes _____
- 6 optimal canopy surface area _____
- 7 a balanced leaf to fruit ratio _____

5 Tick the lines with the correct order of adjectives.

- | | |
|---------------------------------|-------|
| 1 green beautiful vineyard | _____ |
| 2 a cool lovely drink | _____ |
| 3 a green wine bottle | _____ |
| 4 the latest educational reform | _____ |
| 5 a political old idea | _____ |

6 Questions

1 Which gas is needed for photosynthesis?

- Oxygen
- Carbon dioxide
- Hydrogen

2 What type of energy is needed for photosynthesis to happen?

- Light
- Heat
- Electrical

3 The waste by-product of photosynthesis is:

- Oxygen
- Carbon dioxide
- Glucose

4 Tomatoes in a greenhouse grow faster if the carbon dioxide concentration is increased.

This shows that:

- Temperature must have been a limiting factor
- Carbon dioxide concentration must have been a limiting factor
- Light intensity must have been a limiting factor

5 Photosynthesis can be summarized by which word equation?

- carbon dioxide + oxygen → glucose + water
- oxygen + glucose → carbon dioxide + water
- carbon dioxide + water → glucose + oxygen

6 Which substances do plant convert glucose into for storage?

- Starch, fats and oils
- Fats and oils only
- Starch only

7 When do plants respire?

- Only in the light
- Only in the dark
- All the time

7 Complete the text with the following words.

storage deficient water oxygen intensity leaves
by-product glucose chlorophyll equation

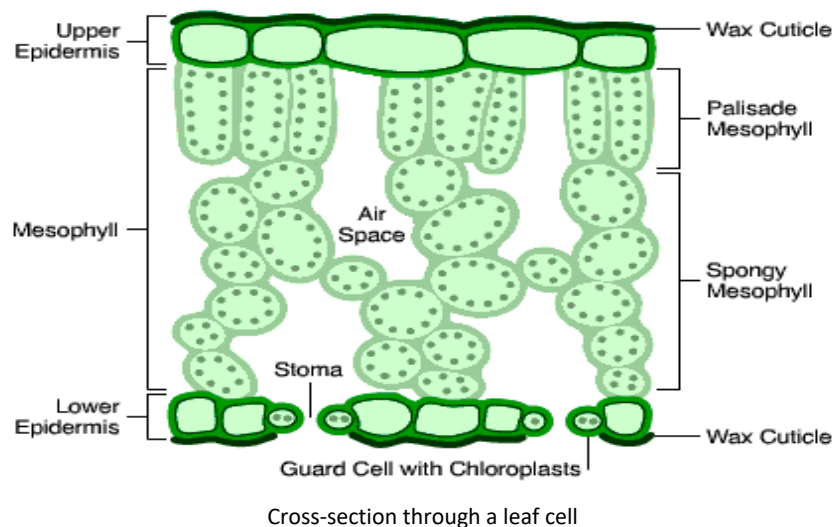
Photosynthesis

Green plants absorb light energy using chlorophyll in their 1 _____. They use it to react carbon dioxide with water to make a sugar called glucose. The 2 _____ is used in respiration, or converted into starch and stored. Oxygen is produced as a 3 _____.

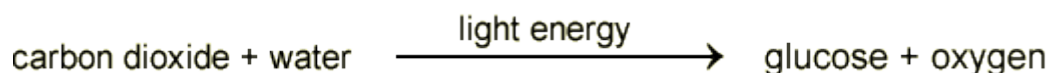
This process is called photosynthesis. Temperature, carbon dioxide concentration and light 4 _____ are factors that can limit the rate of photosynthesis.

Plants also need mineral ions, including nitrate and magnesium, for healthy growth. They suffer from poor growth in conditions where mineral ions are 5 _____.

The reaction requires light energy, which is absorbed by a green substance called chlorophyll. Photosynthesis takes place in leaf cells. These contain chloroplasts, which are tiny objects containing 6 _____.



Here is the 7 _____ for photosynthesis:



Plants absorb 8 _____ through their roots, and carbon dioxide through their leaves. Some glucose is used for respiration, while some is converted into insoluble starch for 9 _____. The stored starch can later be turned back into glucose and used in respiration. 10 _____ is released as a by-product of photosynthesis.

8 Match the words or phrases from the article to these definitions.

- 1 respiration
- 2 limit
- 3 concentration
- 4 reaction
- 5 cell
- 6 chloroplast
- 7 equation
- 8 root
- 9 insoluble
- 10 release

- a) the smallest unit of living matter that can exist on its own.
- b) the amount of substance in a liquid or in another substance
- c) the act of breathing
- d) the structure in plant cells that contains chlorophyll and in which photosynthesis takes place
- e) to let sb/sth come out of a place where they have been kept or trapped
- f) a statement showing that two amounts or values are equal
- g) restrict
- h) a chemical change produced by two or more substances acting on each other
- i) incapable of being dissolved
- j) the part of a plant that grows under the ground

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ 9 ____ 10 ____



9 Complete the text with the following words:

knowledge insufficient absorbed decrease water light
heat quickly enough speed

Factors limiting photosynthesis

Three factors can limit the speed of photosynthesis - light intensity, carbon dioxide concentration and temperature.

Light intensity

Without **1** _____ light, a plant cannot photosynthesise very **2** _____, even if there is plenty of water and carbon dioxide. Increasing the light intensity will boost the **3** _____ of photosynthesis.

Carbon dioxide concentration

Sometimes photosynthesis is limited by the concentration of carbon dioxide in the air. Even if there is plenty of light, a plant cannot photosynthesise if there is **4** _____ carbon dioxide.

Temperature

If it gets too cold, the rate of photosynthesis will **5** _____. Plants cannot photosynthesise if it gets too hot.

Maximising growth

Farmers can use their **6** _____ of these limiting factors to increase crop growth in greenhouses. They may use artificial **7** _____ so that photosynthesis can continue beyond daylight hours, or in a higher-than-normal light intensity. The use of paraffin lamps inside a greenhouse increases the rate of photosynthesis because the burning paraffin produces carbon dioxide, and **8** _____ too.

Plants need to take in a number of elements to stay alive. The most important are:

- carbon
- hydrogen
- oxygen

Plants get hydrogen and oxygen from **9** _____ in the soil, and carbon and oxygen from carbon dioxide and oxygen in the atmosphere. Water and carbon dioxide are used to synthesize food during photosynthesis. Oxygen is used to release energy from food during respiration.

In addition to these three elements, plants need a number of minerals for healthy growth. These are **10** _____ through the roots as mineral ions dissolved in the soil water. Two important mineral ions needed by plants are:

- nitrate - for making amino acids, which are needed to make proteins
- magnesium - for making chlorophyll

If a plant does not get enough minerals, its growth will be poor.

(Source:http://www.bbc.co.uk/schools/gcsebitesize/science/add_aqa_pre_2011/plants/plants1.shtml)

10 Match the words or phrases from the article to these definitions.

- 1 speed
- 2 intensity
- 3 increase
- 4 insufficient
- 5 carbon
- 6 protein
- 7 plant
- 8 boost
- 9 artificial
- 10 dissolve

- a) made or produced to copy something natural; not real
- b) the rate of movement
- c) a chemical element (symbol C)
- d) to become or to make something greater in amount, number, volume, etc.
- e) to mix with a liquid and become part of it
- f) to make something increase, or become better or more successful
- g) the strength of sth that can be measured
- h) not large, strong or important enough for a particular purpose
- i) a natural substance found in meat, eggs, fish, some vegetables etc.
- j) a living thing that grows in the earth

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ 9 ____ 10 ____

E Language Review

Latin Plurals

Which form to use?

As a rule of thumb, the Latin-style plural is appropriate to formal, scientific, or technical writing, while the English plural is better suited to everyday language.

Common words with both forms

When deciding which to choose, it is important to bear in mind the context in which it will appear, as outlined above.

SINGULAR	PLURAL	SINGULAR	PLURAL
addendum	addendums or addenda	minimum	minimums or minima
gymnasium	gymnasiums or gymnasia	moratorium	moratoriums or moratoria
maximum	maximums or maxima	referendum	referendums or referenda
memorandum	memorandums or memoranda	curriculum	curricula and curriculums

Special cases

For a very small group of words, the choice of plural depends on the subject field: e.g. appendixes in surgery and zoology and appendices in books. In scientific work foci, formulae, indices, and vortices are regularly used, but in general writing, the ordinary plural forms in -s and -es are more usual.

Be careful with...

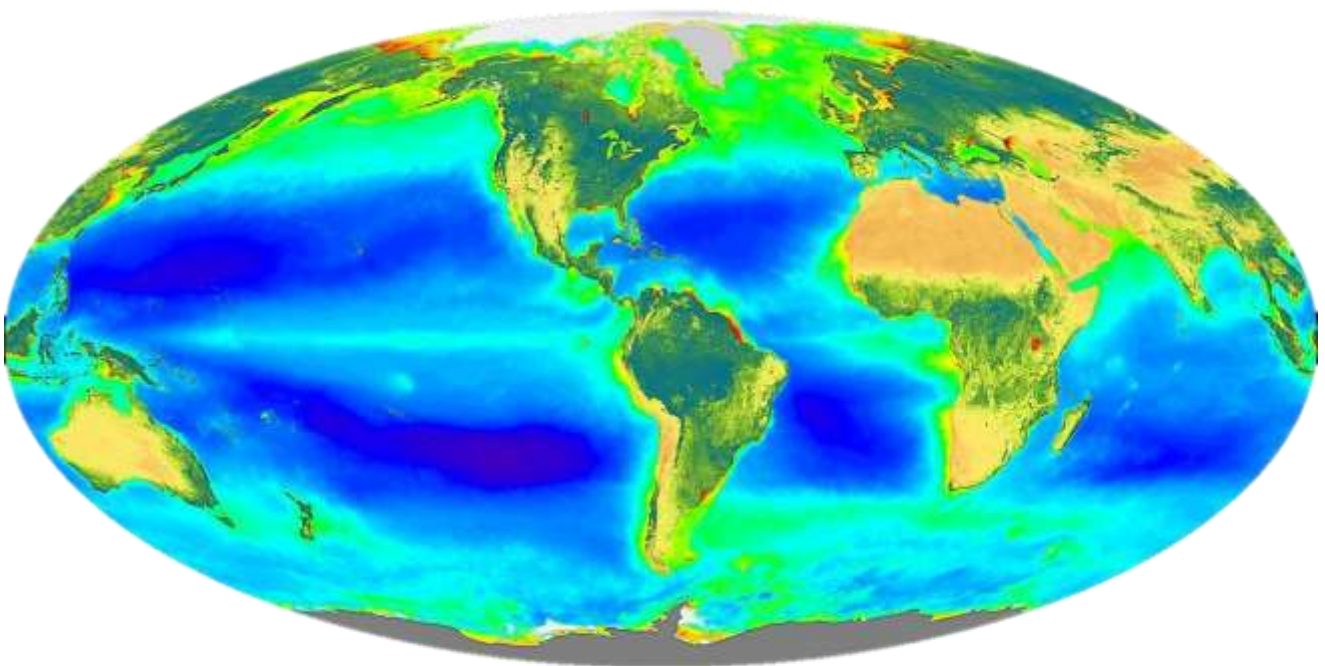
Three words have plurals which are regularly used as singulars in a way that many people will consider a mistake:

SINGULAR	PLURAL
crit erion	crit er ia
str atum	str at a
phen omenon	phen om ena

Irregular Plural Forms

1 Choose the correct plural form (a or b) for these words. For some of the words, both options are acceptable.

- | | | |
|--------------------|----------------------------|----------------------------|
| 1 analysis | a analyses | b analyses |
| 2 appendix | a appendixes | b appendices |
| 3 attorney general | a attorney generals | b attorneys general |
| 4 bureau | a bureaus | b bureaux |
| 5 forum | a forums | b fora |
| 6 index | a indexes | b indices |
| 7 notary public | a notaries public | b notary publics |
| 8 prospectus | a prospectora | b prospectuses |



Global distribution of photosynthesis

(Source: https://upload.wikimedia.org/wikipedia/commons/4/44/Seawifs_global_biosphere.jpg)

F Skills

Presentations

*“Wise men talk because they have something to say;
fools because they have to say something.”*

Plato, Greek philosopher

A presentation is a means of communication that can be adapted to various speaking situations, such as talking to a group, addressing a meeting or briefing a team.

Giving a presentation can be compared to a journey. At the beginning the audience requires some basic information to be able to accompany you on the journey. Once they have the information, they are ready to listen to every step of the journey until you deliver your final message.

Who

Introduce yourself. The quantity of information you give about yourself and the level of formality depends on your audience. For example, for a presentation to your colleagues, you don't need to give your name and background and you can use informal language. More detailed information is needed for the audience you present to for the first time.

Why

Tell your audience the reason they should listen to you and the purpose of your presentation. The 'why' is linked to the conclusion, your final message, the most important part of your presentation.

What

Think about the main points that you're going to develop and the order in which you plan to develop them – outline a roadmap. By doing so, your audience will follow you more easily. One of the most frequently used techniques to give the road map is called 'sequencing'. This technique involves using language such as *one, two, three* or *firstly, secondly, thirdly*.

How

Think of yourself as an audience. You may be asking yourself the following questions: How long is it going to be? When can I ask questions? Should I take notes? Try to answer such questions in your 'start' so that you prepare your audience to listen. You should include these points in your 'start' but you shouldn't be too long. Ninety seconds is the recommended time because the audience tends to listen to you and form an impression of you in these ninety seconds. A correct start helps in forming a good impression.

1 Read through these phrases. Write who, why, what or how next to each phrase.

- 1 Morning everyone, I'm ____ I'm a ____ at _____
- 2 Let me introduce myself. I am _____
- 3 My purpose today is to _____
- 4 The presentation should last about twenty minutes. _____
- 5 I'm happy to take any questions after that. _____
- 6 I'm going to outline three proposals.
Firstly, I'll _____. Then, I'd like to _____ and finally _____
- 7 I've divided my presentation into three main points. I would like to begin with _____
- 8 What I'm going to do today _____

The finish

Signal, summary, conclusion, closing remarks

Try to be calm and stay in control until the last second of your presentation. At the finish of your presentation firstly, pause and *signal* that you are about to finish your presentation. Then, make your *summary* of what has already been said. A good summary reminds the listeners that they should reflect on the content and at the same time builds up your conclusion. The *conclusion* looks forward to what you want your audience to do or think after your presentation. The conclusion is the most important part of the presentation. Finally, make your *closing remarks* by thanking your audience, asking for questions and maybe passing round your presentation handouts.

2 Write Sig (Signal), Sum (Summary), Conc (Conclusion) or CR (Closing Remarks) next to the phrases below.

- 1 Thank you for listening. _____
- 2 I'd like to summarise. _____
- 3 If you have any questions, I'd be happy to answer them. _____
- 4 To summarise, I'll run through my three topics. _____
- 5 So, that completes our presentation. _____
- 6 In my opinion, the only way forward is _____

Structuring Signposting



A good way to make your presentations effective, interesting and easy to follow is to use **signpost language**. 'Signpost language' is the words and phrases that people use to tell the listener what has just happened, and what is going to happen next.

In other words, signpost language guides the listener through the presentation. A good presenter will usually use a lot of signpost language, so it is a good idea to learn a few of the common phrases, even if you spend more time listening to presentations than giving them! Signpost language is usually fairly informal, so it is relatively easy to understand.

Advanced signposting

3 Match the signposts with the examples.

1 change direction and/or depart from the original plan of your presentation

2 refer to an earlier point

3 refer to a point that is coming later

4 repeat something

5 give a wider perspective

6 give a deeper analysis

7 give just the basic information

a I'd like to expand/elaborate on that _____

b Let's just recap _____

c Let me digress for a moment _____

d Let me put that in a nutshell _____

e I'd like to go back to a point I mentioned earlier _____

f I'll be coming to that later _____

g Let me give you another example _____

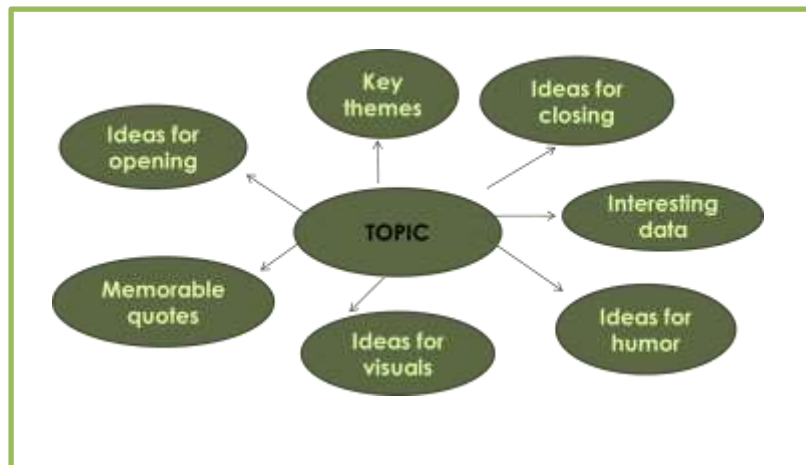
1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

Signposting

Section of presentation	Signpost language
Introducing the topic	The subject/topic of my talk is ____ I'm going to talk about ____ My topic today is ____ My talk is concerned with ____
Overview (outline of presentation)	I'm going to divide this talk into four parts. Basically/ Briefly, I have three things to say. I'd like to begin/start by ____ First of all, I'll ____ Then/ Next ____ Finally/ Lastly ____
Finishing a section	That's all I have to say about ____ We've looked at ____ So much for ____
Starting a new section	Moving on now to ____ Turning to ____ Let's turn now to ____ The next issue/topic/area I'd like to focus on ____ I'd like to expand/elaborate on ____ Now we'll move on to ____ I'd like now to discuss ____ Let's look now at ____
Analysing a point and giving recommendations	Where does that lead us? Let's consider this in more detail ____ What does this mean for ____? Why is this important? The significance of this is ____
Giving examples	For example, ____ A good example of this is ____ As an illustration, ____ To give you an example, ____ To illustrate this point ____
Summarising and concluding	To sum up ____ To summarise ____ Right, let's sum up, shall we? Let's summarise briefly what we've looked at ____ Finally, let me remind you of some of the issues we've covered ____ In conclusion ____ In short ____ Unfortunately, I seem to have run out of time, so I'll conclude very briefly by saying that ____
Paraphrasing and clarifying	Simply put ____ In other words ____ So what I'm saying is ____ To put it more simply ____ To put it another way ____
Invitation to discuss/ask questions	I'm happy to answer any queries/ questions. Does anyone have any questions or comments? Please feel free to ask questions. If you would like me to elaborate on any point, please ask. Would you like to ask any questions? Any questions?

(Source: <http://www.bbc.co.uk/worldservice/learningenglish/business/talkingbusiness/unit3presentations/expert.shtml>)

Bringing it all together



Delivery A few tips



How to control nerves

- Smile or at least look relaxed. Establish eye contact. This will send out a positive message. If you look as if you are not enjoying the presentation, how can you expect the audience to enjoy it?
- Treat your audience as if they are friends without becoming overly familiar.
- Calm yourself down by breathing deeply. This will help control any nervous shakes in your voice or in your hands.
- Prepare well. As the saying goes: preparation and planning prevent a poor performance. Practise giving your talk to an audience of friends or colleagues for this will give you confidence.

You may consider this rule

- Guy Kawasaki framed his 10-20-30 Rule for PowerPoint as:
- 10 slides are the optimal number to use for a presentation.
- 20 minutes is the longest amount of time you should speak.
- 30 point font is the smallest font size you should use on your slides.

(Sources: Find more at: <http://www.skillsyouneed.com/present/what-is-a-presentation.html#ixzz41Ftrzugp>, Powel, 2011, Williams, 2008)

G Reading and Speaking

Group work

1 As a group prepare a short presentation of three to five minutes on one of the five grape varieties. Make your presentations in groups.

After each presentation, fill in the following Feedback form.

Feedback form					
	Poor	OK	Yes!	Wow!	Comments
Start Who Why What How Variety					
Signposting					
Pausing					
Organisation					
Finish Signal Summary Present perfect Conclusion Closing remarks					

(Source: Williams, 2008)

Grape Varieties

Ampelographers agree that there are about 10,000 different varieties of the species *Vitis vinifera* worldwide. Only a few of these have commercial significance. Today there are about fifty most commonly planted grape varieties which originated in Europe or in Asia Minor.

Graševina



Photo courtesy of Kutjevo d.d.

Graševina, covering 4633 hectares, around 22% of the total country's assortment is the most widespread grape variety in Croatia. It is frequently mixed with Riesling although it is neither genetically nor organoleptically the same as the White Riesling. Graševina is also known as Welschriesling, Welsh Riesling, Laški rizling, Riesling italiano/italic, Ryzling Vlašsky and Borba (Spain's Ribera del Guadiana). It is known as the Central Europe variety and there are various theories about its exact place of origin. It is frequently considered to originate in Germany or Romania, however, a number of experts claim that Croatia is its country of origin.

This variety of white wine grape is considered as very easy to grow. The vines of Graševina demand dry and hot climate with a warm temperature of the soil, high altitude locations turned to the south and the wind-protected sides. In the terms of the harvest, it is a late ripening variety. The optimum for this variety is a long vegetative period, 165 to 170 days. In very warm and humid vineyards the grapes are susceptible to a noble rot botrytis which can lead to the finest expressions of the grape. The cluster of Graševina grape is small or medium and densely set. Berries are of medium size, round with tough, yellow skins that have a flecked appearance. Graševina is valued for its medium and high yield. Graševina wines are very fruity and flowery in nature. Depending on the location, viticulture practices, and vinification techniques Graševina wines smell like elderberry, chamomile, green apple, vineyard peach or quince. The most well-known locations for Graševina are Mitrovac, Hrnjevac, Venje and Vetovo.

Riesling



Photo courtesy of Kutjevo d.d.

Riesling also known as Rhine Riesling, Johannisberg Riesling or White Riesling is one of the best white wine varieties in the world. It is a late-ripening variety that delivers outstanding wines in cool growing regions. Its homeland is Germany, where it has been cultivated since at least the 1400s. It is difficult to determine whether it is indigenous to the Rhine, the Mosel, or the Palatinate. Whatever the provenance, the Riesling grape is demanding. It yields significant wines if planted on steep, sunny slopes. Hillside microclimates with plenty of sun exposure and sufficient protection from the winds are of paramount importance to quality Riesling.

Riesling vines are particularly hard-wooded and tolerant of cold weather and they bud late. Riesling is moderately vigorous and productive, yielding from three to six tons per acre. The berries are small, round and soft when ripe, with tender, greenish-yellow skins that have a flecked appearance from lenticels (lens-shaped pores) on the skins. Hanging in compact, winged clusters they may have a problem with bunch rot and non-beneficial moulds if there is much rain or humidity during the ripening season.

Chardonnay



Source: <https://commons.wikimedia.org>

Chardonnay is the grape variety that has conquered the world. Its provenance is Burgundy, and there is even a village named Chardonnay. It is very adaptable in terms of climate, soil and methods of winemaking which resulted in its fastest growth rate in the last twenty-five years of all white varieties.

The success of the grape lies in its ability to produce anything from pleasant to great wines on practically any type of soil. Chardonnay buds early, its vines are shy-bearing, berries are relatively small, thin-skinned, fragile and oxidize easily. This makes it more sensitive to winemaking techniques and more difficult to handle from harvest to bottling in comparison with most other grape types. It is susceptible to a large number of diseases.

The chardonnay vine has a tendency to mutate and, according to various researches, over 400 clonal variants have been found.

Cabernet Sauvignon



Source: <https://commons.wikimedia.org>

like blackcurrants, cedar wood or black pepper, varying in intensity with climatic conditions, viticulture practices, and vinification techniques.

Cabernet Sauvignon is an old grape variety planted around the world. Long thought to be an ancient variety, researches determined that it is actually the scion of a spontaneous cross between cabernet franc and sauvignon blanc.

The best growing sites are in warm regions since the variety ripens relatively late. The cluster of the Cabernet Sauvignon grape is medium in size and densely set. Berries are small, spherical with dark blue, thick and very tough skin. This toughness makes the grapes fairly resistant to disease and spoilage and able to withstand autumn rains with little damage. It is mid to late season ripener.

Cabernet Sauvignon is valued for its low yield and high tannin content. Cabernet Sauvignon wines smell

Pinot Noir



Photo courtesy of J. Mesić

is very calcareous (chalky; containing calcium carbonate), with good drainage. Well-drained soils have a higher average temperature, which assists ripening.

Pinot Noir is one of the oldest grape varieties. Ancient Romans knew this grape as Helvenacia Minor and vinified it as early as the first century AD. It was introduced to new areas by Cistercian monks. There are various records in Burgundy which mention the variety dating back to the 14th century, but it is assumed that it grew there at least a thousand years earlier.

Although this grape variety is quite tolerant to cold climates, it is particularly susceptible to spring frosts because it is one of the earliest leafing varieties. Its vines are not very vigorous and often lack adequate leaf cover to protect the fruit from birds.

Experts agree that the best vineyards for growing Pinot Noir are in Burgundy. Those vineyards slope gently down toward the east, providing the vines with long sun exposure yet avoiding the afternoon heat. The soil there

The clusters of pinot noir grapes are remarkably small, closely set with numerous thin-skinned grapes. When vinified, they yield a wine correspondingly low in tannins. The most appealing quality of Pinot Noir may be its soft, velvet texture with the aroma that conveys mellow fruitness.

(Sources: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. from http://en.wikipedia.org/wiki/List_of_grape_varieties, <http://www.wine-searcher.com/grape-varieties.lml> , http://www.winepros.org/grape_profiles/varietals.htm and Dominé, 2003)

2 After the presentations answer these questions.

- 1 What is an ampelographer?
- 2 Name a few late ripening varieties of white wine.
- 3 Which grape varieties are adaptable in terms of climate?
- 4 Describe two well-known grape varieties planted in the region where you live.
- 5 What is Cabernet Sauvignon valued for?

3 What does the article say about.

- a) Riesling homeland?
- b) Why is the Chardonnay grape sensitive to winemaking techniques?
- c) The best growing sites for Cabernet Sauvignon?
- d) The best vineyards for growing Pinot Noir?

4 What do these numbers from the article refer to?

- a) 14 b) 50 c) 25 d) 10,000 e) 1400 f) 400

5 Match the words 1 to 7 to the words a) to g) to make word partnerships.

- | | |
|--------------|-------------|
| 1 mouth | a) living |
| 2 mineral | b) wooded |
| 3 late/early | c) quality |
| 4 long | d) filling |
| 5 small | e) ripening |
| 6 high | f) berried |
| 7 hard | g) tasting |

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____

H Reading and Speaking

1 Read paragraph 1 of the article below and answer these questions.

- 1 What is the vine growth cycle?
- 2 Name the phenological events in the vine growth cycle?
- 3 Which is the final action of the yearly growing season?

2 Read the article and insert the following headings into the text where appropriate.

- A Fruit flowering
- B After harvest
- C From green harvest to ripe promise
- D New beginnings
- E The big picture
- F Dormancy

The Annual Life Cycle of Grapevines

The vine growth cycle is a pattern repeated every year in every vineyard. It consists of a series of phenological events beginning with bud break in the spring and culminating in leaf fall in the autumn followed by winter dormancy. The best time to pick the fruit is often regarded as one of the most crucial decisions. Harvest is merely the final action of the yearly growing season which is determined by pruning and other vine management decisions. Viticulturalists and vineyard managers monitor the effect of climate, vine diseases and pests in facilitating or hampering the vines' progression from bud break, flowering, fruit set, veraison, harvesting, leaf fall and dormancy, reacting if necessary with the use of viticultural practices.

In mapping out the annual growth cycle of the grapevine, the logical point to start in the season is immediately following the climax of harvest. As the weather cools, leaves age on the vine and eventually drop. Over winter, the vines are dormant and during this time they are pruned. It is important to prune each vineyard specifically to establish the right amount and quality of wood for the coming year. Pruning removes the woody growth of the season past and sets the vine up for the coming cycle to begin.

As winter fades and the weather starts to warm, the new foliage starts to grow from the wood that has been laid down at pruning. This stage is known as bud break or bud burst. In the Northern Hemisphere this stage begins around March. If the vine is pruned during the winter, the start of this cycle is signalled by a "bleeding" of the vine. Small buds on the vine start to swell out and eventually shoots begin to grow from the buds. The shoots grow rapidly in the early stages due to the availability of winter moisture and the increased solar energy. Bud break

is a vulnerable time in the annual life cycle of the vine. Spring frost can be particularly damaging.

After a period of approximately two months, shoot growth slows and flowering occurs. Tiny clusters of small flowers burst from the cluster looking like buttons. Flowering occurs when average daily temperatures are between 15-20 °C. A few weeks after the initial clusters appear, the flowers start to grow in size, with the individual flowers becoming observable. During this stage the pollination and fertilization of the grapevine takes place with the resulting product being a grape berry, containing 1-4 seeds. Fine, mild weather will promote an even and healthy setting of fruit (referred to as fruit set), however strong winds and excessive rain can potentially reduce the fruit set and cause an uneven formation of clusters.

Following the completion of fruit set, green grape berries are formed and the fruit moves through a period of growth and development. The warm weather causes sugar to accumulate in the berries and they begin to grow to about half their final size when they enter the stage of veraison. Just prior to this stage there is an opportunity to reduce the yield. This process is known as green harvesting when excessive bunches of green berries are removed and dropped to the ground. The ripening process normally lasts between 40 to 50 days after fruit set. During this stage the colours of the grape change. Within six days of the start of veraison the berries begin to grow dramatically as they accumulate glucose and fructose and acids begin to fall.

After the grapes have reached optimal ripeness, they are harvested. The vine then prepares for the winter by continuing the process of photosynthesis and storing carbohydrate in its roots and trunks. When the appropriate level of reserves has been reached, the chlorophyll in the leaves begins to break down and the leaves change colour from green to yellow. With the first frost the leaves begin to fall as the vine enters its winter dormancy period.

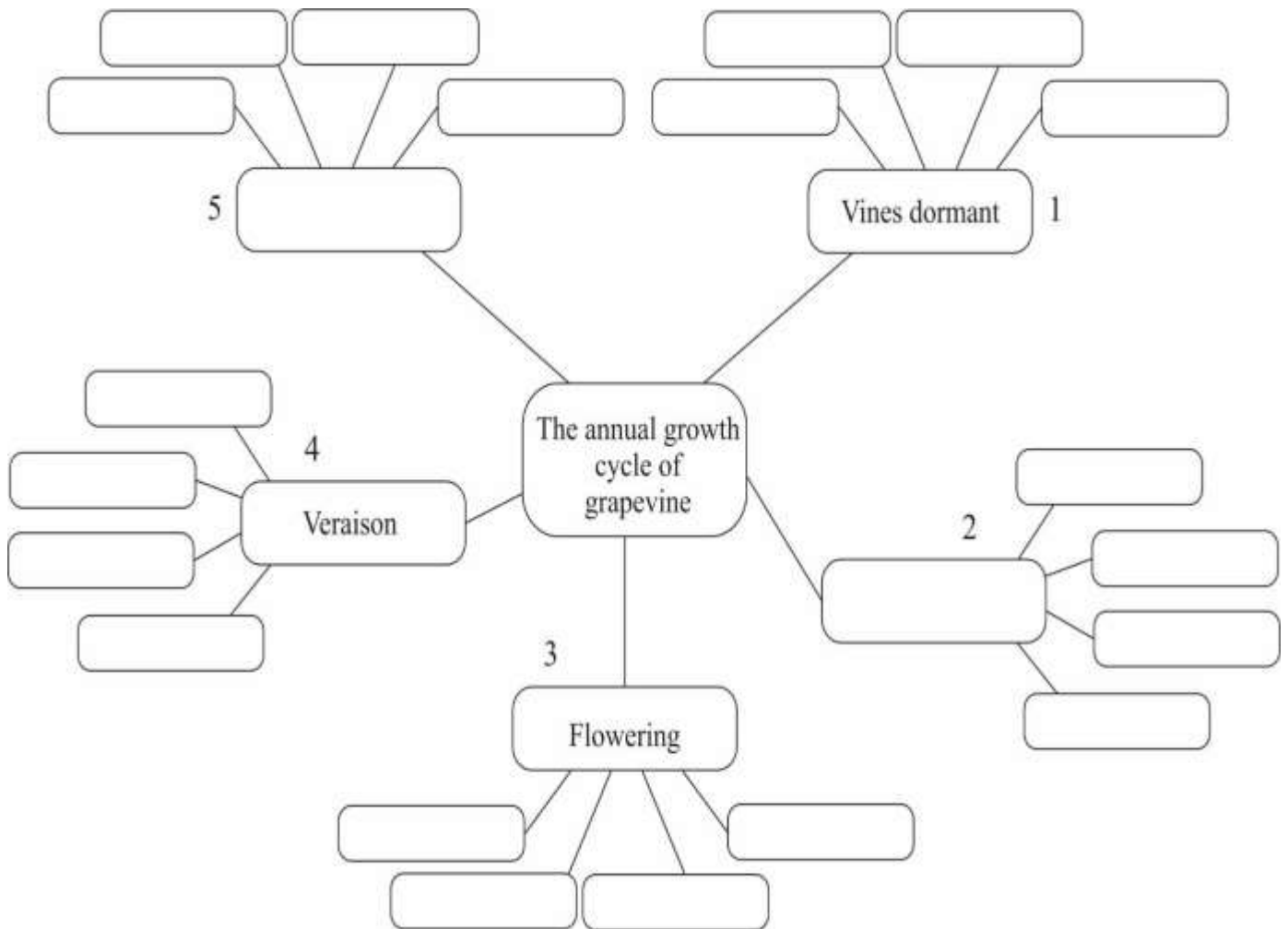
(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc.
http://en.wikipedia.org/wiki/Annual_growth_cycle_of_grapevines)



Photo courtesy of J. Mesić

3 Mind map

The aim of this mind map is to identify the series of events in the vine growth cycle. Fill in the missing parts with a suitable word or phrase. Continue the lines outwards by adding the additional information.





Homework

Read the text and give it a title. Pose questions covering the topic sentence and supporting details.

The vine has many enemies – viruses, bacteria, phytoplasma, fungi, mites, insects and nematodes. Downy Mildew and Powdery Mildew are two most significant fungal diseases of the vine.

The phylloxera louse arrived in France around 1860, in vines imported from the United States. By the end of the 19th century, phylloxera had spread to almost all the wine-producing countries of Europe. It damages vines primarily by attacking the roots causing a sustained disruption of the plant's food supply and even the death of the vine. Phylloxera is now rare in vineyards planted with grafted vines.

The phylloxera louse finds a new host not by moving to a new plant, but by moving from the leaves to the roots of the vine. The winter eggs laid by the female insects hatch at the beginning of the vine's vegetative phase. Once they are fully developed, the young fundatrix lice (stem mothers) create leaf galls, in which they lay their eggs. The "crawlers" that hatch from these eggs spread out over the shoots and create new galls on the young foliage. In late summer, the crawlers no longer head toward the tips of the shoots, but move down the vine and seek out its roots – beginning the underground phase of the cycle. The crawlers migrate to the deeper layers of the soil, where they spend the winter.

The following spring, they feed on young roots, causing swellings and growths, and complete their development as egg laying females. Parthenogenesis produces several generations of root-living crawlers. Some of the crawlers become nymphs (lice with wing buds) and leave the soil, beginning the above-ground phase of the cycle. The nymphs become winged adults and seek out American vines on which they lay both large and small eggs. The large eggs hatch into females, while the small eggs produce males. After mating, the female lays only one egg – called a winter egg – on the trunk of the vine. During the next vegetative phase, a new fundatrix louse will hatch from the egg, and the cycle begins again.

(Dominé, 2003)



I The Lighter Side

Hidden Trees

1 Find the name of a tree hidden in each sentence. Sample:

Since **Darwin's** time people have been intrigued by the theory of evolution. CEDAR

- 1 The new baseball cap pleased John.
- 2 If the deal goes through, Robert will own his dream house.
- 3 Mr. Griff ignored his son's tantrums.
- 4 In Ohio, Akron is the centre of rubber manufacturing.
- 5 The treasure map led us to the secret hiding place.

2 Last Will & Testament of a Farmer

I LEAVE:

To my wife: My overdraft at the bank. Maybe she can explain it.

To my son: Equity on my car. Now he will have to go to work to meet the payments.

To my banker: My soul. He has the mortgage on it anyway.

To my neighbour: My clown suit. He will need it if he continues to farm as he has in the past.

To the farm credit corporation: My unpaid bills. They took some real chances on me. I want to do something for them.

To the junk man: All my machinery. He's had his eyes on it for years.

To my undertaker: A special request. I want six implement dealers and six fertilizer dealers for pallbearers. They are used to carrying me.

To the weatherman: Rain, hail and snow for the funeral, please. No sense in having good weather now.

To the grave digger: Don't bother. The hole I'm in now should be big enough.

And lastly

To the monument maker: Set up a jig for the epitaph. "Here lies a farmer who has now properly assumed all of his obligations."

(Source: <http://www.retrojunkie.com/jokes/farming.>)



(Source: <https://commons.wikimedia.org>)

UNIT 4

The Art of Winemaking



Photo courtesy of J. Mesić

"There can be no bargain without wine."

Latin saying

A Starting up

1 Work in pairs.

Professions Related to Wine

Find the definition for the following professions.

- 1 Cooper _____
- 2 Garagiste _____
- 3 Negociant _____
- 4 Oenologist _____
- 5 Sommelier _____
- 6 Vintner, Winemaker _____
- 7 Viticulturist _____

- a** A wine producer; a person who makes wine
- b** A wine merchant, most specifically those who assemble the produce of smaller growers and winemakers and sells them under their own name
- c** An amateur winemaker, or a derogatory term used for small scale operations of recent inception, usually without pedigree and located in Bordeaux
- d** Craftsman of wooden barrels and casks. A cooperage is a company that produces such casks
- e** Wine scientist or wine chemist; a student of oenology. A winemaker may be trained as an oenologist, but often hires a consultant instead
- f** A restaurant specialist in charge of assembling the wine list, educating the staff about wine, and assisting customers with their wine selection
- g** A person who specializes in the science of grapevines. Can also be someone who manages vineyard pruning, irrigation, and pest control

(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. <http://en.wikipedia.org/wiki/Wine>)

2 Insect, Disease and Weed Control

Complete the sentences below using one of the words or expressions from the box.

leaf curly mite natural predator predator-safe predatory mites
pests weeds bee-safe preparation fungus disease
noble rot botrytis pheromone ampulla

- 1 All the spray solutions we use to control pests and diseases are _____ .
- 2 In our vineyard we use only _____ .
- 3 The _____ is a sucking insect which attacks leaves.
- 4 _____ is fungus that infects various usually overripe wine grapes causing shriveling which results in increased sugar and flavuor content and is responsible for the characteristic flavour of wines.
- 5 Common _____ are flower flies, green lacewings, ladybirds, and chalcid wasps.
- 6 Common _____ are the vine louse, grape berry moths, cicadas, and vine leaf roller.
- 7 Oidium/powdery mildew, peronospora/downy mildew, grey mould and green mould are common _____ .
- 8 By using _____ the male moths are confused and cannot breed.
- 9 _____ in the vineyard compete with the vine for moisture and nutrients.
- 10 _____ are used against spider mites.

B Reading and Speaking

Introduction to Chemistry

1 Work in pairs.

Define the following terms:



chemistry

matter

element

atom

compound



Video



2 Watch the video: What is Chemistry

(Source: https://www.youtube.com/watch?v=O_eGonuFi0I)

3 Match these branches of chemistry (1-5) with their definitions

- 1 organic chemistry
- 2 inorganic chemistry
- 3 physical chemistry
- 4 analytical chemistry
- 5 biochemistry

- A) a branch of chemistry concerned with substances that contain little or no carbon
- B) chemistry that deals with the chemical compounds and processes occurring in organisms
- C) a branch of chemistry that is concerned with carbon and especially carbon compounds which are found in living things
- D) a branch of science applying physical methods and theory to the study of chemical systems
- E) the subdivision of chemistry dealing with the qualitative and quantitative determination of chemical components of substances.

C Language Use

Collocations

1 Which of the following words can form a collocation with a) change, b) substance and c) study.

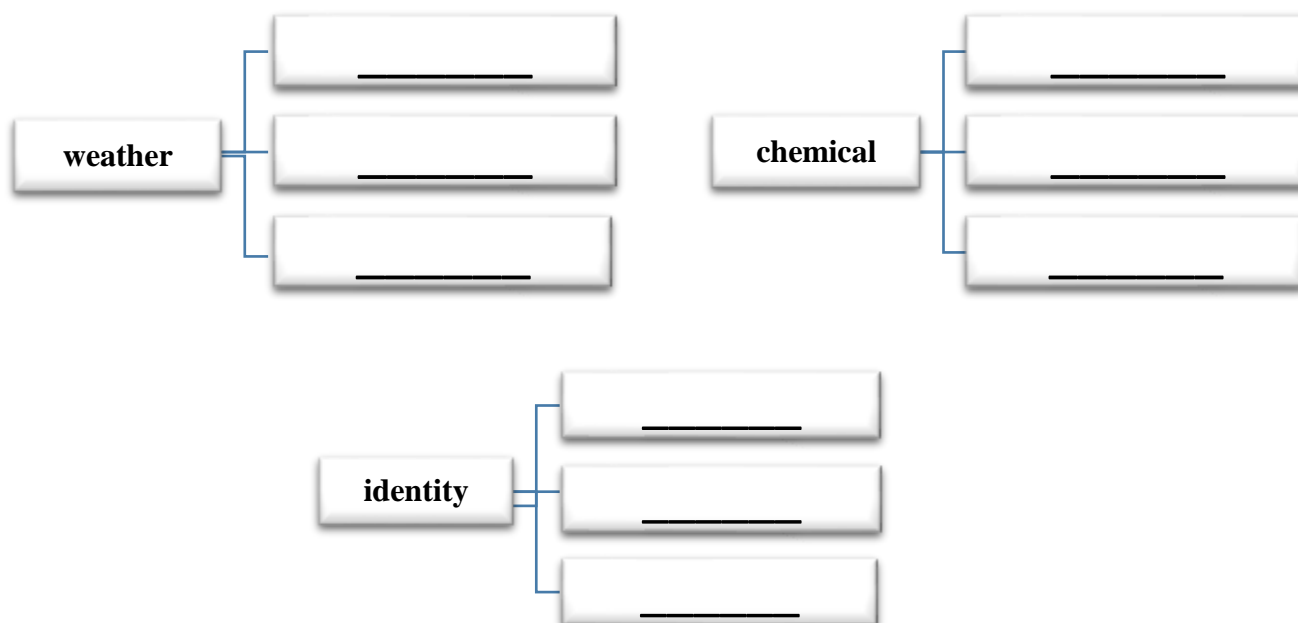
- 1 illegal 2 part-time 3 complete 4 oily 5 graduate 6 dramatic
7 toxic 8 climate 9 full-time 10 long-term 11 chemical 12 academic

a) _____

b) _____

c) _____

2 Complete these collocation forks.



3 Read the text and give it a title. Pose questions covering the topic sentence and supporting details.

A laboratory is a facility that provides controlled conditions in which scientific or technological research, experiments, and measurement may be performed.

Laboratories used for scientific research take many forms because of the differing requirements of specialists in the various fields of science and engineering. A physics laboratory might contain a particle accelerator or vacuum chamber, while a psychologist's laboratory might be a room with one-way mirrors and hidden cameras in which to observe behaviour. In some laboratories, such as those commonly used by computer scientists, computers are used for either simulations or the analysis of data collected elsewhere. Engineers use laboratories to design, build, and test technological devices.

The chemical laboratory may be used for teaching purposes, for routine analysis, testing, and control, for fundamental research or applied research, or as an adjunct to development or production for industry. There are also specialist types of laboratories, for example, those for nuclear research.

Wine laboratories check the quality of wine, champagne, sparkling wine, semi-sparkling wine, fruit wines, fruit juice, beverages containing wine and beverages similar to wine, and spirits. They often function as expert consultants to wineries and wine producers in winemaking, support winemakers during the fermentation process and perform analytical, microbiological and sensory testing to provide advice on reliable processes aimed at producing high quality wines. Licensed wine laboratories analyze and check finished wines and sparkling wines in accordance with statutory specifications in order to classify them as quality wines.

The typical chemical laboratory usually consists of a large room with a weighing (balance) room, a reagent room and sometimes a darkroom.

The balance room is specially constructed to be free from external disturbances. The balances stand on firm stone shelves.

The reagent room is used for storing chemicals and apparatus. Chemicals are stored on shelves in labeled bottles and other containers.

The laboratory itself is fitted with benches, sinks, fume cupboards or hoods, electric drying chambers and steam ovens. Distilled water is usually stored in glass tanks or containers.

The laboratory usually has facilities for glass blowing. Heating is generally done directly by the Bunsen burner. Test-tubes are held above the flame in wooden holders or tongs. Solutions are heated in beakers and flasks on wire gauzes or asbestos boards, supported by tripods. Solids are heated in crucibles supported by triangles. Crucibles have lids.

Vessels and tubes are generally closed by means of glass stoppers, rubber bungs or corks.

Materials are pulverized by a mechanical grinder or by a pestle and mortar. Liquids are stirred with a glass rod.

Filtration is carried out by allowing the liquid to percolate (strain) through a filter, such as a filter paper folded to fit a filter funnel. The filter paper is a circular sheet of paper, which has very fine pores through which liquids can pass but not solids. When a mixture is filtered, the clear liquid which comes through the filter paper is called the filtrate and what is left on the filter paper is known as the residue.

Samples of gases may be collected for experimental purposes in air-tight gas containers over water or mercury by displacing air with the gas. The method of collection varies according to the solubility and density of the gas. A gas-jar is made of thick glass and has a ground glass top, which can be made "gas-tight" by placing on it a ground glass cover smeared with a thin film of petrolatum.

(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. <http://en.wikipedia.org/wiki/Wine>)

4 Translate the following terms.

GLASSWARE

A. Containers

- a) open containers:
- 1) test-tubes
 - 2) beakers
 - 3) flasks →
 - a) conical flasks
 - b) round-bottomed flasks
 - c) flat-bottomed flasks
- b) closed containers -bottles:
- 1) reagent bottles (with glass stoppers)
 - 2) screw-capped bottles
 - 3) wash-bottles

B. Tubing

- a) hollow: 1) tubes → a) straight tubes
 b) U-shaped tubes
 c) bent tubes
- b) solid: rods

C. Special apparatus:

- a) measuring 1) graduated cylinders
 2) burettes
 3) pipettes
- b) pouring 1) funnels



Photo courtesy of J. Mešić

D Language Review

Passive

The Passive changes the focus of a sentence. It is used for functional and stylistic reasons.

Active: *Wine laboratories check the quality of wine.*

Passive: *The quality of wine is checked by/in wine laboratories.*

To form a passive sentence the object of the active sentence is placed in subject position in the passive sentence. The subject of the active sentence may (though need not always) be tagged to the verb phrase as a by-adjunct.

The passive of an active tense is formed by putting the verb *to be* into the same tense as the active verb and adding the past participle of the active verb.

1 Right or wrong?

- 1 **The youth were put** in the police cells overnight.
- 2 **They were questioning** by the police for several hours.
- 3 Next morning **the youth have released**.

2 Change the sentences into passive sentences with the same meaning, e.g.

The authorities refused him a passport. → *He was refused a passport.*

1 They still deny women the right to vote in some countries.

2 Unkind remarks upset the students.

3 I can assure you I will arrange everything in time. (2 passives)

4 They have told him to return the money by next Friday.

5 We'll give the new members of our club all the help they need.

3 Complete these sentences with suitable prepositions.

DON'T use by.

- 1 I am surprised _____ your attitude.
- 2 She was shocked _____ her behaviour.
- 3 I am excited _____ the possibility of becoming an MP.
- 4 Farmers are worried _____ the future.

4 Re-write each sentence in the passive, omitting the words underlined.

1 The government has announced that petrol prices will rise tomorrow.

2 It's time the Ministry of Agriculture did something about this problem.

3 All the farmers agreed with the report and so they changed the law.

4 He doesn't know what happened to the car.

5 Lots of angry farmers had parked their tractors on the pavement.

E Reading and Speaking

1 Read the text below and find words that mean the following.

- 1 incomplete _____
- 2 enrichment _____
- 3 impact _____
- 4 take in _____
- 5 ratio _____
- 6 spot _____
- 7 crucial _____
- 8 absence _____
- 9 lower _____
- 10 copy _____

Soil and Its Influence on Wine Quality

Wine can be made from the grapes grown in virtually every type of soil. The essential requirements are: the soil needs to provide sufficient anchor to the vines, and enough water and nutrients for them to be able to produce grapes that ripen for the harvest. Nevertheless, there are many soil-related factors that will influence wine quality, such as the depth and composition of the soil, the pH, the presence of organic matter, macro and micro nutrients and availability and drainage of water.

The two most important factors of a soil, for the purpose of growing grapes and making wine, are its structure and texture. These two components will cause a vine to grow and produce grapes differently. In principle, the percentages of clay, sand, silt, loam, and rock present in the

soil will determine the grape varieties that would be well suited to produce grapes of the best quality for that specific site.

Soil depth (and the correspondent water availability) comes next. 16 inches of water is required by the average vineyard to grow and ripen grapes (sometimes more and sometimes less), depending on the climatic conditions and each foot in depth of a loamy soil will hold about 3 inches of available water. Thus, such a soil must be 5 feet or more in depth, while sandy soils must be considerably deeper to supply enough water to the vine. Nevertheless, the ability of the roots to grow deep will make the vine less susceptible to water availability in the top layers.

Another viticultural practice that can help to improve the soil condition is the use of cover crops. They protect the soil from rain impact (that is especially helpful in hillsides that have a high risk of erosion), improve drainage, and help to build soil organic matter, growth of Arbuscular mycorrhiza fungi (which is essential for the absorption of nutrients by the roots), and to add organic nitrogen to the soil.

Nitrogen is food for vines. They use it to grow and to reproduce and fertilization can help to improve any existent deficiencies of nitrogen (and other nutrients). However, an excess of this compound can be detrimental to the fruit-bud formation or to fruit set. Nevertheless, the fact that matters the most regarding the influence of soil in wine quality is that high nitrogen concentration will also aid a strong vegetative growth. Two other deficiencies and toxicities should be taken into consideration. With potassium deficiency, leaf fall is premature and can be so extensive that the fruit will fail to ripen; in chalk and limestone soils (plenty of calcium), vines are susceptible to lime-induced chlorosis; both detrimental to fruit quality. The high salinity of the soil can have negative effects as well. When it exceeds certain levels, it affects plant growth and its ability to properly ripen grapes.

As calcium is concerned, it's also important to discuss acidification of vineyard soils. Grape varieties vary substantially in their optimum pH for growth but, very acidic soils (pH of 5.5 or lower), can affect the ability of the vine to absorb some nutrients, while making others much more available, bringing them to levels of toxicity. This can certainly reduce the quality of the wines, but the application of calcium is a remedy for this condition.

Overall, any description of an "ideal soil" for grape growing must acknowledge the local environment where the vineyard is located, the landscape features, grape varieties planted, and the style and level of quality of the wine to be made.

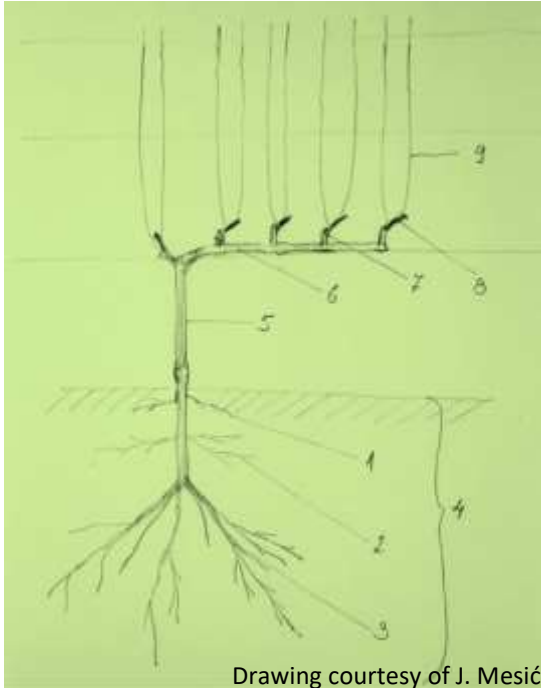
(Source:<http://thewinehub.com/home/2015/11/13/how-does-soil-influence-wine-quality/>)



Morphology of Grapevine

2 Look at the following drawings and write in the listed words.

cordon root trunk arm spur shoot lateral root
shallow roots principal roots



Drawing courtesy of J. Mesić

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____
- 8 _____
- 9 _____

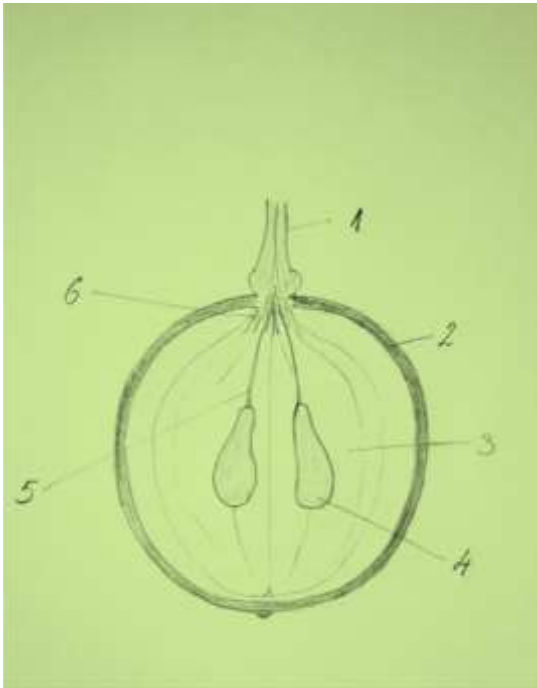
cluster/grape tendril bud shoot two-year-old vine cane
node internode leaf



Drawing courtesy of J. Mesić

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____
- 7 _____
- 8 _____

seed skin flesh pedicel brush vascular bundle



- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____

Drawing courtesy of J. Mesic

3 Give each drawing a title and describe it.

4 Read the article and answer these questions.

- 1 When is the physiological ripeness of the grape reached?
- 2 Where does the process of winemaking really start?
- 3 Why is the carefully planned picking of grapes essential?
- 4 Why is it important to get the grapes to the winery as quickly as possible?

Grape Ripeness

A vine goes through a number of stages of development between bud break at the end of the winter and producing ripe grapes at the beginning of autumn. Physiological ripeness is reached when the grapes achieve sufficiently high sugar levels without losing too much acidity.

Sometimes it can be difficult to achieve the minimum sugar content prescribed by the *appellation* in cooler regions. By contrast, in hotter regions, more frequently the problem is too great a loss of acidity. Corrections are possible during the winemaking process in both cases.

Carefully planned picking enables the grapes to reach the cellar without losing any of the perfection the vineyard has produced. The harvest is the culmination of the wine year and its

most crucial point, yet the experts agree that the process of winemaking really starts in the vineyard.

Picking grapes is the process in which bunches are cut from the vine with a pair of scissors and placed in a small plastic basket or box, which is emptied into a wooden vat or tub. The following step is to pour the grapes into a large container or into a trailer which is pulled by tractors into the winery to be processed.

Getting the grapes into the winery as quickly as possible is vital. Autumn temperatures can be high and spilled grape juice oxidizes quickly when exposed to air. Grapes that are too hot can also lead to a lack of aroma in the wine if they are not chilled on arrival. Spilled grape juice starts fermenting quickly particularly in warm temperatures. This uncontrolled or wild fermentation can give the must a vinegar-like sharpness.

(Sources: Encyclopedia Britannica. Grape. Encyclopedia Britannica 2010 Ultimate Reference Suite DVD, winegrapes.tamu.edu/grow/ripening.pdf and Dominé, 2003)

5 The following words and expressions are connected with grape production and harvest.

Use them to complete the following sentences.

**inter-vine cultivator drip irrigation bucket
grape harvester refractometer pH-value subsidies**

- 1 _____ are emptied into hoods.
- 2 The sugar content is measured with a _____ .
- 3 The _____ is used for removing weeds between the vines.
- 4 We have installed _____ for additional watering.
- 5 Before harvesting _____ must be checked.
- 6 Wine producers in Croatia receive EU _____.
- 7 _____ save labour and time.

F Language Use

Gerund and Infinitive

Notice the Gerund in this sentence from the text:

Picking grapes is the process in which bunches are cut from the vine with a pair of scissors and placed in a small plastic basket or box, which is emptied into a wooden vat or tub.

Translate the sentence.

Are there any other examples of Gerund in the text?

1 Put the verbs in brackets into the infinitive or –ing form

The Chocolate Revolution

After **1** *reaching* (reach) Europe with Columbus in 1502, chocolate rapidly became popular as a drink that people took **2**__ (improve) their health. **3** __ (eat) solid chocolate, however, was unpopular; it was dark and bitter, and manufacturers did not know how **4** __ (mix) it with milk or cream **5**__ (make) it tastes better. The discovery of milk chocolate was made in 1876 by Daniel Peter in Switzerland. After **6** __ (try) unsuccessfully for eight years to mix milk and dark chocolate, Peter began working with his neighbour, the chemist Henri Nestlé. Nestlé had developed a new product **7**__ (feed) babies; in the process, he had discovered how **8** __ (make) condensed milk, which Peter tried instead of **9** __ (use) ordinary milk. The result was an instant success, and the two men joined forces **10**__ (manufacture) milk chocolate for a grateful world.

(Duckworth, 2003)

- 1 _____ 2 _____ 3 _____ 4 _____
5 _____ 6 _____ 7 _____ 8 _____
9 _____ 10 _____

2 Read the extract from a composition below and decide if the underlined phrases are correct. Correct them when necessary in the spaces below, or put a tick in the space if no correction is needed. The first has been done as an example.

I dread thinking (1) what will happen if global warming continues at the present rate. I remember to go (2) on beach holidays when I was a child and although it was hot I don't recall it to be (3) as hot as it has been for the last year or so. Temperatures continue to soar (4) and scientists anticipate it to get (5) worse. I dislike them talking (6) like this and recommended to ignore (7) them completely, though every day we watch the debate become (8) even more heated than a Greek island.

(Side & Wellman, 2001)

- 1 *dread to think* 2 _____ 3 _____ 4 _____
5 _____ 6 _____ 7 _____ 8 _____

3 Underline the word or phrase that best completes the sentences.

- 1 By the evening, people had _____ to worry about the tsunami.
a finished b ceased c quit d given up
- 2 My sister suggested _____ together this weekend.
a getting b to get c having got d to got
- 3 How can you bear her _____ to tell such lies to you?
a going on b keeping c carrying on d continuing

4 The authorities are _____ to build a new bypass around the town.

a advising b suggesting c planning on d proposing

5 I think they really _____ to go to the ceremony with you.

a adored b wanted c appreciated d admired

4 Spelling

Which spelling(s) is/are correct: the first, the second or both?

- | | |
|------------------|-----------------|
| A beginning | begining |
| B loseing | losing |
| C biger | bigger |
| D planed | planned |
| E replacable | replaceable |
| F acknowledgment | acknowledgement |

5 *Cross out the letter(s) that is/are not normally pronounced, e.g.*

~~H~~OUR

- 1 BUSINESS
- 2 INTERESTING
- 3 DIFFERENT
- 4 RESTAURANT
- 5 USUALLY

6 *Read the passage below about over-ripeness. In most of the lines 1- 12 there is one wrong word. Some lines, however, are correct.*

- ▶ ● If a line is **correct**, put a tick on the appropriate line.
- ▶ ● If a line is **incorrect underline the wrong word** in the text, and **write the correct word in the space provided.**

If the grapes are not picked once they are ripe, the stage of over-ripeness begins. _____
One of the most famous types of over-ripeness on the vine is achievement with _____
the aid of noble rot, production wines such as Tokaji and Sauternes. The fungus _____
responsibility is the same one that causes gray rot, but the conditions are different. _____
Noble rot requires misty, slightly humidity mornings, followed by sunny _____
afternoons. The fungus develops under the skins of the grapes, leading to a loss _____
of moisture and an increase in the concentration of sugar. The crops are harvested _____
in several stages by searching out affected bunches, or even individual grapes. _____
Over-ripeness can also be achieved away from the vine, by picking and storing _____
bunches once they are ripe. In certain regions of Italy, grapes are hung on racks _____
for months and then pressed the following year during Holy Week, forming the _____
base from VIN SANTO. _____

(Dominé, 2003)

G Reading and Language

1 Work in pairs. Student A: read the article and present the advantages of the manual harvesting of grapes to your partner.

Student B: read the article and present the advantages of the mechanical harvesting of grapes to your partner.

Manual or Mechanical Harvesting



Photo courtesy of Kutjevo d.d.

Growers may opt to harvest their crop manually or mechanically. If the slopes are steep, vineyards small and fragmented, or the vines low and old, the only possibility is to harvest manually. One of the most important reasons for choosing manual harvesting is to deliver the grapes to the winery in perfect condition. If the crop is in good health and arrives in the winery as unscathed as possible, the need to add sulphur can be significantly reduced or even avoided completely. Additionally, manual harvesting allows the grapes to be sorted during and directly after picking, before leaving the vineyard.

Manual harvesting is more expensive than mechanical harvesting, but many people prefer hand-picking for the sake of tradition. People enjoy working in small harvesting teams of not more than 10 to 20 pickers who often return year after year because they enjoy working together.

However, machines are being found in more and more grape regions. Mechanical harvesters or in some cases robots are now used in most medium to large vineyards. They were first used in a Californian vineyard in 1968, significantly decreasing the time it takes to gather grapes.

One of the advantages of mechanical harvesting is that it can be used as circumstances dictate. Harvesting can be done at night, while it is cool which is important for many wineries in hot regions of Australia where daytime temperatures reach between 35° and 45 ° C.

The greatest advantage of mechanical harvesters is their speed. With machines it is possible to bring in the entire harvest at the optimum moment. The quality of the work done by a mechanical harvester also depends on the shake setting and the speed with which it moves. The quicker it passes along the rows, the harder it has to shake the vines to loosen the grapes. This damages the crop, injures the vines and breaks the stakes. Mechanical harvesters cannot be used where wines are made by pressing whole bunches because the machines deliver only individual grapes.

(Source: Encyclopedia Britannica. Wine Making Process. Encyclopedia Britannica 2010 Ultimate Reference Suite DVD)

2 Read the article again and underline all modal verbs.

3 In each item below one or two options may be possible to complete the sentence. Underline those that are possible.

1 Do you think you *will/may/could* stand a little further away?

2 *May/Could/Would* you be so kind as to give me some advice?

3 *Shall/Will/Can* I carry that rather heavy-looking case for you?

4 *Will/Could/Can* you possibly come back a little later?

5 *May/Would/Might* you be willing to refund the money we have already paid you?

4 Write the second sentence so that it has a similar meaning to the first. Use the words in brackets.

Perhaps Sandra knows the address. (may)

Sandra may know the address.

1 You should be careful. (ought)

2 I managed to finish my homework. (able)

3 I realize that it was a terrible experience for you. (must)

4 It's against the rules for players to have a drink. (allowed)

5 The report must be on my desk tomorrow morning. (has)

7 It is possible that Valerie did not receive my message. (might)

8 It was not necessary for Barbara to clean the flat. (didn't)

Winter Harvest of Grapes



Photo courtesy of J. Mesić

A winter harvest of grapes for the production of ice wine has been known since the nineteenth century. The first ice wine was produced when a German grape farmer was surprised by an early frost. As he didn't want to waste the grapes, he pressed the juice from the frozen grapes and the resulting wine was ice wine.

Ice wine is one of the rarities in the sweet category of wines. It is traditionally made by harvesting and pressing frozen grapes at a temperature of at least -7°C .

Frozen grapes are harvested very carefully, exclusively by hand, at early dawn while it is still dark because the harvest must be finished before sunrise.

The water content of the berries largely turns to ice and little juice can be pressed out containing a very high proportion of sugars, acids and other extract components.

Ice wine is very rare wine and belongs to top predicate wines. It is obtained exclusively from grapes of recommended varieties which ripen in exceptional years under exceptional conditions and is harvested and processed in a specific way.

(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. http://en.wikipedia.org/wiki/Ice_wine)

5 Are these statements true (T) or false (F)? Correct the false ones.

- 1 Frozen grapes are harvested before sunrise. _____
- 2 A lot of juice can be pressed from frozen grapes. _____
- 3 Frozen grapes are harvested mechanically. _____
- 4 Winter harvest was known in ancient times. _____
- 5 Ice wine is produced in large quantities. _____

6 Discuss these questions before you read the article.

- 1 Which is the first important step after harvesting the grapes?
- 2 What is free run juice?
- 3 When does pressing take place in the production of white wine?
- 4 When does pressing take place in the production of red wine?

Turning Grapes into Wine

Vinification, the transformation of grapes into wine begins with the arrival of the grapes into



Photo courtesy of J. Mesic

the winery and ends when the fermented wine is racked off its lees. The process takes between less than a week and three months, depending on the wine and fermentation methods.

The first important step after harvesting is getting the grapes into the winery as quickly as possible. Autumn temperatures can be high and juice from broken grapes can oxidise before the crop even arrives. Grapes that are too hot can also lead to a lack of aroma in the wine if they are not chilled on arrival.

Next, the grapes are crushed and/or de-stemmed (separated from the stalks of the bunch). Crushing is the process of gently squeezing the berries and breaking the skins to start to liberate the contents of the berries. In the past it used to be done with the feet or hands, however, in modern wine production, it is done by a crusher-stemmer which consists of a perforated cylinder containing paddles revolving at 600 to 1,200 revolutions per minute.

Pressing takes place at different points in the winemaking process, depending on whether white or red wine is being produced. How pressing is carried out depends on the desired end product. With white wines it generally takes place after de-stemming and crushing, and after fermentation with reds. The liquid that runs off before pressing begins is called the free run juice or wine.

There are a number of pressing techniques and the choice of which one to use depends on many factors such as economics, the amount to be pressed, the type of wine to be produced and possibly the regulations in force in a particular region. The traditional basket press is gradually being replaced by a horizontal pneumatic basket press which applies pressure from both ends. The drained pomace (crushed mass remaining after the extraction of juice from grapes) may be used to provide distilling material for the production of wine spirits.

Before the must of white grapes can be fermented it has to be less turbid and cloudy. Many winemakers think that unless they clear the must of every bit of solid matter the wine will suffer. The simplest and most natural method of clarification is settling. The must is pumped into a settling tank where it rests for a day. In order to achieve the goal, the must has to be cooled to from 5° to 0° C. After twenty-four hours all solids precipitate and the must is clarified.

If there is no possibility of cooling the must, other clarification methods are used. The must can be fined by the addition of bentonite. In many areas wineries centrifuge the white must to remove the solids. Among the fining agents used are enzymes which dissolve pectins. Pectin

makes the must thick. Removing the pectin thins the must. It can be clarified faster and fermented sooner.

(Source: Encyclopedia Britannica. Wine Making Process. Encyclopedia Britannica 2010 Ultimate Reference Suite DVD)

7 Use these words or phrases from the article to answer the questions below.

vinification precipitate liberate
carry out unless de-stemmed

Which word or phrase:

- 1 means to complete the task? _____
- 2 refers to winemaking? _____
- 3 means the same as if not? _____
- 4 refers to separate and fall or deposit? _____
- 5 is the opposite of stemmed? _____
- 6 means to free sb or sth? _____

H Skills

Handling Difficult Situations

1 Work in pairs. You will be looking at the language for dealing with tricky situations.

For each of the situations, 1-8 choose the appropriate response a) to h).

- 1 Someone asks about a colleague who's been fired.
- 2 You are invited out to dinner when you don't really want to go.
- 3 A colleague tells you some very bad news about herself.
- 4 You arrive late for a meeting.
- 5 You recognize someone but you can't recall their name.
- 6 You want to end a conversation at a business reception.
- 7 You want someone to stop smoking in a non-smoking area.
- 8 You spill coffee over a client's desk at a meeting.
 - a) Excuse me. I'm afraid smoking isn't allowed here.
 - b) I'm sorry but there's someone over there that I have to talk to.
 - c) How clumsy of me. I'm really sorry.
 - d) I'm terribly sorry to hear that.
 - e) I'm so sorry. The traffic was a nightmare.
 - f) I know we've met before but I'm afraid I can't remember the name.
 - g) That's really kind of you but I'm exhausted after the flight.
 - h) I'm afraid he left the company last month.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____



Listening

2 Listen to these four conversations. In each case, match what the second speaker says to one of these headings.

- ▶ saying 'no' politely
- ▶ apologising
- ▶ showing sympathy
- ▶ ending conversation

3 Read the article and answer these questions.

- 1 What happens during the fermentation process?
- 2 How do the yeasts multiply?
- 3 At what temperature does the fermentation of white must occur?
- 4 How do winemakers get rid of undesirable micro-organisms?
- 5 How is the malolactic fermentation induced?
- 6 Why are grape skins important in red wine production?
- 7 What is racking?

Fermentation



Photo courtesy of J. Mesić

All wines need yeast to ferment. During the fermentation process, sugar is turned into alcohol by the action of yeast, releasing carbon dioxide and heat. Yeasts are fungi, and like bacteria, they are single celled. They multiply by division. The energy for this process is supplied by the

sugars present in grape must dissolved glucose and fructose. The activity of the yeast is limited by certain conditions. At high temperatures yeast multiplies quickly causing a stormy fermentation while low temperatures make them lazy and slow down fermentation.

The fermentation of white must occurs at a relatively cool temperature (about 12° to 17° C). In red wine must the optimum colour extraction consistent with yeast growth occurs at about 24° to 30° C. Yeast is present on the grapes and the process of fermentation can be done with this natural yeast, however, they are not always present in the environment in quantities sufficient to bring about adequate fermentation. The use of chemicals in the vineyard can cause a drop in the yeast population. Winemakers who are reluctant to take any risk, add commercially

produced yeasts whose properties are known in detail. This can be done before fermentation begins, or used only as an initial boost where fermentation is slow or has been interrupted.

A lot of damage to the wine can be done by the number of undesirable micro-organisms from partially rotted or injured grapes. The most frequent method used to stop their growth is the addition of sulphur dioxide to the freshly crushed grapes.

The alcoholic fermentation of red grapes takes place both in the liquid, or must, and also in the solid components – the skins, seeds, and stalks. To ensure the satisfactory extraction of pigments and tannins, it is important to maximize contact between the solids and the liquid, otherwise, the carbon dioxide that is released carries the solids to the surface where they form a "cap".

Wine can be fermented in large stainless steel vessels or oak barrels. Depending on the objectives (decision/wishes/desires/intention) of the winemakers, it can be fermented mainly in stainless steel and then briefly put in oak barrels or the whole fermentation can be done in stainless steel.

All red wines undergo a second fermentation after the alcoholic fermentation is completed. It is called malolactic after the Latin word malum, "apple". In all temperate regions, red wines retain varying degrees of malic acid. Malolactic fermentation is initiated by the enzymes produced by certain lactic-acid bacteria. Excessive malolactic fermentation may produce wines too low in acidity or with undesirable odours.

In many grape regions, malolactic fermentation occurs spontaneously in the springtime. The only thing the winemaker has to do is to open the windows and let the warm spring air in. With rising temperatures, the fermented wine once more becomes active.

The fermentation of normal musts is usually completed in 10 to 30 days, the period in which the major portion of the yeast cells will be found in the sediment or lees. The process of the separation of the wine from the lees is called racking.

(Source: Encyclopedia Britannica.Wine Making Process. Encyclopedia Britannica 2010 Ultimate Reference Suite DVD)



Photo courtesy of J. Mesić

4 Read the text again and provide the English equivalents of the following words or expressions.

- 1 odvajanje vina od taloga _____
- 2 ugljični dioksid _____
- 3 svojstva _____
- 4 peteljka _____
- 5 kvasci _____
- 6 jabučna kiselina _____
- 7 površina _____
- 8 talog _____

5 Rearrange the words in the sentences below to form correct sentences. (Add capital letters, question marks and other punctuation marks where necessary.) There is an example at the beginning (0).

0 in wine ways can be pressed two white

White wine can be pressed in two ways.

1 careful of alcoholic fermentation control process the requires

2 derive from grape skins wines red colour their

3 stainless or large fermented is wine steel vessels barrels usually either in oak

4 fermentation caused by bacteria lactic-acid enzymes is the by produced certain

5 must normal fermentation the usually take long how of does

6 Translate the following text.

Alkoholno vrenje mošta



Photo courtesy of J. Mesić

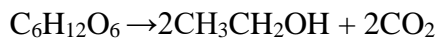
Vrenje mošta, tj. alkoholna fermentacija predstavlja jednu od osnovnih faza u procesu proizvodnje vina. Bit te tajanstvene pojave razjasnio je Louis Pasteur (1822.-1895). Vrenjem mošta, u stvari, počinje stvaranje vina.

To je faza koja nastupa nakon muljanja grožđa odnosno cijedenja mošta. Tada kvasci (gljivice

alkoholne fermentacije) koji su na pokožici bobice mirovali, došavši u tekućinu u kojoj je rastvoren šećer (u mošt), počinju intenzivno razmnožavanje, razlažući šećer na razne spojeve, a najviše na alkohol i CO₂. Ova dva spoja su, u stvari, najvažniji i osnovni produkti rada vinskog kvasca. Istovremeno, alkohol je i osnovni sastojak vina, odnosno svakog alkoholnog pića, dobivenog alkoholnom fermentacijom.

Alkoholno vrenje se pojednostavljeno prikazuje ovako:

šećer → etanol + ugljični dioksid + toplina



Pored ovih osnovnih produkata alkoholne fermentacije, stvara se, u znatno manjim količinama i čitav niz raznih drugih spojeva. Istovremeno, nastaje određena količina energije, koja se oslobađa u vidu topline, a djelomično je kvasci koriste za svoje životne potrebe. Tijek vinifikacije, količina i međusobni odnos pojedinih spojeva, kao i količina stvorene energije dosta se razlikuju. Promjene u moštu koje izazivaju kvasci vizualno se očituju u sljedećem: mošt se najprije jako zamuti, zatim se stvaraju lagani mjehurići i pojavljuje se debela pjena koja počinje vreti. Pri tom temperatura poraste za 10, 20 i više stupnja. Debljina pjene i intenzitet vrenja znatno ovise od temperature mošta, kao i od drugih okolnosti, tj. kvaliteta (sastava) mošta, veličine posude, vrste odnosno kulture kvasca, aeracije i sumporenja mošta itd. Ovaj proces i promjene nazivaju se alkoholno vrenje mošta ili alkoholna fermentacija, odnosno vinifikacija u užem smislu riječi.

(Source:http://www.vinogradarstvo.hr/index.php?option=com_content&view=article&id=419:alkoholno-vrenje-mosta-alkoholna-fermentacija&catid=103:za-one-koji-zele-znati-nesto-vise&Itemid=250)

I Language Use

1 Choose the correct plural form.

A bacteriums/ bacteria/ bacterias

B funguses/ fungi/ funga

C criteriums/ criteria /criterias

D passer-bys / passers-by

E mother-in-laws/ mothers-in-law

British vs American English

2 British vs American English

Fill each of the numbered blanks with a verb from the list in an appropriate form. The first (0) has been given as an example.

discriminate differ vary differentiate diverge
liken contrast (compare)

Millions of words have been written in an attempt to *compare* (0) the two languages, pointing out how they _____ (1) but are still recognisably the 'same' language. Clearly, no one should _____ (2) against the American species just because it is the younger partner. Some people have _____ (3) the difference to that between a horse and a mule, but that does not go very far towards _____ (4) between the two languages. They are rather two breeds of horse that have _____ (5) very slightly over the years. Some points of British English grammar _____ (6) quite sharply with American English, but the fact remains that accent _____ (7) as much within each country as between the two.

(Side & Wellman, 2001)

3 Give the common British equivalents for these American English words.

- A fall _____
- B subway _____
- C restroom _____
- D sneakers _____
- E faucet _____
- F pants _____
- G garbage _____
- H elevator _____



4 Explain different parts of speech in the following sentence:

When I was born, I was so surprised that I couldn't talk for a year and a half.
Gracie Allen

5 Match the signs with their meaning

- | | |
|----------|--------------------|
| 1. . | a brackets |
| 2. , | b semicolon |
| 3. : | c dash |
| 4. ; | d comma |
| 5. ? | e quotation mark |
| 6. ! | f block capitals |
| 7. ' | g colon |
| 8. - | h apostrophe |
| 9. ... | i exclamation mark |
| 10. / | j full stop |
| 11. “ “ | k dots |
| 12. () | l question mark |
| 13. ANNE | m slash / oblique |

6 All the punctuation and capital letters have been omitted from the following text. Put them back in the right place.

Chaptalization

chaptalization is the process of adding sugar to the wine in order to increase its alcohol content the name goes back to the french scientist and politician jean antoine chaptal 1756 1832 as minister of the interior under napoleon he was very concerned about the decline of the french wine industry in the period after the french revolution it occurred to him that wines could be enriched by the addition of either sweet must or raw sugar the enrichment of sour must through the addition of sugar made the creation of harmonious wines possible in the rainy years and since then it has been known as the sunshine out of a bag

(Dominé, 2003)



(Source: https://upload.wikimedia.org/wikipedia/commons/thumb/3/39/Jean-Antoine_Chaptal_1.jpg)

J The Lighter Side

1 How would you read this email address aloud?

m.robins@kmail.co.uk

Electronic Messaging

2 These are some examples of how words might be shown in a message.

What is the word?

1 2NITE	_____	8 MSG	_____
2 ASAP	_____	9 YR	_____
3 F2F	_____	10 SPK	_____
4 HAND	_____		
5 PCM	_____		
6 2 DAY	_____		
7 KIT	_____		

3 Jokes in texting

money wil buy a bed but not sleep, fud but not appetite, amusement but not hapines..u c
money s not evrything, der4,fu hav 2 much, pls send it 2 me ASAP!:-)

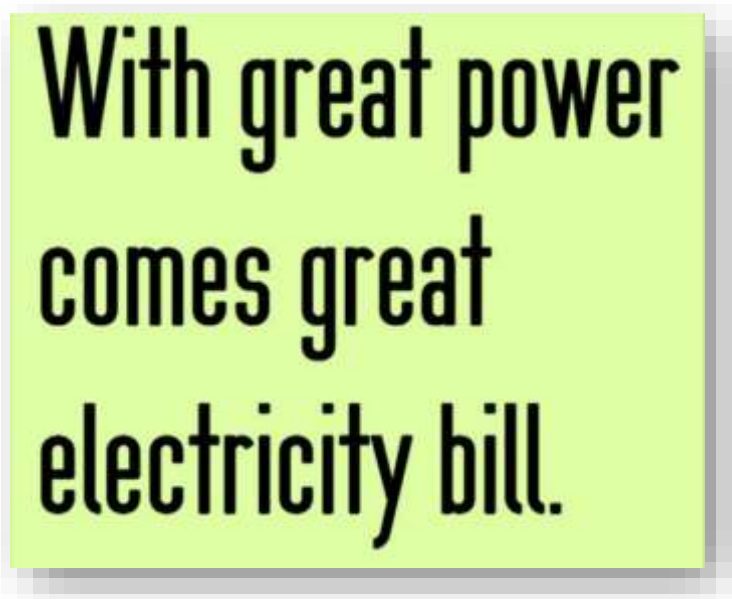
Girls are like celfones, they like to be held & talked to, but press the wrong button and you're disconnected. Guys are like buses...if you miss that one, another will be along soon.

A husband coming home from a confession lifts his wife and carries her on his shoulder.

Wife: Did d priest tell u 2 b so romantic like this?

Husband: No, he told me 2 carry my cross.

(Source: [http:// www.txt2nite.com/](http://www.txt2nite.com/))



UNIT 5

Bottling and Aging



Photo courtesy of Kutjevo d.d.

"Wine is bottled poetry."

Robert Louis Stevenson (1850-1894), Scottish author

A Starting up Drinking Terms

1 Work in pairs. Find the definitions for the following words and expressions related to drinking terms. There is one extra definition.

- 1 teetotaller
- 2 BYOB
- 3 liquor
- 4 fifth
- 5 forbearance
- 6 social drinking
- 7 one for the road
- 8 prohibition
- 9 sober
- 10 blue law

- A legal forbidding of manufacture and sale of alcoholic drinks
- B (slang) shot of straight spirits, such as vodka on ice
- C one who does not drink alcohol
- D (adj) not drunk, esp. habitually temperate in use of alcohol
- E law restricting alcoholic use, sale, or consumption
- F bring your own booze; designation on party invitation that drinks will not be supplied by host
- G alcoholic drink, usually distilled rather than fermented; booze
- H one-fifth gallon, standard U.S. bottle size for spirits
- I abstinence; temperance
- J final drink before leaving bar or party
- K moderate drinking at gatherings

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ 9 ____ 10 ____

B Reading and Speaking

Aging



Photo courtesy of J. Mesić

The truth is that there is no instant recipe for success in the art of turning grapes into wine. The same applies to maturing the wine in barrels. Many wines improve in quality during barrel and bottle storage. The barrel's most significant feature is that it allows the wine to breathe. During the aging period, acidity decreases,

additional clarification, and stabilization occur as undesirable substances are precipitated, and the various components of the wine form complex compounds affecting flavour and aroma.

The first decision a winemaker must make is the extent to which barrels should be used. It is possible to finish off a proportion of the wine in barrels, and the rest in tanks, and reintegrate the two directly before bottling to homogenize the blend.

As a rule of thumb, the more "structure" a wine has, the better it will withstand barrel aging. Barrel aging allows slow oxidation and adds certain aromatic compounds. That way the various components of the wine combine with each other, making the wine more harmonious. The additional oak tannins refine the tannins already present in red wine and give whites a sophisticated tannic element they previously did not have.

All barrels "drink" the wine, particularly the new ones: the loss is estimated to amount to three to five percent. Ullage is the headspace of air between the wine and the top of the barrel. The barrels cannot be left with an empty space inside. In order to prevent a vinegary edge that may develop, the wine barrel must be regularly topped up.

The duration of barrel aging varies depending on the type of wine being matured and the amount of volatile acid that forms in the barrel. Barrel maturation is more labour intensive than aging in a tank. When this fact is added to the cost of purchasing the barrels it is easy to see why barrel aging is so expensive. These factors are the reason why only high quality wine is worth carefully maturing in wood.

(Source: Encyclopedia Britannica. Aging. Encyclopedia Britannica 2010 Ultimate Reference Suite DVD)

1 Are these statements true (T) or false (F)? Correct the false ones.

- 1 Most wines do not improve in quality during barrel storage. _____
- 2 During the aging period the flavour and aroma of wine change. _____
- 3 Ullage is the head space of air between the wine and the bottom of the barrel. _____
- 4 The wine barrels don't have to be regularly topped up. _____
- 5 Maturing in tanks is as labour intensive as aging in barrels. _____

2 Fill in the gaps in the following sentences with the correct form of make, do or have. There is an example at the beginning (0).

- 0 Why do politicians always take so long to make decisions?
1 It's time you _____ a holiday, Margaret. It will _____ you the world of good.
2 Everyone over the age of thirty should _____ a will.
3 Your daughter is _____ excellent progress, Mrs. Grove.
She ought to _____ well in next year's exam.
4 It _____ no difference to me when you finish it, as long as you _____ a good job.
5 I've decided to _____ a big party on my birthday.
Could I leave you to _____ the arrangements, darling?
6 You must _____ the exam, I'm afraid. You _____ no alternative.
7 The two countries _____ talks last week and are optimistic about _____ peace soon.
8 Take this medicine. It will _____ you good.
9 This photograph doesn't _____ Sally justice. She is much better-looking really.
10 If we are going to _____ this company profitable again, we are going to have to _____ a lot of changes.

3 Discuss the following proverbs with your partner. Do you agree on their meaning? Are there any similar proverbs in your language?

The hand that rocks the cradle rules the world.

The exception proves the rule.

C Language Use

Idioms

1 Match the idioms from 1 to 6 with their meaning a to f. Use your dictionary.

- 1 rule someone or something out
2 a rule of thumb
3 rule over someone or something
4 rule the roost
5 rule with a velvet glove
6 rule with an iron fist

A (fig.) to be the most powerful member of a group, especially at home

B (fig.) to rule in a very gentle way

C to prevent, disqualify, or cancel someone or something

D a general principle developed through experiential rather than scientific means

E (fig.) to control a person or a group of people very severely

F to serve as a boss or chief over someone or something

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____

2 Complete the following sentences with the most suitable idiom (in an appropriate form) from exercise 1.

1 He _____, but he gets things done, nonetheless.

2 As _____, we always plant our tomatoes the first week in May.

3 The lack of money _____ our holiday plans.

4 Who _____ at your home?

5 He is the kind of boss who _____ his employees.

6 The late president _____ the country _____ for twenty years.

D Reading and Language

1 Discuss these questions before you read the article.

1 What type of wood can be used for the production of wine barrels?

2 How long does it take for an oak tree to reach the stage in which it can be used for timber?

3 Why is the size of a barrel important?

4 Which wine barrels are used by winemakers in Bordeaux and Burgundy?

5 List the words and expressions connected with the size and different names of barrels.

Barrels



Photo courtesy of Kutjevo d.d.

The use of wine barrels to age and store wine is an old tradition. A number of types of wood were used for wine barrels throughout history including beech, acacia, chestnut, cherry and poplar wood. Time has shown that only barrels made of oak or chestnut impart suitable aromas to the wine stored in them. Oak is the better choice. The aromas it contributes are far more interesting and its properties fulfil the cooper's technical requirements. Chestnut is rarely used nowadays

because it is susceptible to woodworm.

An oak tree takes 150 to 230 years to reach maturity and the stage in which it can be used for timber. Oak from a number of countries is used to make barrels, but French oak is considered to be the finest. American oak has been highly regarded for some time, not only on the American continent, but in Spain and Portugal, and more recently in South Africa and Australia as well.

Italian winemakers have been using Slavonian oak barrels of larger sizes, reusing them for many years before replacement.

Croatia has a long tradition in the production of oak barrels. Skilful coopers have an in-depth knowledge, which along with superior quality materials, have resulted in high quality oak barrels recognized not only by Croatian winemakers but also those all over the world.



Photo courtesy of Kutjevo d.d.

The production of oak barrels had declined due to the increasing popularity of stainless steel tanks. However, recently the trend is shifting back to the usage of oak barrels due to the superior taste and aroma of the wine aged and stored in oak barrels.

Barrels come in many sizes. The smaller the barrel used, the greater the wood to wine ratio. That means that more wood will be in contact with any given amount of wine. Wines will, therefore, extract more flavours, needing less time. A larger barrel lacks wine to wood contact, while a smaller barrel may contribute too much oak.

The smallest of the commonly used barrels are the barriques from Bordeaux. They hold 225 litres and can be found in the cellars of winemakers worldwide, especially those involved in producing Bordeaux-style blends of quality. In Burgundy they are a little smaller and hold 205 litres. Barrels used in the Portuguese Douro Valley for storing Port are called pipes and they hold either 550 or 580 litres. A hogshead is a 300 litre barrel used by winemakers in Australia.

(Source: <https://en.wikipedia.org/wiki/Barrel>)

2 Prefixes can help us understand a word by giving us some hint towards its meaning. Look at the following prefixes and try to explain their meaning.

- 1 dis _____
- 2 il (+l) _____
- 3 im (+m or p) _____
- 4 in _____
- 5 ir (+r) _____
- 6 un _____

3 Which negative adjective fits each of the following definitions?

- 1 _____ means not having a husband or wife.
- 2 _____ means impossible to eat.
- 3 _____ means unable to read or write.
- 4 _____ means not having a job.
- 5 _____ means fair in giving judgement, not favouring one side.
- 6 _____ means unable to be replaced.

4 A large number of foreign words and phrases are used in viticulture and academic texts. They are frequently derived from Latin or French.

The following table gives a list of Latin prefixes and their basic meanings.

Latin prefix	Basic meaning	Example word
anti-	against	anti-government
auto-	of or by oneself	autobiography
bi-	two, twice	bilateral
co-	together	co-author
de-	away, off; generally indicates reversal or removal in English	defrost
dis-	not, not any	discredit
ex-	former	ex-smoker
ex-	out of	extract
inter-	between, among	international
micro-	small	microwave
mini-	small	minicomputer
mis-	wrongly	misunderstand
mono-	one, single	monologue
multi-	many	multimillionaire
non-	not	nonessential
over-	too much	overcrowded
post-	after	postdate
pre-	before	premeditate
pro-	in favour of	pro-revolutionary
pseudo-	false	pseudo-intellectual
quasi-	almost, but not completely, the thing described	quasi-monopoly
re-	again, back, backward	recall
semi-	half	semi-sweet wine
sub-	under	subsoil
super-	big	superpower
under-	too little	underpaid
trans-	across, beyond, through	transgenetic

5 Match a prefix with a word to make a new word.

- | | |
|-----------|--------------------|
| 1 ab- | a breed |
| 2 over- | b boyfriend |
| 3 super- | c bus |
| 4 ex- | d mature |
| 5 mini- | e normal |
| 6 co- | f operator |
| 7 pre- | g cyclone |
| 8 anti- | h ripe |
| 9 post- | i blossom spraying |
| 10 inter- | j national |

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ 9 ____ 10 ____

6 British and American English. Spelling differences.

What is the American English spelling of the following words?

- | | |
|----------------|-------|
| 1 skilful | _____ |
| 2 litre | _____ |
| 3 flavour | _____ |
| 4 oenology | _____ |
| 5 colour | _____ |
| 6 practise (v) | _____ |
| 7 traveller | _____ |



7 Right *R* or wrong *W*?

- | | |
|---|-------|
| 1 I poured him a glass of wine, he drank at once. | _____ |
| 2 Did you like the wine which we drank last night? | _____ |
| 3 Did you like the wine we drank last night? | _____ |
| 4 I poured him a glass of wine, which he drank at once. | _____ |



8 Homework

Prepare a short presentation on The Craft of Barrel Making in Croatia.

Use the Internet to find information.

Bottling

Source: https://upload.wikimedia.org/wikipedia/commons/e/e8/Bottling_machine_filling_bottle.jpg



Before bottling the wine, blending, filtration and the use of antiseptics against microbe development may be required. Blending can be done for several reasons, some of which are: to enhance the aroma, to improve colour, to adjust the pH of a wine, to raise or lower the alcohol level or to raise or lower levels of tannins.

Final filtration is required before bottling and the amount of sulphur dioxide is adjusted, especially in sweet table wines. The finer the filtration medium, the greater the stability of the wine, but the more it is stripped of its good quality. This is the reason why some winemakers offer connoisseurs unfiltered bottling in which the structure of the wine remains intact.

The actual bottling operation requires the oxygen pickup to be kept to a minimum. Bottom filling is the inserting of a tube into the bottle and filling from the bottom.

Sterile new bottles are usually used, but the same bottles

may be reused after cleaning and sterilization. The shape and colour of bottles change according to cost and the changing habits of consumers. Most wines are sold in shops which is the reason they have to draw attention to themselves on the shelf. Some producers go for a distinctive shape, others certain colours. However, it should not be forgotten that a wine is a part of the tradition and culture of its country of origin. That fact should be reflected in the design of a bottle.

Some white wines are subject to change when exposed to light, and therefore bottled in brown, brownish green or greenish blue coloured bottles. The glass bottle is still the most commonly used container for wine, although some wines are now being sold in plastic bottles or Tetra Pak cartons. Wines packaged in heavy plastic bags within cardboard boxes are called box wines, or cask wine. Such wines have a tap on the side of the box. Box wine stays fresh for up to a month after opening. The environmental considerations of wine packaging show advantages and disadvantages of both bottled and box wines.

After bottling, the closure is made. Standard wines are closed with screw caps, while cork closures are preferred for wines that will be aged in the bottle. 50 % of cork production comes from Portugal.

(Sources: Enc. Britannica. Bottling, from Encyclopedia Britannica 2010 Ultimate Reference Suite DVD and Dominé, 2003)

9 Write down questions about the text to be answered by your fellow students.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____
- 6 _____

E Language Review

Base and Strong Adjectives

1 Match the base adjectives in A with the strong adjectives in B

A Base adjectives

- 1 tasty
- 2 bad
- 3 dirty
- 4 tired
- 5 good
- 6 happy
- 7 angry
- 8 surprised

B Strong adjectives

- a) great, wonderful, fantastic, superb
- b) exhausted
- c) delicious
- d) filthy
- e) horrible, awful, terrible, disgusting
- f) furious
- g) astonished, amazed
- h) thrilled, delighted

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____

Dwarves and Giants

2 Complete the text with the words from the box.

years ruled biblical capital sizes founder
related collectors Wise equivalent

Wine and champagne bottles come in an astonishing range of **1** ____ The smallest is the quarter bottle (18.5 cl) mostly used by airlines. Next comes the half bottle (37.5 cl), the standard bottle (75cl), the magnum (1.5 l) and double magnum (3 l). Larger bottles are popular among wine **2** ____ for two reasons. First they serve as a showpiece and second the wine ages better in larger bottles.

The largest bottle sizes all have **3** ____ names.

- ▶ A Jeroboam contains about four standard bottles. Jeroboam was the **4** ____ and first ruler of the divided kingdom of Israel, from 913-910 B.C.
- ▶ A Methuselah contains the **5** ____ of eight bottles. Methuselah was a patriarch from before the time of the Flood, and is famous for having lived for 969 **6** ____
- ▶ A Salmanazar is a bottle of 9 litres. The name is apparently **7** ____ to the Babylonian royal name Shalmaneser.
- ▶ A Balthazar contains 16 bottles (12l). It appears to derive its name from one of the Three **8** ____ Men from the East.
- ▶ A Nebuchadnezzar has a capacity of 20 bottles (15l). Its namesake **9** ____ Babylon for over forty years, during which time it became the **10** ____ of the Orient.

(Dominé, 2003)

3 Correct the sentences.

1 It's really cold lately, so I've bought a new winter coat.

2 Manchester play really well at the moment. Their new player has real talent.

3 A one-day strike has called by London Underground workers for Wednesday this week.

4 It looks if we're going to have trouble with Helen again.

5 This is George, that sells the wine.

6 Smoking is dangerous, as well as makes you smell bad.

7 Nobody knows the reason from the accident.

8 Can you translate this from English at Greek.

9 I feel angry about my brother at saying such terrible things.

10 Open your books on page 32 and do exercise 5 on the top of the page.

F Reading and Speaking

Providing a Tight Seal

1 Name the four different types of bottle seals/caps in the photo.



Photo courtesy of J. Mesić

Cork

Cork is an almost perfect wine seal. It closes the bottle efficiently, lets in tiny amounts of oxygen, and has a neutral taste. However, it is expensive. Natural corks have a few drawbacks worth mentioning. Poorly made corks can deteriorate and leave your wine “corked” (tasting like a mouldy cork). Once a wine is corked there’s nothing you can do about it.

Another drawback is corks that leak. Some corks have a little channel on the side of the cork that allows wine to leak out. You can’t always see these defects in a cork prior to bottling so it’s a risk you must take to use cork.

Corkiness

2 Fill each of the numbered blanks with one of the words listed.

faulty common corky detected can
minimal seal pass bark Mediterranean

Cork is an almost perfect wine **1** _____. It has a neutral taste and allows only **2** _____ amounts of oxygen to **3** _____. Cork is harvested from the **4** _____ of the cork oak, *Quercus suber*, which grows mostly in the warm countries around the **5** _____. Portugal is the greatest exporter of corks; southwestern Spain also has extensive plantings of *Quercus suber*. Sardinia and Corsica have large stands of cork oak and their own cork industry. As a rule, trees are 25 to 30 years old when they are stripped of their bark for the first time, and it takes ten years for the bark to grow back. Cork consists of the dead cells of the woody tissue, called suberin. These cells are filled with nitrogen and they are absolutely water and airtight. A wine that smells or tastes of cork is **6** _____. The usual cause is a substance called trichloroanisole (TCA). Corkiness is the most **7** _____ real wine fault. A **8** _____ wine cannot be enjoyed. A corky smell is usually **9** _____ in the bouquet; often the corkiness **10** _____ also be tasted.

Synthetic Cork

Today’s synthetic corks are much more sophisticated than the old petroleum based ones. Synthetic corks don’t deteriorate, nor do they have a tendency to leak. Many synthetic corks do not allow for micro-oxygenation. They seal very well. This is fine for a wine you intend to consume within three years or so. Some synthetic corks are designed to allow for micro-oxygenation but they haven’t been in use long enough to say for sure how they compare to natural cork.

Screw Caps

Screw Caps are largely thought to be a sign of cheap wine. Supporters of screw caps point at the lack of spoiled wine due to bad corks among their chief benefits. Screw caps also aren’t likely to let loose if checked in airline baggage as a cork can. On the other hand, screw caps

don't allow for micro-oxygenation as natural corks do. As the inside of the cap is coated with a plastic to help seal it the wine may pick up undesirable flavours.

Crown Caps

The crown cap was patented by William Painter in 1892. It has 21 teeth and to open the bottle a bottle opener is generally used. The height of the crown cap was reduced and specified in the German standard DIN 6099 in the 1960s. The "twist-off" crown cap is now used in the United States, Canada, and Australia. This cap is pressed around screw threads instead of a flange and can be removed by twisting the cap by hand, thus eliminating the need for an opener.

(Sources: https://en.wikipedia.org/wiki/Bottle_cap, <http://winemakersacademy.com/bottling-wine/>)

3 Work in pairs. Go through cons and pros of using cork or other cork alternatives for closing wine bottles. Present your opinion to your pair. Add some more points.

Cork: Pros

- a natural renewable resource
- historically preferred
- long term aging has proven

Cork: Cons

- expensive (2-3x)
- 1-3% affected by TCA 'cork' taint
- limited natural resource
- variable quality
- natural corks breathe at variable rates

Cork Alternatives: Pros

- a more affordable option
- no TCA 'cork' taint
- long term aging studies have shown positive results
- screw caps are easy to open

Cork Alternatives: Cons

- some cork alternatives don't breathe
- mostly made from non-renewable resources
- recyclable but not biodegradable
- variable manufacturing quality
- associated with 'cheap' wine

Cork



Source: https://c1.staticflickr.com/8/7699/28348699675_404e85aef7_b.jpg

The words *city* and *town*, are sometimes used interchangeably but a city is generally large with a wide range of facilities. This is a description of Cork, one of Ireland's main cities.

4 Which words or phrases might be useful for describing your own or another town?

Cork city is the major metropolis of the south; indeed with a population of about 135,000, it is the second largest city in the Republic. The main business and shopping centre of the town lies on the island created by two channels of the River Lee, with most places within walking distance of the centre. (The buses tend to be overcrowded and the one-way traffic system is fiendishly complicated.) In the hilly area of the city is the famous Shandon Steeple, the bell-tower of St Anne's Church, built on the site of a church destroyed when the city was besieged by the Duke of Marlborough. Back across the River Lee lies the city's cathedral, an imposing 19th century building in the French Gothic style. Cork has two markets. Neither caters specifically for tourists but those who enjoy the atmosphere of a real working market will appreciate their charm. The Crawford Art Gallery is well worth a visit. It regularly mounts adventurous exhibitions by contemporary artists. The fashionable residential districts of Cork city overlook the harbour. There are other residential areas on the outskirts.

(McCarthy & O'Dell, 2003)

5 Check your understanding of the text about Cork by answering the following questions.

- 1 Where is Cork?
- 2 Where is the shopping and business centre of Cork?
- 3 What is Cork's traffic system like?
- 4 What is special about the site of St Anne's Church?
- 5 In what style is the architecture of Cork Cathedral?
- 6 Why is the Crawford Gallery worth visiting?

6 *The description of Cork comes from a guidebook for tourists. Write sentences about a town of your choice, using the following expressions from the text.*

the second/third/fourth ... est the main area of the town lies
 within walking distance of built on the site Baroque/Gothic style
 cater tend to be to overlook well worth visiting
 to mount an exhibition on the outskirts

7 *Suggest three words which would collocate well with each of the nouns below, as in the examples.*

- | | | |
|------------------------------------|-----------------------------------|----------------------------------|
| 1 _____
_____ museum
_____ | 2 _____
_____ college
_____ | 3 night
_____ club
_____ |
| 4 leisure
_____ centre
_____ | 5 _____
_____ court
_____ | 6 _____
_____ agency
_____ |

G Reading and Speaking

1 *Check your understanding of the text by answering the following questions.*

- 1 What is the purpose of a wine label?
- 2 What information do most wine labels contain?
- 3 Which are the two broad categories of wine produced within the EU?
- 4 What information is mandatory on wine labels in the U.S.A.?
- 5 What information can be seen on the back label in Australia and the U.S.A.?
- 6 What about Croatia? What is mandatory on wine labels in Croatia?
- 7 Do you have a favourite wine label?

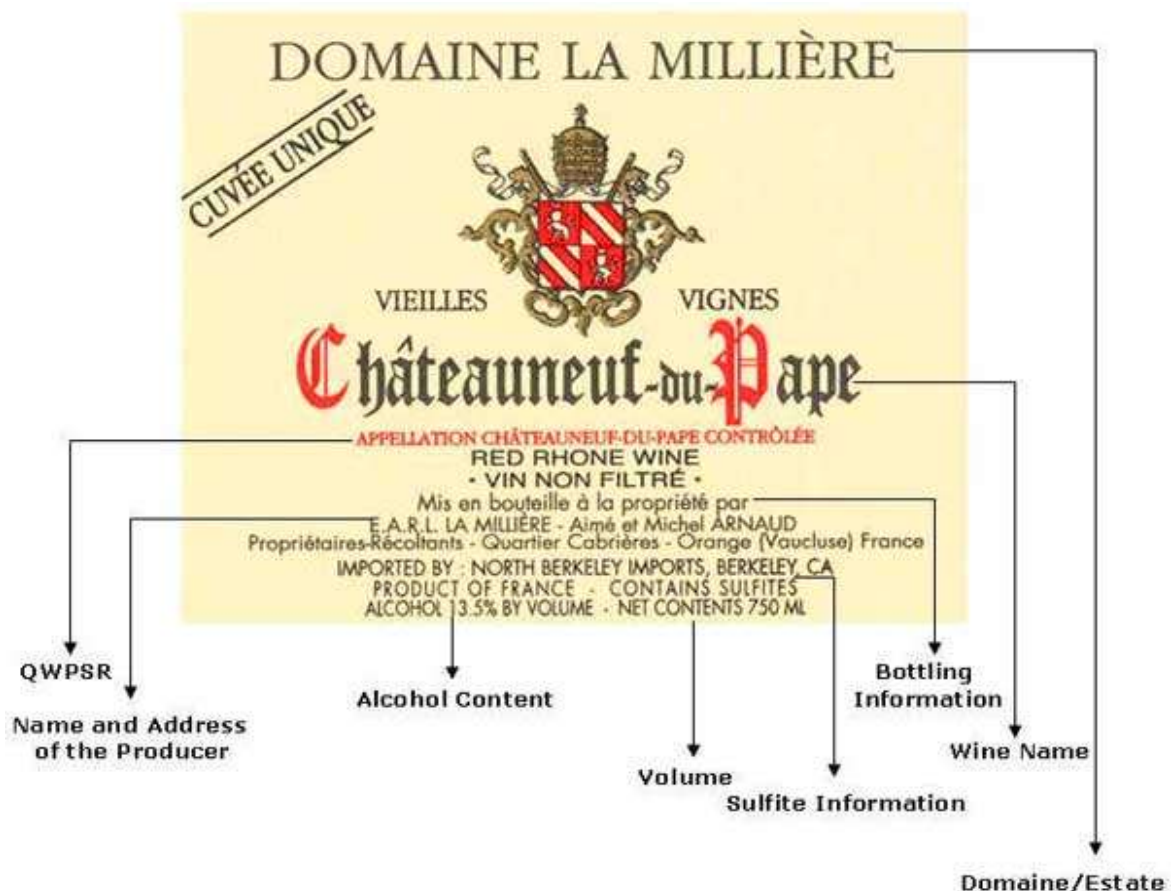
Wine Labelling

Every bottle of wine must have a label. The primary purpose of a wine label is to provide certain information for consumers such as the type and origin of the wine. Some of the information on a wine label is required by the country where the wine is made, other items are required by the country where the wine is sold. Most wine labels contain information on the country of origin, quality, type of wine, alcohol content, producer, bottler or importer. Some wines have neck and/or back labels. The neck label may include the vintage date and the back label usually gives extra information about the wine and government-required warnings.

The mandatory information on a wine label is largely determined by the consumer laws of the country where the wine is marketed. The European Union covers an average of 70% of the world's production and 60% of the world's consumption of wine. The EU includes many different countries, and each of them has its own unique wine laws and legislation. That is the reason why the general classification rules have been designed to maintain consistency within the entire economic zone.

Prior to 2011, all wine produced commercially within the EU fell into one of two categories: 'QWPSR' (Quality Wine Produced in a Specified Region) and the more basic 'Table Wine' (including 'Table Wine with a Geographical Indication').

These were replaced in 2011 with PDO (Protected Designation of Origin) and PGI (Protected Geographical Indication).



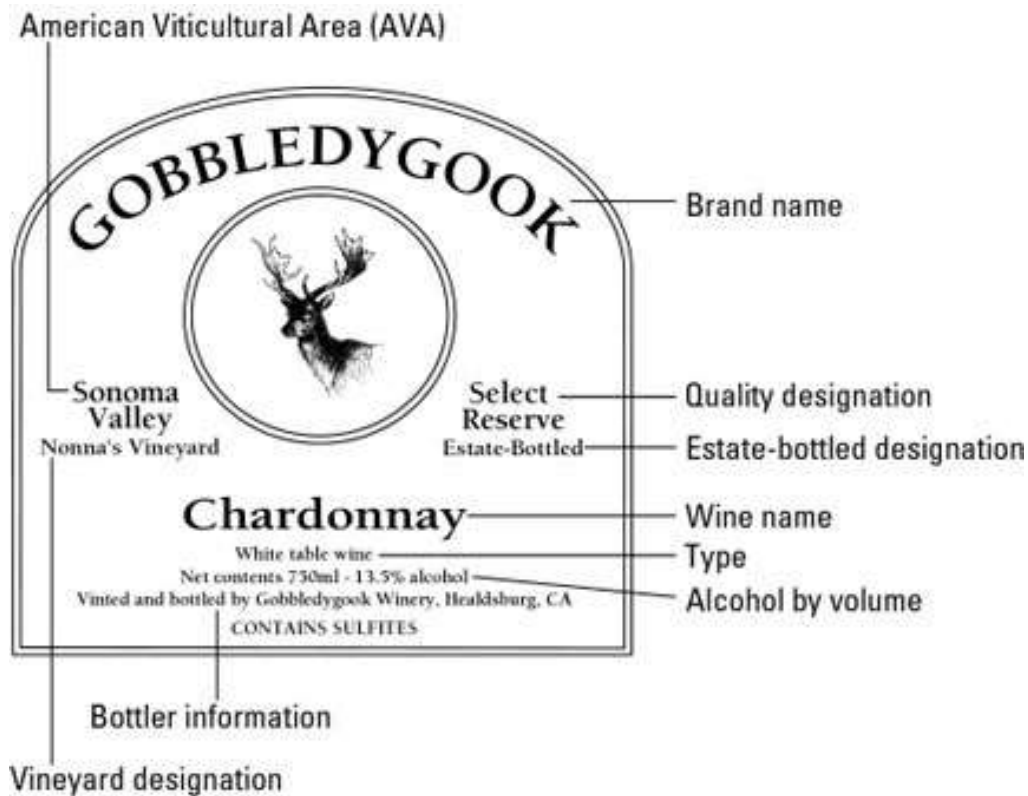
A typical QWPSR wine label

(Source: <http://www.wine-searcher.com/wine-label-eu.html>)

In the U.S.A. the federal government mandates the wine labels to contain the following information for wines sold in the U.S.A.:

- ▶ A brand name
- ▶ Indication of class or type (table wine, dessert wine, or sparkling wine)
- ▶ The percentage of alcohol by volume (unless it is implicit in the class; for example, the statement "table wine" implies an alcohol content of less than 14 percent)
- ▶ Name and address of the bottler
- ▶ Net contents (expressed in millilitres; the standard wine bottle is 750 ml, which is 25.6 ounces)

- ▶ The phrase *Contains Sulphites* (with very, very few exceptions)
- ▶ The government warning



The label of an American varietal wine.

(Source: <http://www.dummies.com/how-to/content/understanding-wine-labels.html#ixzz1LwLM9imX>)

The size of the font is also regulated for mandatory information. In Australia and the U.S.A., a wine label must also mention that it has sulphites. A warning regarding the consumption of alcohol during pregnancy and the possibility of a reduced ability to drive while intoxicated is usually found on the back label.

New Zealand and Australian labelling regulations have required an allergen warning to appear on all labels due to the use of egg whites, milk and isinglass in the fining and clarifying of the wine.

Label design is very important nowadays. Some wineries hire designers to perform the task, while others use the same labels for a long period of time. Some people collect wine labels and organize them by theme, country or region, the others produce a wine tasting-notes journal, yet for some, a wine label may be reminiscence about a time they spent with friends or loved ones.

(Sources: Wikipedia: The Free Encyclopedia. FL. Wikipedia Foundation, Inc.

http://en.wikipedia.org/wiki/Wine_label, <http://www.wine-searcher.com/wine-label-eu.html>,

<http://www.dummies.com/how-to/content/understanding-wine-labels.html#ixzz1LwLM9imX>

and http://www.napavintners.com/wines/wnv_1_labeling.aspx)



2 Go to: Instructions for wine labelling

<http://www.mps.hr/UserDocsImages/VINO/UPUTA%20ZA%20OZNA%20C4%8CAVA%20NJE%20VINA%20-%20NAKON%2013.%20PROSINCA%202014%20-ispr.pdf>

3 Read the text carefully and find the answers to the following questions.

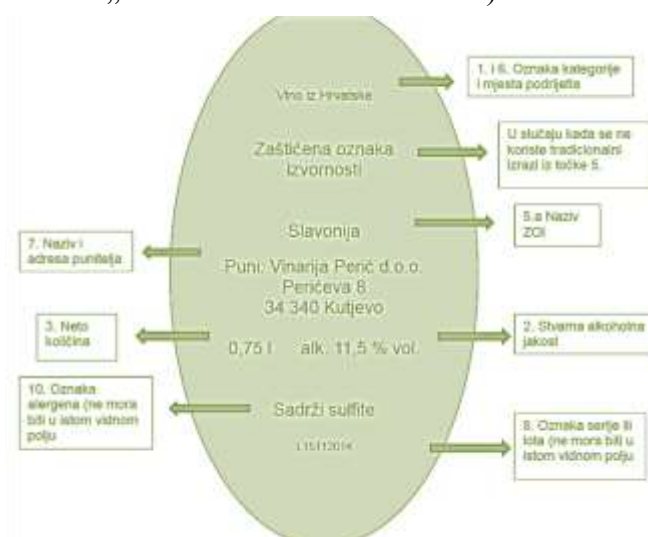
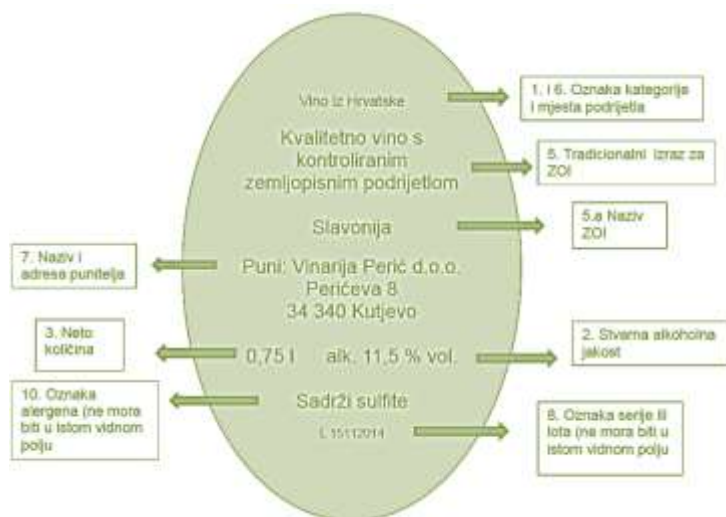
- 1 Name all the mandatory information on a wine label.
- 2 Name some of the additional information on a wine label.
- 3 What does ZOI stand for?
- 4 Name the Protected Designations of Origin in the Republic of Croatia.

4 Look at four different examples of wine labelling in Croatia. Use your knowledge and give the instructions for correct wine labelling.

PRIMJERI OZNAČAVANJA VINA PODRIJETLOM IZ RH PRIMJERI OZNAČAVANJA VINA SA ZAŠTIĆENOM OZNAKOM IZVORNOSTI

Primjeri obveznih podataka kod mirnih vina

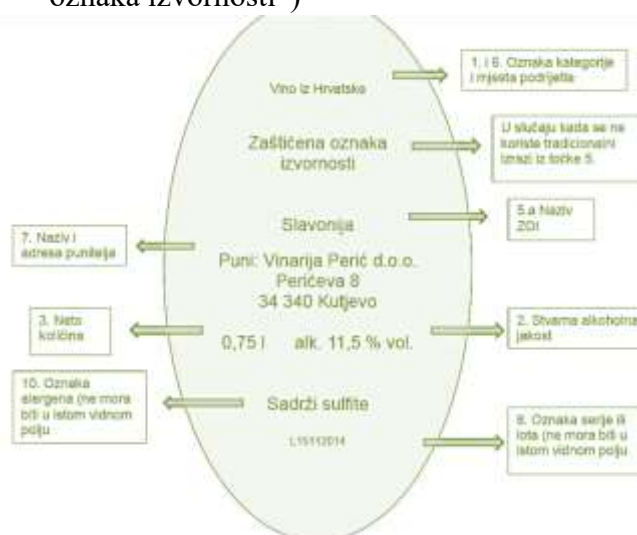
Primjeri obveznih podataka kod mirnih vina (kada se koristi izraz „zaštićena oznaka izvornosti“)



PRIMJERI OZNAČAVANJA VINA BEZ ZAŠTIĆENE OZNAKE IZVORNOSTI, ALI SA OZNAKOM SORTE I/ILI BERBE

Primjeri obveznih podataka kod mirnih vina

Primjeri obveznih podataka kod mirnih vina (kada se koristi izraz „zaštićena oznaka izvornosti“)





5 Watch the video: How to make your own wine label and design one.

<https://www.youtube.com/watch?v=AwxWqZkoNNs>

6 Complete the following sentences with the words from the box.

back bear show quality assurance control tasting

- 1 All bottles must _____ a label.
- 2 Quality _____ ensures the wine's continuing quality.
- 3 The label must _____ names of the producer and bottler.
- 4 On the _____ label you often find information on serving temperature and food recommendations.
- 5 In order to get an official _____ number a wine must be chemically analysed and tasted by a _____ commission.
- 6 In Croatia control _____ is very tight.

H Skills

Essay Writing

The essay is a popular method tool of assessment in foreign language. Therefore it is important that you ensure that your essay-writing skill is of the highest level. You should keep in mind that a good essay is a combination of knowledge of the topic and skills.

What makes a good essay?

Put it simply a good essay is one that answers the question and demonstrates the range of written and analytical skills. A good essay should demonstrate the following:

- ▶ Relevant knowledge about the topic that is the subject of the question
- ▶ A research into a variety of relevant source materials
- ▶ Skilful use of source materials which should be incorporated into the essay and used for strengthening your arguments
- ▶ A flowing line of arguments with an introduction and conclusion
- ▶ Good written communication skills for producing a meaningful piece of work
- ▶ Correct approach to referencing in order to ensure that all source material is acknowledged in an appropriate style.

Analysing the question

What does the question ask?

The first step is to analyse the question in order to work out what it requires. You should focus on what the essay asks rather than the broader issue of what the essay is about.

1 Practical exercise

Try to identify the questions that are asked by the following essay title.

If Croatia has any guidelines towards the development of sustainable agriculture what should they outline. Consider this topic with particular reference to the European Union.

Preparation: research and planning

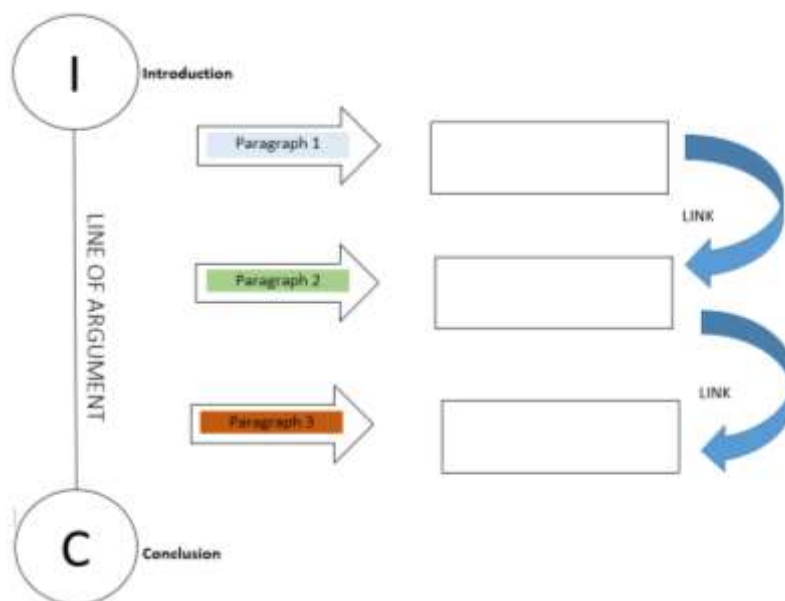
The two stages will reveal different points on the essay question and will lead towards a draft conclusion and enable you to select relevant material that you will include in your essay. Study the topic of your essay carefully and then see what you already know about a topic by brainstorming. This technique is useful in essay writing as a way of establishing a list of potential topics for your essay. From it you can make preliminary decisions about the relevance of each topic and direct yourself towards your reading and research.

Planning a structure

The structure of the essay is important. It determines the consistency of your argument. Determining the best structure involves deciding which points should be grouped together into a paragraph and the order of these paragraphs in relation to each other. You have to determine the content of each paragraph and then fit these paragraphs together so that they present a logical line of argument.

A good idea is to create a kind of working structure for your essay. One way to do this is illustrated in Figure 1.

Figure 1
Structuring an essay



(Source: Finch & Fafinski, 2013)

As you can see from this structure your essay must have an introduction, a conclusion, and a line of argument that runs through it. Each paragraph must be linked to the next and/or back to the question.

Writing the essay

When you have researched the topic and put together preliminary plan of your essay you can start writing. The following three steps which apply to essay writing in general are a good guide to structuring your law essay: introduction, the body of the essay and conclusion.

Introduction

Your essay must be introduced properly, in order to help the reader know what you are going to talk about. The introduction has a number of functions to fulfil:

- ▶ It identifies the central subject matter of the essay
- ▶ It sets out the issues that will be discussed in the essay in order to answer the question

The introduction gives the reader/marker an instant impression if you have understood the question. Many students prefer to write the introduction to the essay at the end of the writing which may be useful approach because the final version of your essay may be different from your planned version.

The introduction should not be too long – ideally, no longer than a paragraph or two unless you are writing a thesis. Structure your introduction as follows:

- ▶ Your first sentence should grab the reader's/marker's attention
- ▶ The next sentence establishes the specific focus of the essay question
- ▶ The next sentences should set out how the objective of the essay will be established
- ▶ The final sentence of the introduction may give an indication of the conclusion

The body of the essay

It is always useful to give a brief piece of background to your essay – a quick insight into its basic foundations.

Creating paragraphs

Paragraphs are very important since they are the building blocks of your essay. They divide the essay into smaller chunks with each one containing a separate argument or idea. Your paragraphs should be organized in such a way that each one contributes to the construction of a following line of argument. Students find it difficult to determine the content and the length of a paragraph. One technique that is widely used to determine the content of a paragraph is the PEE technique (point, elaboration, example) and the fourth characteristic may be the link.

- ▶ Point. A paragraph should start by outlining its central point
- ▶ Elaboration. The sentences that follow should expand on this point to explain it in greater detail
- ▶ Example. This provides support for the argument that you are presenting to make it more convincing
- ▶ Link. The final sentence should either relate to the point made, back to the question, or provide a link to the next paragraph.

Signposting

Signposting is the process of making your essay clear to the reader/marker. It refers to the words and phrases in your essay that explain the significance of your points. The following table sets out the different roles played by signposting words and phrases in signalling the relationship between the points made in your essay.

Agreement or similarity	moreover, also, similarly, in addition, furthermore, additionally, as well as, what is more, in the same way, likewise
Disagreement or contrast	nevertheless, however, on the other hand, conversely, by contrast, but, yet, by comparison, although
Providing exemplification or explanation	because, due to, as a result, owing to, by virtue of, as a consequence of, therefore, particularly, hence, including, especially
Reformulating or reiterating an idea	in other words, in essence, that is, in simple terms, to clarify, rather, to paraphrase, to reiterate
Enumerating and sequencing	firstly, secondly, finally, subsequently, consequently, before, eventually, first and foremost, there are a number of considerations
Providing examples	for example, to illustrate this point, for instance, this can be demonstrated, such as
Summarising	in conclusion, in summary, finally, hence, as an overview

When writing remember that you must not merely reproduce what has already been written on a subject but keep in mind that you should answer the specific question asked rather than discuss the topic in general terms. To be able to answer the question you must compose an essay which is analytical rather than descriptive.

Writing a conclusion

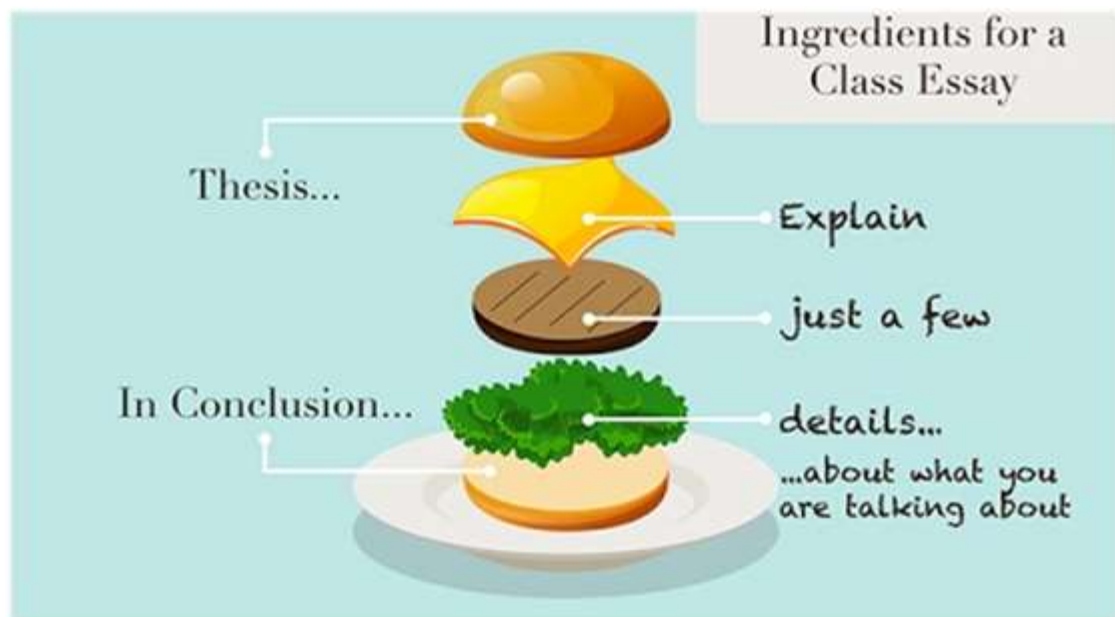
The aim of conclusion is to round off your arguments. It is not a place to introduce new material. A good conclusion should give a brief recount of what has been said and then establish your final position as suggested in the previous parts of your essay. If you are expected to establish a definite position, you need to be clear on one side of the argument or the other. Your conclusion must show that you have answered the question.

Polish

Frequently students think that their essay is finished the moment they have written the final word. This is just a first draft and there is still a lot to be done before submission of the work. There is a range of activities that will help you to produce writing which will satisfy your expectations and result in good grade.

Usually each essay has a maximum word limit that must not be exceeded. If you find that you are over the word limit, you have to find a way to reduce the number of words. There are two ways to do this: you can cut out the whole sentences or paragraphs out of your essay or you can keep all of your content but try to find a way to express it in fewer words. The best would be the combination of two methods.

Keep in mind the fact that your essay must present a flowing argument that develops in a logical way and which answers the question. This means that you need a strong structure, clear links between the paragraphs, and frequent references back to the question. Be sure that your essay has structure, flow and focus.



Source: <https://i.ytimg.com/vi/ogJiuffsej0/hqdefault.jpg>

2 Look at the examples of discourse markers in the table.

From the list a-g choose their function.

	Function	Examples
1		as well as, like, resembling, parallel to, identically, equally
2		above all, after all, most important of all, moreover to highlight
3		also, as well as, besides, furthermore, in addition, moreover
4		before, earlier, by now, simultaneously, henceforth, sooner, following
5		to close, last of all, finally, to end, to complete, hence, therefore, to sum up
6		on the whole, in general, as a rule, broadly speaking, mostly
7		all in all in fact, to put it differently, that is to say
a)	Indicating time order	
b)	Repeating	
c)	Concluding or summarising	
d)	Adding a point	
e)	Comparing	
f)	Emphasising or intensifying	
g)	Generalizing	

Proof reading

Proof reading is an essential part of the process of ensuring that your work is ready for submission. A good suggestion in this stage would be to print your essay since it is much easier to read what you have actually written on paper than to spot errors on a computer screen. Read the essay carefully and pay particular attention to punctuation. Make all the necessary changes. You should carry out the process once again after the errors have been corrected to check that no mistakes remain.

I The Lighter Side

Colloquial Comparisons

There are a good many colloquial comparisons in English like

as brown as a berry

which means extremely brown (as far as sun-tan is concerned).

1 Here are 10 incomplete comparisons. Complete them with the words from the box.

beet	bee	whistle	lemon	mule
lord	sin	honey	peacock	pig

- 1 as sweet as _____
- 2 as stubborn as a _____
- 3 as fat as a _____
- 4 as sour as _____
- 5 as ugly as _____
- 6 as red as _____
- 7 as busy as a _____
- 8 as proud as a _____
- 9 as clean as a _____
- 10 as drunk as a _____

2 A New Drink?



A guy walks into a bar and approaches the barman, 'Can I have a pint of Less, please?' 'I'm sorry sir,' the barman replies, looking slightly puzzled, 'I've not come across that one before. Is it a spirit?' 'I've no idea,' replies the guy, 'The thing is, I went to see my doctor last week and he told me that I should drink less.'

(Source:<http://www.having-fun-with-wine.com/wine-jokes-and-humor.html>)

UNIT 6

Secrets of the Senses



Photo courtesy of Kutjevo d.d.

"Wine makes every meal an occasion, every table more elegant, every day more civilized."

André Simon (1877-1970), wine merchant

A Starting up

EU Wine Regulations

1 Read the article and insert the following headings into the text where appropriate.

- A Aspects Regulated
- B Documents
- C EU Regulations and National Wine Laws
- D Classification and Labelling
- E Winemaking Practices
- F European Union Wine Regulations

European Union Wine Regulations

1

European Union wine regulations are common legislation related to wine existing within the European Union (EU), the member states of which account for almost two-thirds of the world's wine production. These regulations form a part of the Common Agricultural Policy (CAP) of EU, and regulate such things as the maximum vineyard surface allowed to individual EU member states, allowed winemaking practices and principles for wine classification and labelling. The wine regulations exist to regulate total production in order to combat overproduction of wine and to provide an underpinning to Protected Designations of Origin (PDOs), among other things. In a sense, the wine regulations, therefore, try to protect both the producer and the consumer.

2

The central document of the EU wine regulations is entitled Council Regulation on the common organization of the market in wine and it is supplemented by several Commission regulations.

3

The aspects regulated by the EU fall mainly into the categories winemaking practices, classification and labelling, wine-production potential, documentation of wine industry activities, imports from non-EU countries, and duties of enforcement agencies.

4

The wines produced within the EU are divided into two quality categories, Table wines (TW) and Quality Wines Produced in Specified Regions (QWpsr), where QWpsr is the higher category. Rules for winemaking practices and labelling are different for TW and QWpsr. The similar categories also exist for sparkling wine.

The TW and QWpsr categories are translated into different national wine classification for each member state. Thus, some member states may have more than two levels of classification, but all national levels correspond to either TW or QWpsr and are subject to the common minimum standards set out in the EU wine regulations. Labelling information is divided into compulsory and optional information. Information not listed as part of either of these two categories may not be displayed on the bottle. To some extent, this information varies with the quality category.

5

Perhaps most importantly, the regulations define wine as "the product obtained exclusively from the total or partial alcoholic fermentation of fresh grapes, whether or not crushed, or of grape must". Furthermore, wine can only be made from grape varieties listed as allowed, and only those vine varieties may be planted for commercial purposes. Each EU member state draws up such lists of varieties, which may only contain purebred *Vitis vinifera* varieties and certain crosses between *V. vinifera* and other species of the *Vitis* genus. Many winemaking practices depend on the classification of the wine – TW or QWpsr. The defined European Union wine

growing zones are used to regulate these practices, but some leeway is given for authorizing deviations in vintages of exceptional climatic conditions.

6

The reason why these regulations exist on the EU level is because of the common market inside the EU, which has led to a need to harmonize regulations for various products which traditionally have been regulated on a national level. The EU wine regulations form a framework for the wine laws of the European Union member states. Since national wine laws have a much longer history than the EU wine regulations, the EU regulations have been designed to accommodate existing regulations of several member states. In general, the EU wine regulations provide for minimum standards across the EU, while making it possible for individual member states to enact stricter standards in certain areas in their national wine laws. The Croatian Institute of Viticulture and Enology was set up in 1996 to oversee the country's wine industry and be responsible for regulating wine-growing and wine production.

(Source:https://en.wikipedia.org/wiki/European_Union_wine_regulations)

2 Read the article again and answer the following questions.

- 1 What is the aim of wine regulations?
- 2 Name the quality categories of the wines produced within the EU?
- 3 How many basic categories of wine are there within the EU?
- 4 What is the role of the EU wine regulations when the EU member states laws are considered?
- 5 How do the EU regulations define wine?
- 6 How is labelling information divided?

B Reading and Speaking

Wine Laws

1 Read the text and fill it in with the following sentences. There is one extra sentence which does not fit the text.

- a) The vintage wines are:
- b) By the content of sugar, wines can be distinguished as:
- c) Table wines are classified by colour as:
- d) Table wines are classified by character as:
- e) The three major categories according to vinification classification are:

Wine is most frequently defined as an alcoholic drink made from the juice of grapes that has been left to ferment. Grape wine is produced by fermenting crushed grapes using various types of yeast. Wine can also be made from many other fruits including apples and pears. Many wines retain the flavour and aroma of the fruit from which they were made.

There are many different classifications of wine according to various methods including, grape variety, quality, taste, vinification methods, vintage, and wine style.

1) _____

- ▶ still wines
- ▶ sparkling wines
- ▶ fortified wines.

2) _____

dry (not sweet)

- ▶ semi-dry
- ▶ semi-sweet
- ▶ sweet wines are classified as dessert wines

3) _____

- ▶ dry wines contain less than 4 g/l of sugar
- ▶ semi-dry wines have 4-12 g/l of sugar
- ▶ semi-sweet wines are a little bit sweeter than semi-dry ones containing 12-50 g/l of sugar
- ▶ dessert or sweet wines contain more than 50 g/l of sugar

4) _____

- ▶ red
- ▶ white
- ▶ rosé (pink)

Wines may also be classified according to specific flavours, types of grape they were made of and origins where grape grew.

(Sources: Wikipedia: The Free Encyclopedia. FL. Wikipedia Foundation, Inc.

http://en.wikipedia.org/wiki/Classification_of_wine., <http://www.food.gov.uk/multimedia/pdfs/euwineregs.pdf>,

<http://www.metalimagination.com/wineclassification.html>)

Wine Law

The aim of wine laws is to give the buyer some assurances concerning the provenance and a minimal quality guarantee. Wines are usually named either by their grape variety or by the place of production. European wines are named both after the place of production and the grapes used.

The countries of the European Union have agreed to categorize wines into two major groups: table wines and quality wines. Only the wines from prominent growing areas within each country can be included in the quality wine class. Table wines represent the lower level of wine production which means that only the most minimal requirements are made of their origin and production standards.

2 Read Articles 3, 4 and 5 on Wine Law and translate them. Go to:

<https://www.zakon.hr/z/277/Zakon-o-vinu>

The following vocabulary list may help you.

- ▶ table wines
- ▶ table wines with/ without controlled origin label
- ▶ quality wines with controlled origin label
- ▶ high quality wines with controlled origin label
- ▶ premium wines
- ▶ predicate wines
- ▶ vintage wines
- ▶ special wines
- ▶ still wines
- ▶ sparkling wines
- ▶ dessert wines
- ▶ archive wines
- ▶ aromatized wines
- ▶ liqueur wines

3 Read Articles 6, 7, 10 and 13 on Wine Law and answer the following questions. Go to:

<https://www.zakon.hr/z/277/Zakon-o-vinu>

- 1 How are archive wines defined?
- 2 How are predicate wines defined?
- 3 Name the categories of special wines.
- 4 Which are the liqueur wines and how are they categorized?

C Language Review

1 Circle the option A, B, C or D, that best completes each sentence.

- 1 The full ____ of the damage done by the storm only became clear at daybreak.
A degree B amount C summary D extent
- 2 ____ can make a mistake; no one is perfect.
A Nobody B Someone C Anyone D Each
- 3 This is ____ less satisfactory than the previous offer.
A fairly B far C absolutely D somewhat
- 4 Most of the candidates suffer from a(n) ____ of experience.
A shortage B lack C absence D outgoing
- 5 As ____ expenses, we'll be happy to compensate you up to a maximum of € 100.
A concerning B regarding C regard D regards
- 6 We are desperately ____ of really experienced workers.
A lacking B short C needy D light

- 7 The course seems to lay particular ____ on learning the theory behind the practice.
A mention **B** point **C** highlight **D** stress
- 8 Although the conditions weren't ideal for harvesting, we decided to ____ a go of it.
A make **B** do **C** run **D** carry
- 9 I really think there is no ____ of her continuing to work here.
A doubt **B** question **C** uncertainty **D** response
- 10 This class seems to have only a ____ knowledge of what they are supposed to achieve.
A smattering **B** rudimentary **C** comprehensive **D** faded

Word formation: negatives

Negatives are formed in English by using prefixes. The most common of these are: un-, in-, il-, im-, ir-, non-, dis- and anti-.

Make these adjectives negative by adding a correct prefix.

resistible	honest	legal	valid	literate	familiar	partial
social	fatal	functional	regular	septic	dependent	
	renewable	respected	practical			

un-	in-	il-	im-
ir-	non-	dis-	anti-



D Reading and Speaking

The Smell of Wine

1 Discuss these questions with your partner before you read the article.

- 1 What is wine tasting?
- 2 Is there a difference between tasting and drinking a wine?
- 3 What is the difference between aroma and bouquet of wine?
- 4 Which senses do we use when we taste a wine?
- 5 How many steps are there in the full sensory perception of a wine?

Wine has a greater variety of styles and levels of quality than any other agricultural product. If we wish to identify what is good or bad about a wine we must know how to use our senses of sight, smell, and taste. The right tasting technique is very important. Four steps are required for a full sensory perception of a wine. The steps are: smelling, tasting on the tongue, considering the aftertaste at the back of the mouth and observing the wine's colour.

It is best to start tasting a wine with a sniff. By doing that, faults that have developed in the vineyard, manufacture or in storage are easily detected. The wine will smell musty, vinegary or of sulphur. Additionally, the smell gives an indication as to whether the wine has undergone protective or oxidative handling, whether it was stored in wooden barrels or in stainless-steel tanks, and whether its aromas are due only to the grape variety.

About two-thirds of an attentive taster's perceptions of a wine are obtained via his or her nose. There are a huge number of different aromas in red and white wines. The natural aromas of the grapes are considered primary. Most of them are flowery and fruity. Fruity aromas in white wine can range from banana, melon, pineapple, gooseberry, apple and peach to lemon. In red wines they can be reminiscent of berries, cherries or plums. In the process of fermentation, wine acquires some new aromas. The fermentation or secondary aromas enrich the wine by altering its aroma profile from that of grape juice to that of wine. Secondary aromas are reminiscent of butter, bread, mushrooms, leather, cheese and animal smells. Most of the secondary aromas are volatile.

The aroma of wine stored either in barrels or bottles begins to change the summer after its harvest. The first signs of the process of aging are the new spicy, balsamic and woody aromas. From that point on, the professionals say that the wine does not have aroma it has "bouquet". If the wine is further aged in wood or refined in the bottle, the bouquet keeps developing. Scientists have identified over five hundred different wine aromas. In the early 1980s, scientists on the Davis campus of the University of California tried to systematize the various wine aromas. The result was the aroma wheel. It is useful, although it has not succeeded in creating a generally accepted language of aroma.

(Sources: http://www.vinography.com/archives/.../the_magic_of_wine_aromas.html..
<http://winearomawheel.com/> and Dominé, 2003)

2 Re-read the text above and find words and expressions that mean the following.

- 1 by means of _____
- 2 to vary between two particular amounts, sizes etc. _____
- 3 to improve the quality _____
- 4 reminding of sb or sth _____
- 5 unstable, likely to change _____
- 6 grow bigger _____
- 7 ability to see _____
- 8 to need something, to depend on _____
- 9 the way you notice things _____
- 10 to get something _____

What is the Wine Aroma Wheel?

The Wine Aroma Wheel is an incredible tool to learn about wines and enhance one’s ability to describe the complexity of flavour in red and white wines.

Initially, most people can’t recognize or describe aromas so the purpose of the wheel is to provide terms to describe wine aromas.

The wheel has very general terms located in the center (e.g. fruity or spicy), going to the most specific terms in the outer tier (such as strawberry or clove).

(Source: <http://www.thewinecellarinsider.com/wine-topics/wine-educational-questions/davis-aroma-wheel/>)

3 Study the following words used for describing aromas in wine.

Arrange them according to the category they fit.

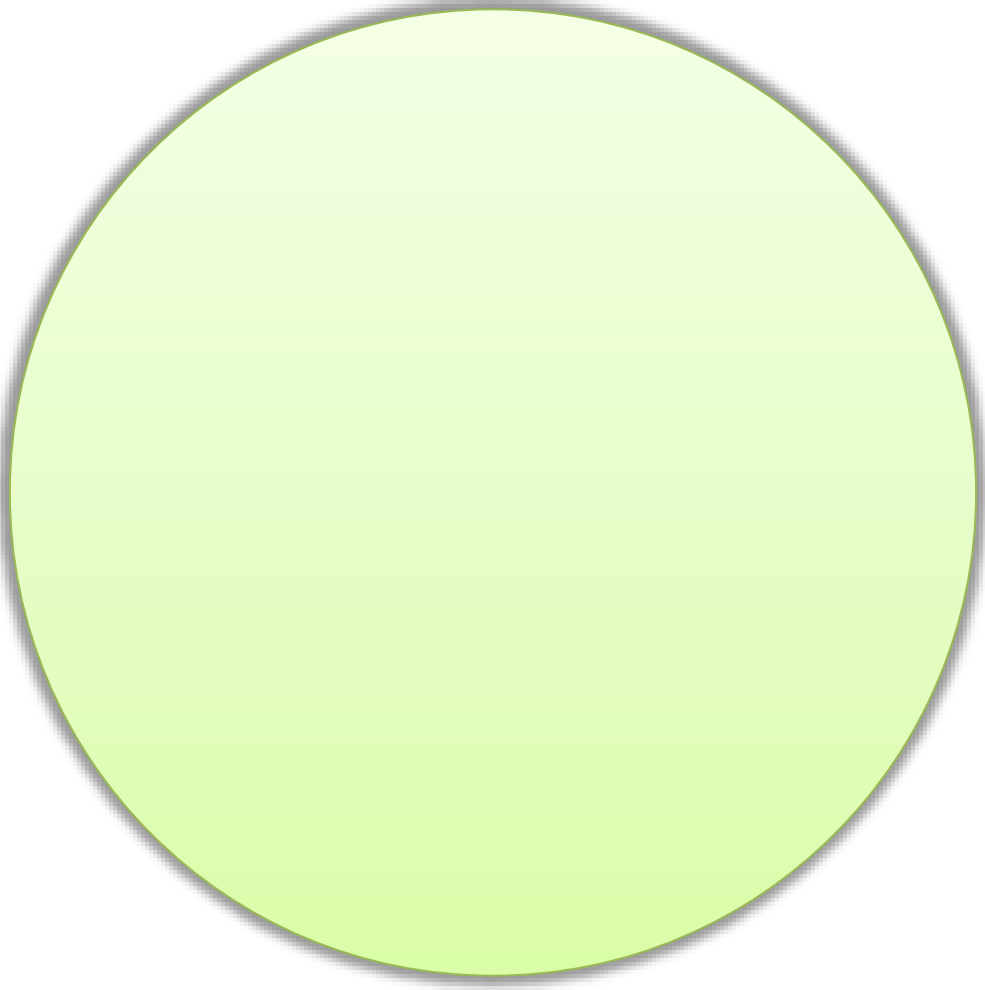
**chocolate/ black pepper/ vanilla/ mint/ sweaty/ orange blossom/ apple/ anise/
dusty/ moldy cork/ mousey/ diesel/ cedar/ burnt match/ peach/ garlic/ green olive/ oak/
honey/ mushrooms/ rose/cherry/ violet/ soy sauce/ baker's yeast/tobacco/ cloves**

Fruity	Spicy	Floral	Woody	Earthy	Caramel	Herbaceous	Micro-biological	Chemical

4 Taste a wine and fill in this empty aroma wheel with all the aromas you recognized in it. You may need to add some terms which are not mentioned in Exercise 3.



Source: http://1.bp.blogspot.com/-OswYCl-S8bM/VFZYd5tWkvl/AAAAAAAAA8c/bD44Sv6zZXk/s1600/IMG_2723.JPG



5 Before you read the article, answer these questions.

- 1 Which is the essential ingredient for making chocolate?
- 2 Where is cocoa grown?
- 3 Who brought cocoa to Europe?
- 4 Which countries are the largest producers of chocolate?
- 5 Name some well known producers of chocolate in your country?
- 6 Which is your favourite chocolate?

The cocoa tree

Cocoa is the essential ingredient for chocolate. The cocoa tree, which originally comes from the tropical rain forests of Honduras, Venezuela and Mexico is nowadays grown in a narrow belt around the equator in the Americas, Africa and Asia.

The cocoa tree flowers all year round, in two cycles of six months. Thousands of minuscule white (female) and pink (male) flowers adorn stem and branches. No more than forty of the thousands of flowers will eventually develop into cocoa pods.

After six months, the cocoa pods are full-grown and are ready to be harvested. There are two harvests per year.

The farmers cut the outer peel of the cocoa pods open with long knives to collect the fruit pulp inside. This pulp contains 40 to 50 seeds, the cocoa beans. The beans are then left to ferment for five to seven days. This natural process removes any of the remaining fruit pulp around the beans. During fermentation, the beans change from grey to brown to purple and develop their aroma. After fermenting, the cocoa beans are spread out and left to dry in the sun for about six days. When the beans are dry enough, the cocoa farmers bring their harvest to collection centres. The beans are then shipped to the cocoa processing and chocolate producing sites in Europe, America and Asia.

6 Read the text above and find words and expressions that mean the following.

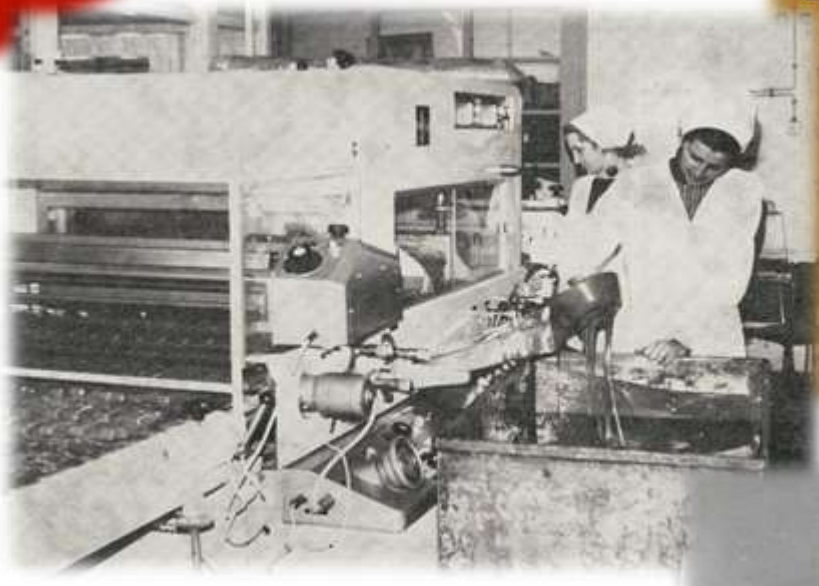
- 1 circle, period _____
- 2 flesh _____
- 3 ornament, enrich _____
- 4 piece, element _____
- 5 to stretch over a large area _____
- 6 capsule _____
- 7 grain _____
- 8 at the end _____
- 9 today _____
- 10 ring, string _____

7 Use your knowledge of chocolate production and arrange the following sentences in order to describe the process.

From Cocoa Bean to Cocoa Liquor and From Cocoa Liquor to Chocolate

- A** During cooling, chocolate becomes hard and shiny so that it comes out of the moulds perfectly shaped and ready for packing.
- B** At the end of the conching process, cocoa butter and an emulsifier (soya lecithin) are added to the conch.
- C** The ingredients are first measured according to the recipe and these ingredients are mixed into a homogeneous chocolate dough.
- D** Cocoa beans are cleansed of stones, dirt and sand and dried quickly under heaters which makes it easier to break the beans and to remove the shell around them.
- E** In special grinders, nibs are ground to a very fine, liquid mass, the cocoa liquor which is one of the main ingredients of chocolate.
- F** The liquidity of the chocolate is measured and adjusted to the desired specifications.
- G** Depending on the kind of chocolate, different ingredients are used:
 - Dark chocolate: Cocoa liquor + cocoa butter + sugar
 - Milk chocolate: Cocoa liquor + cocoa butter + sugar + milk powder
 - White chocolate: Cocoa butter + sugar + milk powder
 - Vanilla or vanilla essence can be added to all types to enhance the taste.
- H** The product is stored in a clean, dry (relative humidity max. 70 %) and the odourless environment. Storage temperature should be 12 - 20 °C.
- I** Tempering ensures the formation of the right type of cocoa butter crystals so that the chocolate will harden into shiny, hard, stable shapes.
- J** This mixture is then refined between rollers to form a fine chocolate powder in which the particles are so small that the human tongue can no longer distinguish them.
- K** Contact with air, heat and friction result in several different physical and chemical processes.
- L** Liquid chocolate must first be tempered so it can eventually harden.
- M** Depending on the liquidity required by the customer, extra cocoa butter is added to the chocolate. The more cocoa butter, the more liquid the chocolate.
- N** Cocoa liquor can be further processed into two different components: cocoa butter and cocoa powder.
- O** Cocoa nibs are then roasted, which develops their aroma.
- P** The chocolate powder is put into large tanks called conches.
- Q** Only after tempering can chocolate be poured into moulds or made into drops and finally cooled.
- R** The liquid chocolate is then moulded into blocks, drops or other solid shapes.
- S** It is kneaded for several hours until the aromas have fully developed.

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ 9 ____
10 ____ 11 ____ 12 ____ 13 ____ 14 ____ 15 ____ 16 ____ 17 ____ 18 ____ 19 ____



VREMELJELINA GOD. 17. 11. TRSTU 1948
PECARA BRANDY-A
 IMPORT ČAJA I RUMA

 Vremeljelina: STOCK POŽEGA SLAV.
 Tablica br. 1
 Podložni predmet: B

 Broj: 200 POŽ. 678.
 Broj: 101
 Zaprta br. 2478
 Ljubljana br. 1800
 Servisna št. 626
 Skuplja št. 6261

Stock Brandy Medicinal d.d.
 Slav. Požega 26. I. 1948

POTREBA
 Koje se potvrđuju, da se radna knjižica br. 1016780
 izdana pod tim brojem registra radnih knjižica
 dne 22. 11. 48. po kotarskim naredbama odobru
 radnih namještanika:

Rado Brauhig (Vencelar)
 Prošimo, ime i očevo ime
 Djevojačko ime kod udatih
 Dan, mjesec i godina rođenja
 Mjesto i kotar rođenja
 Najviši stepen školovanja
 Zanimanje
 Uspješnost
 Broj lične legitimacije
 Salarij sa čuvanja sa vrijedno trajanja radnog odnosa iznovo izdanog radnika kod
 ovog poduzeća.

STOCK FASINES - SLAV. POŽEGA **STOCK BRANDY MEDICINAL d.d.**



Photo courtesy of Zvečevo d.o.o.

E Language Review

Indirect Speech

1 Each of these 10 sentences contains a space which can be filled by one of these verbs:

say speak tell talk (in an appropriate form)

Choose the verb that best fits each sentence, and then put its appropriate form into the blank space.

- 1 George _____ Mary she could come.
- 2 You must _____ what you want.
- 3 You must _____ me what you want.
- 4 Father _____ to me yesterday: "Don't spend all your money at once."
- 5 I was _____ not to be a fool.
- 6 I think we'll have to _____ this over carefully.
- 7 The subject is closed. There is nothing more to be _____ .
- 8 Mary didn't _____ that the party was off.
- 9 He must be _____ to pull himself together.
- 10 It has been announced that the Prime Minister will _____ in tomorrow's debate.

2 Re-write each sentence in reported speech, using the verbs given in the appropriate verb form.

- 1 'I think I'll take this bottle of red wine,' said the customer.
_____ (decide)
- 2 'Don't forget to buy some milk, Andy,' said Bill.
_____ (remind)
- 3 'I'm sorry I couldn't come on Saturday,' said Brian.
_____ (say) + (could)

3 Turn the following questions into indirect speech.

- 1 He asked: 'How are you going to do that?'
- 2 Joe asked: 'Did they all attend the meeting last night?'
- 3 George asked: 'What is the price of that harvester?'
- 4 Ellen wondered: 'Is it true that Lilian is getting married?'
- 5 He asked: 'Where does Gordon have his suits made?'

Homonyms, Homophones and Homographs

“Homonyms confuse me ~~two~~ too.”

What is a homonym?

The prefix of the word *homo* is Greek and means “same,” and the root of the word *onym* means “name.” The literal translation would be “same name” or “same word.” Homonyms, therefore, are defined as two or more words that share the same spelling, or the same pronunciation, or both, but have different meanings.

4 What is the meaning of the word *swallow* in the following examples?

I had a sore throat and it hurt to **swallow**.

Swallows came earlier this year.

Use the same word to complete each pair of sentences.

- 1 a It's not _____ ! You gave her more than me!
b See the woman with blue eyes and _____ hair. That's my wife.
- 2 a My salary is paid directly into my _____ .
b She jumped in and swam to the opposite _____ of the river.
- 3 a You look smart in your new _____ .
b The new dress you bought doesn't _____ you.
- 4 a I can't _____ him. He never stops talking about himself.
b My granddaughter won't go to sleep without her teddy _____ .

What is a homophone?

Homophones are words with the same pronunciation, but different spelling and different meanings.

- / blu:/ the wind _____ last night (blew)
 the sky is _____ (blue)
- / meid/ there is a _____ (maid) to do the housework
 In 1996 changes were _____ (made) once again.

What is a homograph?

A homograph is one of two or more words that are spelled alike but not necessarily pronounced alike and have different meanings. This usually arises from two words having different origins. You can see many homographs when you compare a word's noun and verb meanings to each other. For instance, take the words “ring” and “ring.” Ring, when acting as a noun, stands for a piece of jewellery that you wear on your finger. When used as a verb, ring means to telephone somebody, if you ring a bell or if a bell rings, it produces a sound.

5 Fill in the blanks in each sentence with two words that have the same sound but different spelling and different meanings. The number of blanks equals the number of letters in the missing word.

1 His team _ _ _ _ _ game and lost two.

2 As we approached the coast we could _ _ _ _ the _ _ _ _ .

3 Everything looked so familiar; it was as if we had _ _ _ _ _ that _ _ _ _ _ before.

4 I was _ _ _ _ _ so I jumped on my surf _ _ _ _ _ and paddled out to the biggest waves.

5 We were so hungry that we _ _ _ _ _ hamburgers.

F Reading and Language

The Taste of Wine

"He who knows how to enjoy himself doesn't drink his wine: he tastes its secrets."

Salvador Dalí, (1904- 1989), Spanish painter

What did Salvador Dalí say?

He said _____

1 Here are key words for five questions. Write out the questions in full, and then see how many answers you can find in the text below.

Example: What/bud/ a /taste/is?

What is a taste bud?

1 are/tannins/detected/when?

2 derived/are/what/from/tannins?

3 crucial/taste/for/the/is/of/wine/what/red?

4 how/basic/determine/buds/tastes/many/the/taste/can?

5 a/with/the/flavours/what/are/tasted/of/wine?

The flavours of a wine are tasted with the taste buds on the tongue. There are four basic tastes that can be determined by the taste buds: sweet, sour, bitter and salty. Various food textures can be distinguished in our mouth, such as if a substance is runny, dry, creamy or viscous. The complexity of aromas is detected by the olfactory centre at the back of the throat.

The first thing the taste buds perceive when wine flows over the tongue is its sweetness, followed by its acidity (sourness). These are the two components that characterize the basic structure of a white wine. The impression of sweetness is not formed only by unfermented

residual sugar, but also by the alcohol. The balance of sweetness and acidity is an important indicator of production method and quality. The texture and flavour of a wine should be well matched. However, only the complexity of its aromas which is appreciated at the moment you start to swallow gives an indication of the greatness or modesty of a wine. A fine white wine always has a long-lasting, multi-layered bouquet, with fruity aromas complemented by spicy overtones and the fragrances of wood.

The difference between red and white wine is in the presence of tannins. Tannins are derived from the seeds, stems and skins of the grapes and from the wooden barrels if they were used for the maturation process. The quality of the tannins is the indicator as to whether the grapes were ripe when harvested. Tannins are detected when the wine is tasted in the mouth.

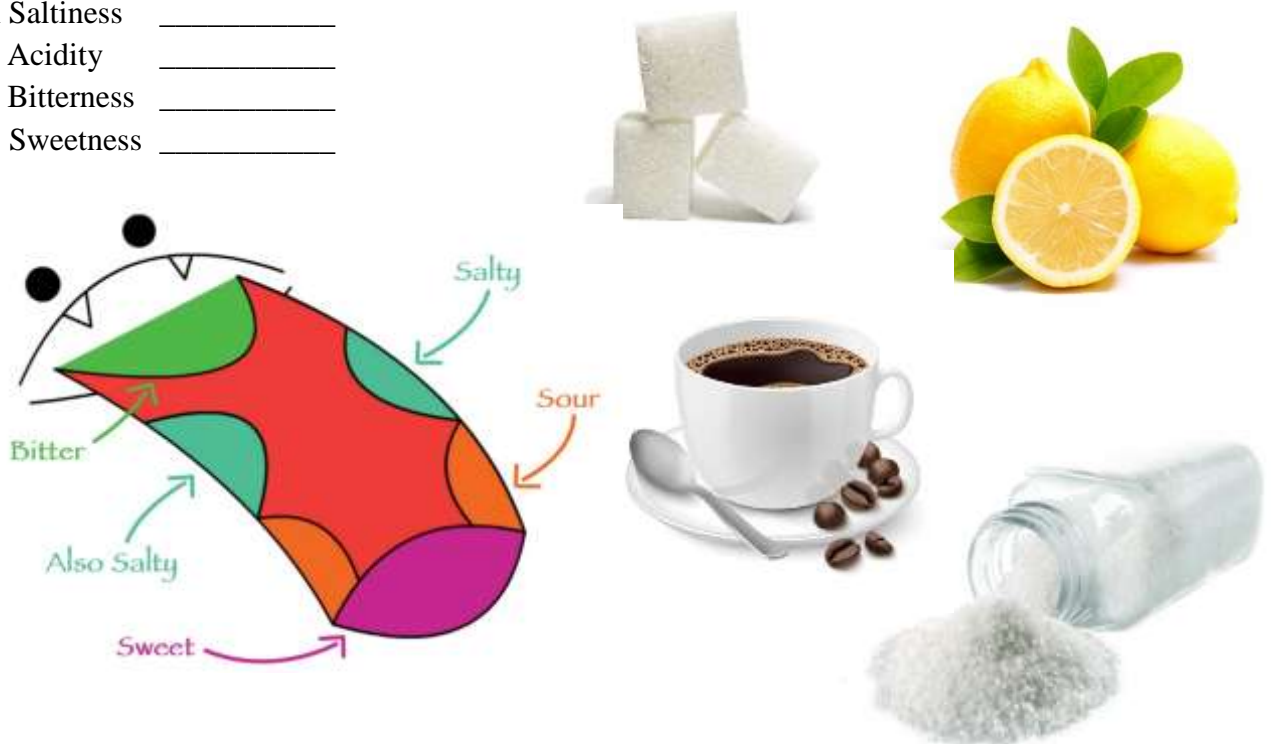
The balance of sweetness, acidity and bitterness is crucial to the taste of red wine. The true quality of a red wine can be determined when swallowed. Experts claim that a really superb red wine fills the whole mouth and throat with its abundance, releasing the aromas ranging from dark, fruity blackberries, blackcurrants or plums, with spicy notes of cloves or pepper, to the caramelized, woody aromas of tobacco, cedar or coffee, and if they linger for a while in the mouth and throat after swallowing, one can be sure that it is a superb wine.

(Sources: <http://wine.about.com/od/winebasic1/ht/winetasting.htm> and Dominé, 2003)

2 Connect the following descriptions with the four taste perceptions.

- 1 A sensation similar to sugary beverages and such wines will provoke the production of thick saliva in your mouth.
- 2 A sensation similar to diluted lemon juice and such wines will provoke the production of abundant and fluid saliva in your mouth.
- 3 This sensation is similar to the one evoked in unsweetened coffee or grapefruit. Many tasters perceive this sensation easier when swallowing the wine.
- 4 This sensation is similar to see water or chicken salted broth.

- A Saltiness _____
- B Acidity _____
- C Bitterness _____
- D Sweetness _____



Wine Tasting

3 Arrange the following sentences to describe the correct procedure of Wine Tasting.

- A Before you smell the wine, swirl the wine in your glass.
- B Take a small sip and roll it around your tongue.
- C So the wine is able to give off its aroma.
- D Then you swallow it.
- E Then you taste the wine.
- F First, we look at the wine.
- G Hold the glass against a white background.
- H Take the glass by its stem.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____



Photo courtesy of J. Mesic

TASTING EVALUATION SHEET

VINS TRANQUILLES - STILL WINES

	☺	☺	☹	☹	☹
ASPECT / ASPECT	<input checked="" type="checkbox"/> 5		<input type="checkbox"/> 3		<input type="checkbox"/> 1
ASPECT / ASPECT	<input checked="" type="checkbox"/> 10		<input type="checkbox"/> 6		<input type="checkbox"/> 3
INTENSITE / INTENSITY	<input type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 8	<input type="checkbox"/> 4	<input type="checkbox"/> 3
FRANCISE / GENUINNESS	<input type="checkbox"/> 6	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 3
QUALITE / QUALITY	<input type="checkbox"/> 10	<input checked="" type="checkbox"/> 10	<input type="checkbox"/> 12	<input type="checkbox"/> 11	<input type="checkbox"/> 8
INTENSITE / INTENSITY	<input type="checkbox"/> 6	<input checked="" type="checkbox"/> 7	<input type="checkbox"/> 8	<input type="checkbox"/> 4	<input type="checkbox"/> 3
FRANCISE / GENUINNESS	<input type="checkbox"/> 6	<input checked="" type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 3
QUALITE / QUALITY	<input type="checkbox"/> 12	<input checked="" type="checkbox"/> 10	<input checked="" type="checkbox"/> 4	<input type="checkbox"/> 11	<input type="checkbox"/> 10
PERSISTANCE / PERSISTENCE	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 5	<input type="checkbox"/> 4
JUGEMENT GLOBAL / OVERALL JUDGEMENT	<input type="checkbox"/> 11	<input type="checkbox"/> 10	<input checked="" type="checkbox"/> 8	<input type="checkbox"/> 6	<input type="checkbox"/> 3
SUMME / TOTAL <input type="checkbox"/> *	REMARKS / REMARQUES				

COMMISSION N° PANEL N°

NUMERO DE REGISTRATION / SAISON NUMBER

USRE / FLOTTE

ECHANTILLON / SAMPLE

Signature du consommateur / Buyer's Signature

Mise en bouche
Calibration Wine

- Grand Cru / Grand Cru
- Grand Cru / Médoc / AOP
- Grand Cru / Médoc / AOP
- Grand Cru / Médoc / AOP
- Grand Cru / Médoc / AOP

4 Discuss these questions with your partner before you read the article.

- 1 What is the chemical composition of wine?
- 2 What is the average alcohol content of red/white wines?
- 3 Which vitamins can be found in wine?
- 4 Which minerals can be found in wine?
- 5 What is the approximate percentage of water in a bottle of wine?
- 6 Which are the main acids present in grapes?

The Chemical Composition of Wine: What Chemicals are in Wine?

5 Read the article and match the headings below to numbers 1 to 11.

- A Inorganic Constituents
- B Phenolics
- C Chemical Composition
- D Vitamin Content of Wine
- E Other Chemical Compounds in Wine
- F Mineral Content of Wine
- G Carbohydrates
- H Alcohols
- I Acids
- J Other Flavour Compounds
- K Nitrogenous Compounds



This chemical composition of wine graphic doesn't represent every wine, but was put together as a baseline of what's in wine. Red wines vary in alcohol content from 11% - 15% generally, which would change the above model.

1

- ▶ thiamine
- ▶ riboflavin
- ▶ niacin
- ▶ Vitamins A, B, K & G
- ▶ folate
- ▶ choline
- ▶ betaine
- ▶ lutein
- ▶ zeaxanthin

2

- ▶ Sodium
- ▶ Calcium
- ▶ Iron
- ▶ Magnesium
- ▶ Phosphorus
- ▶ Potassium
- ▶ Zinc
- ▶ Copper
- ▶ Manganese
- ▶ Fluoride
- ▶ Selenium

3

- ▶ Sugar
- ▶ Sulfites
- ▶ Grape Thumatin-like proteins
- ▶ Amino Acids
- ▶ Citric Acid
- ▶ Gallic Acid
- ▶ Tartic Acid
- ▶ Mallic Acid
- ▶ Succinic Acid
- ▶ Acetic Acid
- ▶ Lactic Acid

4

The main constituents of grapevine berry juice and wine are:

- ▶ Water
- ▶ Carbohydrates
- ▶ Acids
- ▶ Alcohols
- ▶ Phenols
- ▶ Nitrogenous compounds
- ▶ Inorganic substances

5 _____

In must, these can be divided up into the simple carbohydrates (sugars) and more complex ones (pectins and glucans).

Sugars are the raw material that wine yeasts convert to alcohol and glycerol. The major sugars in grapes are glucose and fructose, present in approximately equal quantities. Technically, a dry wine contains less than 2g/l sugar, but in commercial terms, a dry wine might contain up to 10 g/l sugar.

Pectins are present in grapes in small quantities. High concentrations of pectins make it difficult to extract and/or clarify grape juice and filter wine.

6 _____

The main acids present in grapes are tartaric and malic. These are 'organic' acids, as they contain carbon atoms. They are responsible for the relatively high acidity and low pH (hydrogen ion concentration) of grapes, compared with other fruits, and for the fresh crisp taste of wine. Grape must also contains low levels of citric, ascorbic and acetic acids.

7 _____

Ethanol is produced during fermentation by yeast from sugar. Trace amounts of other alcohols are also produced and these contribute to the flavour of the wine. Glycerol (glycerine) has an effect on the viscosity and sweetness of the wine. It can be produced in significant amounts when grapes are infected with *Botrytis* as noble rot.

8 _____

Phenols are a group of chemical compounds that affect the wine's colour, texture, astringency and bitterness. Smaller phenols can taste bitter, or develop bitter tastes on oxidation. Anthocyanins are responsible for red wine colour and are generally found in pulp cells directly underneath the skins of black grapes. Tannins largely determine the astringency and body of a wine and are important antioxidants and preservatives.

9 _____

These are substances containing nitrogen, such as proteins, amino acids and ammonium salts. Yeast and bacteria need nitrogen sources for growth. Most proteins in red wines are removed by the tannins, but, in white wines, certain proteins can cause hazes.

10 _____

Most inorganic ions (e.g. metals and nitrates) are not very important in juice and wine. The potassium content is the exception as the potassium salts of the organic acids contribute to the wine's acidity: the level of potassium is lower in wine due to the precipitation of potassium bitartrate.

Iron and copper may be dissolved in wine from metal surfaces containing these metals. They give rise to hazes in the wine called iron or copper 'casse'.

The major anions present are phosphate, chloride and sulphate.

There are many other flavour compounds present in juice and wine in trace amounts, and these are largely responsible for their characteristic aromas and flavours. The situation is very complex with levels of volatility and the synergy between combinations of compounds often as important as the individual compounds present. Winemaking is concerned with the extraction and conservation of desirable flavour compounds and the minimisation of undesirable flavour compounds.

The chemical composition of grapes is affected by many factors, including the following:

- ▶ Grape variety or cultivar
- ▶ Environmental factors such as climate and soil ('Terroir')
- ▶ Viticultural management
- ▶ Seasonal variations (The concept of 'vintage'). This is because the three principal climatic parameters (light, heat, water) vary considerably from year to year.
(Source: www.benefits-of-resveratrol.com/chemical-composition-of-wine.html)

G Skills

Academic Writing Skills

Why are writing skills important?

The language of agriculture is objective and certain. Frequently there are references to other languages, most commonly Latin when referring to the origin and French when the wine is in question. Therefore a good command of language is invaluable. A good general dictionary, as well as a dictionary of specialized terms, will ensure that you are using specialized terminology correctly.

Critical Analysis

When you are asked a question you are supposed to be original and give a fresh insight to the question. Your work should not be a reproduction of existing material with no analysis of your own. Try to write an original piece and not just a reproduction of everything you have read on an issue. Be careful and do not put forward only other people's opinions. By copying quotations, paraphrasing or re-wording other people's opinions you will show that you have not made an attempt to develop any of your ideas on what you have researched.

Your work should show your ability to accept information you have read and to deduce results from that information. The data you present must be interpreted appropriately. Tables and graphs should be accompanied by written explanations. The obtained results must justify data collection. You do not need to quote long passages except where it is unavoidable.

The following checklist for writing up your work may help:

- ▶ Is my work original?

- ▶ Are my arguments relevant to the question(s) being asked?
- ▶ Is my work presenting and analysing alternative arguments or contrasting opinions?
- ▶ Do I have too many quotations? Are they too long?
- ▶ Have I referenced my work properly?
- ▶ Is there evidence of critical reasoning and logic in my work?

Consistency

English is full of synonyms. It is easy to start writing about something using one word, and then, later on, start using other words with similar meaning. This can lead to a lack of clarity.

1 Here are some examples of commonly used synonyms.

Match the words (1-10) with their synonyms (a-j).

1 farming	a yield
2 rural	b province
3 wild	c compulsory
4 harvest	d cultivation
5 soil	e uncultivated
6 classification	f correlate with
7 mandatory	g provenance
8 correspond	h land
9 origin	i pastoral
10 region	j categorization

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10 ___



(Source: <https://static.pexels.com/photos/249360/pexels-photo-249360.jpeg>)

Match the expressions or phrases from 1 – 11 to the correct meaning.

Blue

- 1 Out of the blue
- 2 True blue
- 3 Once in a blue moon
- 4 Blue ribbon
- 5 Blue blood
- 6 Blue law
- 7 Blue comedy
- 8 Blueprint
- 9 Blue plate special
- 10 Bluestocking
- 11 Feeling blue

- a) laws about morality issues
- b) a specially priced meal at a restaurant
- c) to feel sad or unhappy
- d) first place; to describe something as being of the highest quality
- e) an event that occurs infrequently
- f) jokes about socially taboo subjects
- g) a detailed design of an object or idea
- h) a woman with strong scholarly interests
- i) to be loyal or faithful
- j) unexpected
- k) an aristocrat

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10 ___ 11 ___

2 Match the expressions or phrases from 1 – 9 to the correct meaning.

Red

- 1 Red carpet treatment
- 2 Caught red-handed
- 3 Red in the face
- 4 Seeing red
- 5 Red flag
- 6 Not worth a red cent
- 7 Red letter day
- 8 Red tape
- 9 In the red

- a) having no value
- b) giving privileged treatment to an important person
- c) a term to describe an economic loss
- d) clearly guilty
- e) to be angered
- f) excessive formalities in the governmental process
- g) a warning of danger
- h) a memorable, joyful day
- i) to become embarrassed

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___

The Colour of Wine



Photo courtesy of J. Mesic

The colour of a particular wine has its own appeal. The colour can give the clues as to how good the vintage was, the grape variety, the method of production and maturity.

Generally speaking, the deeper and darker the wine's red colouring is, the greater the amount of tannins and other substances in its extractions. All

red wine grapes contain natural pigments. Depending on the grape variety, these can be paler, darker, or more concentrated in the skins of the fruit.

Red wine contains on average ten times more colour compounds than white wine. The thicker and riper the skins, the lesser juice the grapes contain and the greater the potential to produce wine of a good colour. The colour of a red wine can be: dark red, ruby red, cherry red, scarlet, brick-red or light brick-red. Red wines lighter with age, eventually showing an orange aura around the edges. The most intensely-coloured wines are not always the best. Thus colour as such, is definitely not an indicator of quality.

White wines are frequently described as colourless due to the fact that grape juice usually has no skin contact during vinification. However, this perception is not completely true. The colours present in white wine range from pale green through to golden yellow, but are more difficult for the human eye to perceive. A mixture of green and yellow plant pigments are present in the flesh as well as the skin of pale-coloured grapes. That is the reason why white wine, which is not fermented along with skins, contains a certain amount of pigment. Grapes with a slight purple or grayish-pink tinge have the most potential for producing good colour.

The colour of a white wine can be: light yellow, straw-coloured, lemon-yellow, golden yellow, old gold or amber-yellow. White wines darken with age. Wines with a lot of substance, those that have had a short rest on their lees are never pale yellow, but show a lemon hue when they are still young. Although in modern winemaking processes the colour of a wine can, to a certain extent, be artificially boosted with additives or enzymes, an expert can tell a great deal from the shade of a wine.

(Dominé, 2003)

3 Re-read the text above and find words and expressions that mean the following.

- 1 bezbojan _____
- 2 određena količina _____
- 3 nježnožuta boja vina _____
- 4 tamnocrvena boja vina _____
- 5 slamnatožuta boja vina _____
- 6 zlatnožuta boja vina _____
- 7 u prosjeku _____
- 8 konačno _____
- 9 manje _____
- 10 nijansa boje; primjesa _____

4 Right *R* or wrong *W*?

- A** This is **much** the best wine I've tasted this evening. _____
- B** This is **quite** the best wine I've tasted this evening. _____
- C** The **commonest** reason given for absence from school is the flu. _____
- D** Can you speak a bit **slower**, please? _____
- E** He's the **politest** child I know. _____
- F** **The more** dangerous it is, **the more** I like it. _____

5 Change these words to adverbs, e.g.

easy → *easily*

- 1 dry → _____
- 2 noble → _____
- 3 public → _____
- 4 tragic → _____
- 5 artificial → _____

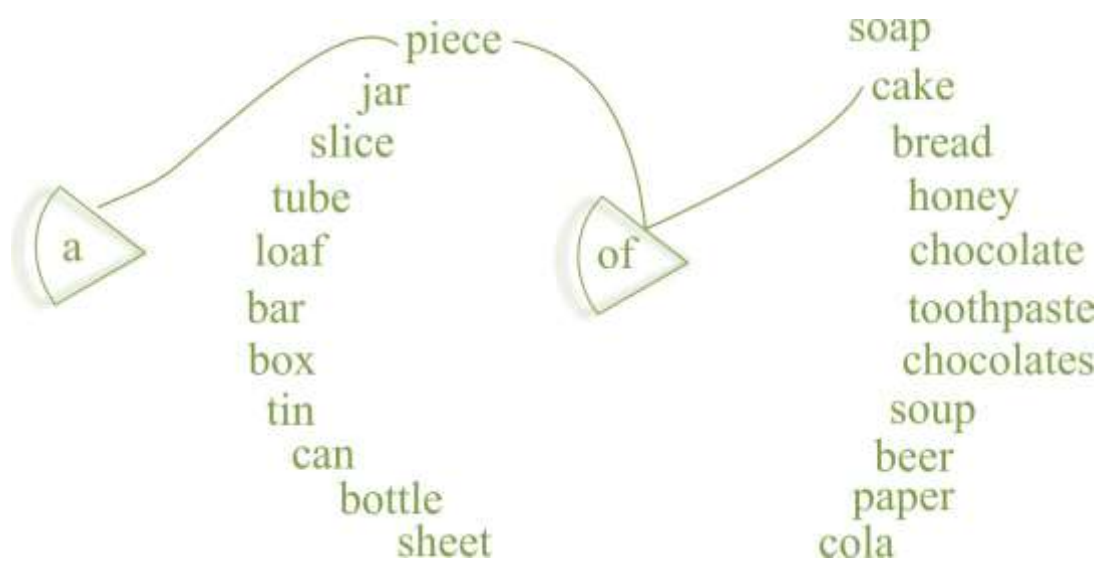


Source: [http:// www.txt2nite.com](http://www.txt2nite.com)

Adjective	Noun	Verb
intoxicating		
	swelling	
		treat
	dislocation	
converted		
	product	
		attract
	failure	

7 Expressing quantity

What combinations can you make using nouns from the two boxes?



(Soars, 41)

I Skills

Active listening

1 How do you know if someone is not listening to you? How does it make you feel?

Which of the following do you do to show people that you are listening to them? Add a few more suggestions.



- look people directly in the eye at all times
- nod your head often to show interest
- repeat what the speaker has said in your own words
- be aware of the speaker's body language
- interrupt the speaker often to show you are listening
- use body language to show you are attentive
- ask questions if you do not understand
- try to predict what they are going to say next
- say nothing until you are absolutely sure that the speaker has finished



2 Work in pairs. Think about two examples of your own experience with public service officers when the service you received was:

- excellent
- poor

When your partner is speaking, make an effort to listen actively. Use some of the language from the list:

Showing interest

Really?

That's interesting.

Right/OK/Mmm/Yes/No

Showing empathy

How awful!

I know what you mean.

Asking for details

What did you do?

So what happened?

Clarifying

Are you saying _____?

What exactly do you mean by _____?

Could you be more specific, please?

Summarising

(So) you think _____

What you are saying is _____

Repetition/Question tags

A He told me that the fee was 10€.

B 10€? Was it?

J Reading and Speaking

1 Read the article and see if you can find the answers to the following questions.

- 1 What is an approximate nutritional value per 100g of red table wine?
- 2 What does the term French Paradox refer to?
- 3 How does red wine reduce the risk of blood clots?
- 4 What does the British Medical Association recommend?
- 5 What does the amount of wine a person can drink without concern depend on?
- 6 Name a few negative side effects of drinking wine.

Wine and Health

Wine was considered a foodstuff for centuries and is still regarded as daily fare in many countries. Issues which may be discussed in connection with drinking wine can range from the talk about potential alcoholism, the number calories a wine contributes to a meal, a number of vitamins and minerals in wine, to the most important scientific discovery of the last few years about the positive connection between wine consumption and a lower risk of heart failure.

The French Paradox refers to the comparatively lower incidence of coronary heart disease in France despite high levels of saturated fat in the traditional French diet. Scientific studies in England, the United States, France and Denmark established a connection between red wine consumption and a reduced risk of coronary disease. Red wine contains more polyphenols than white wine, and these are thought to be particularly protective against cardiovascular disease. Laboratory tests have shown that red wine has a tendency to thin the blood which helps to reduce the risk of blood clots.

Negative effects of drinking wine result from drinking a lot. Drinking a lot of wine in a short time will certainly damage the body. The amount of wine a person can drink without concern varies from person to person. In setting the limits, physical constitution, weight, gender and the condition of a person's organs all play a part. According to the British Medical Association drinking less than 21 units of alcohol per week for men and 14 units for women is unlikely to damage health. This means that men can drink 2.5 bottles and women 1.5 bottles of wine over a week without worrying.

Doctors agree that during pregnancy women should abstain from alcohol. The male liver can process an average of 30 percent more alcohol than the female. Even a regular moderate consumption of wine requires regular checkups of the liver, the nervous system, the digestive system and other organs. Some of the negative side effects of drinking wine are: drunkenness, headaches, migraines, allergies, stomach problems, excessive calorie intake (a bottle of wine with 12 percent of alcohol contains almost 500 calories) and enlargement of the liver.

(Source: Wikipedia: The Free Encyclopedia. FL. Wikipedia Foundation, Inc.

http://en.wikipedia.org/wiki/Health_effects_of_wine.)

Health and Nutrition Benefits of Drinking Red and White Wine

2 Student A reads Case 1 and answers the questions.

Student B reads Case 2 and answers the questions.

Student C reads Case 3 and answers the questions.

Case 1

Aside from pure, hedonistic pleasure, it would be interesting to know how many people drink wine for its potential health benefits. Therefore it's interesting to look at what is inside a glass of wine, along with its caloric content. Antioxidants, resveratrol, flavonoids and polyphenols are the most often cited compounds found in wine that researchers like to point out as potentially being healthy chemicals found in wine.

Vitamins and minerals found in wine

Wine does not contain much in the way of vitamins. Each glass of red wine gives on average the following of your daily, nutritional needs: 1% Vitamin K, 1% Thiamine, 2% Niacin, 3% Riboflavin and 4% Vitamin K. Trace amounts of minerals are also found in wine. Each glass of wine gives close to the following percentages of your daily adult requirement of minerals: 1% Calcium, 1% Copper, 1% Zinc, 3% Phosphorus, 4% Iron, 4% Magnesium, 5% Potassium and 10% Manganese.

The statistics are similar but different for white wine. White wine is lower in carbohydrates, with only 2.6% of carbohydrates on average per serving. White wine provides of your daily nutritional needs 3% Magnesium, 3% Vitamin B6, 3% Vitamin B2 and 3% Niacin, 1% Riboflavin along with trace elements of Iron, Calcium, Potassium, Phosphorus and Zinc.

Red Wine is also a source of Antioxidants, Flavonoids, Polyphenols and Resveratrol.

Antioxidants can help prevent cancer, heart disease and assist in lowering cholesterol due to the fact that red wine raises the levels of HDL (High-density lipoproteins) or good cholesterol which helps protect your arteries.

Flavonoids, also known as bioflavonoids, are a natural chemical found in plants. Due to the fermentation process, select enzymes are created that help remove some carcinogens and possibly help inhibit the growth of tumours. In turn, this helps you to produce more good cholesterol.

Resveratrol is said to help in the prevention of damage to your blood vessels while reducing bad cholesterol and assisting to help prevent blood clots.

Polyphenols help coat and protect the important lining of the blood vessels in your heart.

It would appear that red wine offers more potential health benefits, due to its naturally higher levels of polyphenols, resveratrol, and antioxidants. Those compounds are found in the grape skins, which are more important to the production of red wine, than white wine.

Red wine may also help lower the risk of the onset of rheumatoid arthritis in some people who are long term, wine drinkers.

A number of healthy compounds found in red wine actually varies depending on the grape varietal, the region or appellation, the vintage and even the terroir.

- 1 Which compounds found in wine are considered to be healthy chemicals?
- 2 Which vitamins can be found in wine?
- 3 How does white wine differ in content of vitamins and minerals from red wine?
- 4 What can antioxidants help prevent?
- 5 What are flavonoids?

Case 2

Level of alcohol in red wine

Alcohol is perhaps the key component in a wine, without it, we would be drinking juice. The percentage of alcohol in red wine varies quite a bit. For dry red wine, the alcohol content can range from 12% alcohol up to 16% or even higher in some regions. For fortified red wines (Port, Sherry and Madeira) the alcohol content ranges from an average of 18% to 20%.

Percentage of alcohol in white wine

For dry white wines, the level of alcohol is amazingly diverse, depending on the grape varietal and region where the wine was produced. For dry white wines produced from grapes like Chardonnay or Sauvignon Blanc, the percentage of alcohol usually ranges from 13% to 15%. For dry wines made from Riesling, the level of alcohol is among the lowest at close to 8% to 9%. For Graševina the percentage varies from 11.5% to 14%. For sweet, white wines, the level of alcohol differs considerably, depending on the grape and where the wine was produced ranging from 12.5% to 14%.

Sugar content in wine

While wine is packed with all the good things we mentioned, the truth is, wine is mostly water. Perhaps 1.5% of wine comes from solid materials. The remainder consists of alcohol, carbohydrates, and water. A number of calories found in wine vary, depending on the type of wine. Sweet and fortified wines contain much more calories than red or white wine. Dry red and white wines on average include less than 3 grams of residual sugar per litre. Sweet or fortified wines vary widely, depending on their level of sweetness. On average they offer from anywhere between 20 grams per to litre up to 150 grams per litre of residual sugar.

Calories in wine

An average glass of wine is close to 6 ounces. This means each glass of dry wine, depending on the degree of alcohol will vary from 100 calories up to 175 calories. The higher end of the spectrum is reserved for very high alcohol wines found in Australia, California or other warm climate terroirs. Champagne, depending on the level of dosage, or sugar comes in at an average of 140 calories per glass.

For red wines, they are, generally speaking, more alcoholic and sweeter than white ranging from 125 calories up to 175 calories, depending on the level of ripeness and alcohol in the wine.

- 1 How many calories does the average drinker ingest when enjoying wine?
- 2 What is the level of alcohol content in dry white wine?
- 3 What is the level of alcohol content in sweet white wine?
- 4 What do the following numbers stand for: a) 1.5%, b) 100 to 175 c) 140?



Case 3

Red wine headache (RWH) and its cause

From time to time, many drinkers of wine get headaches. In fact, this is so common, it is often referred to as red wine headaches or RWH. While some of those headaches are caused from over consumption of wine that is not the sole cause. A lot of people blame allergies to sulfites for their suffering. While that does happen, that is not the cause of red wine headaches. Sulfites are used in almost every wine as a preservative agent. White wines contain between 250 and 450 parts per million of sulfites, whereas red wines contain between 50-350 parts per million of sulfites. While sulfites can bring on typical allergic or asthma symptoms they are not the culprit responsible for wine induced headaches. So, if it's not sulfites that cause the famous red wine headache or RWH, what is it?

It would appear that there are two potential reasons for the red wine headaches: histamines and tyramine. The simple medical explanation for red wine headaches is that histamine dilate your blood vessels and bring on the flushing and inflammatory sensations while tyramine gets credit for two effects. It is responsible for initially constricting and then dilating your blood vessels causing your blood pressure to rise slightly, just enough to induce a headache. It is important to keep in mind the amount of histamines present in red wine are much more prevalent than those which appear in white wine. That is the reason the condition is referred to as red wine headaches or RWH. In fact, histamines in red wine have been measured to be in some cases up to 200% higher in red wine, than what you commonly find in white wine.

People who suffer from red wine headaches more often than others can have an enzyme deficiency that does not allow them to metabolize histamines as well as they would like.

In order to prevent or cure the red wine headache, drink at least one full, an 8-ounce glass of water per glass of wine. Water is the best friend as drinking alcohol can cause dehydration.

(Source:<http://www.thewinecellarinsider.com/wine-topics/wine-educational-questions/health-nutrition-benefits-of-drinking-red-and-white-wine/>)

- 1 What does the abbreviation RWH stand for?
- 2 What are histamines and tyramine?
- 3 How does histamine affect blood vessels?
- 4 Where do histamines and tyramine come from?
- 5 How can RWH be prevented or cured?



K The Lighter Side

Making Use of a PEN

1 Each of the items below contains the word PEN. How many can you identify?

Example: Having no money. PENniless

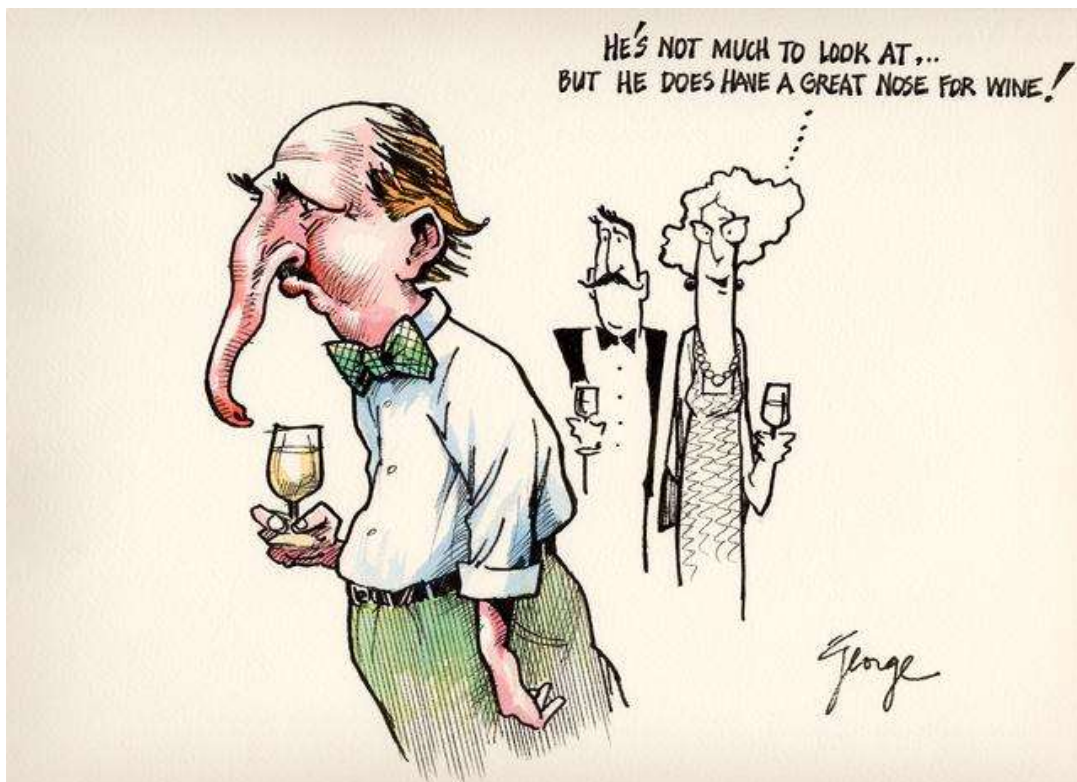
- 1 The process by which fruit matures; -----
- 2 A five-sided figure. -----
- 3 Land bordered on three sides by water. -----
- 4 A bird native to Antarctica. -----
- 5 Another word for a cent. -----
- 6 Punishment or fine. -----
- 7 Rely upon. -----
- 8 Retirement income. -----

(Source: <http://www.exchanges.state.gov/englishteaching/forum/>)

A hard drinker, sitting at the table was offered grapes at dessert.

'Thank you,' said he pushing the dish away from him, 'but I am not in the habit of taking my wine in pills.'

(Source: <http://www.having-fun-with-wine.com/wine-jokes-and-humor.html>)



(Source: http://www.winelit.slsa.sa.gov.au/wine_lore/WL_Aldridge_01.jpg)

UNIT 7

Serving and Drinking Tips



Photo courtesy of J. Mesić

"This wine is too good for toast-drinking, my dear. You don't want to mix emotions up with a wine like that. You lose the taste."

Ernest Hemingway (1899 – 1961), American author

A Starting up

Not much is needed to enjoy a wine: a good bottle and an appropriate glass. But then the questions start:

When is the right time to open the bottle?

How do you serve a really good wine?

What is decanting?

When does a wine need to be decanted?

Which is the right temperature to serve a wine?

How to select the right wine glass?

1 Answer these questions individually. Then compare your answers with a partner.

Serving and Drinking Temperatures

Two temperatures are crucial for the wine: the storage temperature and the serving temperature. The perfect temperature for wine storage is 10 to 13 °C while the serving temperature of wine depends on the type of wine.

The serving temperature of a wine has a crucial effect on how it will smell and taste. Chilling or warming an unopened bottle does not alter the composition of the contents, but a great wine

will not reveal its full complexity if it is too cool, and fizzy white will seem rather insipid at room temperature. The main reason for these variations is the complexity of wine: its vital ingredients react differently to cold and warmth.

There are almost as many “rules” associated with serving the wine as there are concerned with what to eat with it. Some of them are argued over at length; some are common sense, and some are just misunderstood.

In the end, however, it is the quality of the wine that determines its ideal serving temperature: simpler products need lower temperatures, while more complex, high quality wines benefit from greater warmth.

Serving temperatures

Wine	Description	Temperature
Sparkling wines		
<i>dry, fruity</i>	very well chilled	39-43° F (4-6 °C)
Champagnes		
<i>non-vintage cuvée</i>	well chilled	43-48° F (6-9 °C)
<i>vintage</i>	cellar temperature	54-57° F (12-14 °C)
White wines		
<i>light, acidic</i>	well chilled	43-48° F (6-9 °C)
<i>exotically aromatic</i>	chilled	46-50° F (8-10 °C)
<i>full bodied, woody</i>	cool	57-61° F (14-16 °C)
<i>Rose</i>	well chilled	43-48° F (6-9 °C)
Red wines		
<i>light, fruity</i>	cellar temperature	54-57° F (12-14 °C)
<i>medium bodied</i>	moderately warm	61° F (16 °C)
<i>full bodied, tannic, mature</i>	room temperature	64° F (18 °C)
Dessert wines		
	chilled to moderately warm	54-61° F (12-16 °C)

Every wine has its own ideal drinking temperature. For white wines, it is around 50° F (10° C), for red wines around 64° F (18° C). There are deviations depending on the type of wine. Light white wines can be drunk a few degrees cooler, and sparkling wines should be served at 46° F (8° C).

The notion that red wines should be drunk at “room temperature” is mistaken. What is room temperature? Today’s rooms hover around 21° C, and often they are even warmer. At this temperature you taste mainly the alcohol and glycerine in the wine, not the fruit, and that way you lose an important facet of the taste.

(Dominé, 2003)

2 The words on the left are from the text *Serving and Drinking Temperatures* above. Fill in the slots to make words that have similar meaning:

Crucial e _ _ _ _ _
 Alter c _ _ _ _
 Reveal d _ _ _ _ _
 Insipid f _ _ _ _ _ _ _ _
 Ingredient c _ _ _ _ _ _ _
 Notion i _ _ _
 Taste f _ _ _ _ _
 Facet a _ _ _ _ _

3 Compound nouns

Words can combine to make new words. Write one word in each box to make three compound nouns.

Check the use of hyphens in your dictionary.

- | | | | | | |
|---|--|---------------------------|---|--------------------------------|--|
| 1 | | melon
fall
skiing | 5 | birthday
credit
business | |
| 2 | | test
pressure
donor | 6 | shake
writing
bag | |
| 3 | | house
grocer
salad | 7 | tea
plastic
shopping | |
| 4 | | cube
berg
rink | | | |



B Reading and Speaking

Bringing Wine to the Correct Temperature

Chilling White Wines

1 Fill each of the numbered blanks with one of the words listed.

refrigerator water solution cellar freezer
ice salt process cool cubes

What do you do when your cellar is too warm and the white wine isn't cool enough? Perfectly simple: you remember to fetch the wine from the _____ (1) in time to put it in the refrigerator. If you need to chill it even faster, an ice bucket is the only _____ (2). In ice water it will drop at least ten degrees (5° C) in a matter of ten minutes or so. You do need to add water to the _____ (3), for it is a good conductor. Putting a pinch of salt in the _____ (4) can speed up the _____ (5), though; _____ (6) causes the ice cubes to melt faster and release their cold. If there are no ice _____ (7) available, your only recourse is the freezer compartment of your _____ (8). Only use this to _____ (9) the wine a few degrees, however, for if it stays in the _____ (10) longer than ten or fifteen minutes it will be not only cold, but also half frozen.

(Priewe, 2006)

Warming Red Wine

2 Complete the text with *a*, *the*, or *nothing* (the zero article).

When red wine comes from (1) _____ cellar it is often too cold to be enjoyed at once. (2) _____ professional term for (3) _____ quickly bringing it up to drinking temperature is *chambrier*. If you failed to take (4) _____ wine from (5) _____ cellar soon enough, you will have to do something. It used to be that you simply placed (6) _____ wine on (7) _____ radiator, but that heats only (8) _____ wine at (9) _____ bottom of (10) _____ bottle, not (11) _____ rest. (12) _____ better method is to lay (13) _____ bottle in (14) _____ container of lukewarm water. (15) _____ wine inside will reach (16) _____ desired temperature in only (17) _____ few minutes. But be careful: red wine is always served (18) _____ degree or two cooler than (19) _____ proper drinking temperature, as it quickly warms in (20) _____ glass. And (21) _____ another thing: don't even think of warming wine in (22) _____ microwave; (23) _____ bottle will immediately explode.

(Priewe, 2006)

Decanting Makes a Difference

3 Here are key words for five questions. Write out the questions in full, then see how many answers you can find in the article below.

Example: What/call/mixture/beer/lemonade?

What do you call a mixture of beer and lemonade?

a What/decanting?

b What/wine/kind/need/decant?

c Reason/what/decant?

d How/wine/decant?

e What /wines/young/need/aroma/unfold?



(Source: http://www.thewinepig.com/images/11931155_764374050338556_400374012_n1.jp)

4 Read the article and match the headings below to paragraphs 1, 2, 3 and 4.

- A Decanting young wines
- B How wines are decanted
- C Why wines are decanted
- D Why old wines are decanted

1 _____

Pouring a wine carefully from its bottle into a carafe is called decanting. Only two kinds of wine need to be decanted: very old red wines, which have formed a sediment in the bottle, and heavy but still young red wines, which are improved by some air contact before serving.

2 _____

Old wines are decanted in order to leave the sediment behind in the bottle so that it does not enter the glasses when the wine is served. The sediment built up over the years is mainly composed of tannins that have separated out. The sediment does not affect the taste of the wine despite the deposit, which has a bitter taste. The exceptions to this rule are old Burgundies with their sediment, which is good and can be enjoyed with the wine.

Decanting has to be done with great care when dealing with very old wines. Exposure to oxygen after years of airtight development can shock wines into sudden oxidation and make them undrinkable.

3 _____

A funnel is the simplest tool for easy decanting since it has a fine strainer at the bottom where the sediment is caught. Instead of using a funnel, experienced wine drinkers place a lit candle beneath the neck of the bottle while pouring the wine into the carafe. In the light of the candle, they can see when the sediment reaches the bottle neck and can stop pouring.

4 _____
It is important to decant young wines, rich in tannins, because they need air in order to unfold their aroma and to dissipate unpleasant smells. Carafes with a large surface and a long neck are used for such wines because they swirl and air the wine as it is decanted.

(Priewe, 2006)

5 Re-read the text above and find words and expressions that mean the following:

- 1 to pour from one vessel into another _____
- 2 the matter that settles to the bottom of a liquid _____
- 3 to divide into different parts _____
- 4 to create or develop something _____
- 5 to cause to spread thin or scatter and gradually vanish _____
- 6 not allowing air to get in or out _____
- 7 to open out _____

C Skills

Putting People at Ease Small Talk

1 Discuss these questions.

- 1 What is small talk?
- 2 What are your five favourite topics for small talk?
- 3 What topics are definitely not suitable?

The importance of small talk is that it is a means of establishing a basis for communication with people whom we do not know well. By starting discussions with some neutral topic, the people involved can get to know each other and find their common ground.

You should keep in mind that not all cultures value small talk. When opening discussion with Germans it can be kept to a minimum. Other cultures, including English-speaking ones, value small talk.

The secret of successful small talk is to find out what the other person is interested in and let them talk about it. Therefore you should try to discover about the other person's interests prior to your meeting. By building up something of a mental picture of the person you will be speaking to, you are likely to find some common ground more quickly.

When talking to another person, consider the non-verbal signs you are sending. Try to smile as much as possible. Avoid any topic that might be taboo for the other person, or anything which might lead to violent disagreement (religion or politics).

Safe neutral subjects include the following:

- ▶ Conventional greeting (Hello. How are you? Nice to meet you.)
- ▶ Weather (The weather's been great/awful, hasn't it?)
- ▶ Current events, but not of a politically sensitive nature.
- ▶ Sport.
- ▶ Personal interests.
- ▶ Family.
- ▶ What they are going to do for the weekend.
- ▶ Show the other person around your office and introduce key people.
- ▶ Offer refreshments to your guests.

2 Someone is visiting your country. To which questions might the following be answers?

- 1 Yes, several times.
- 2 I'd love to.
- 3 We're doing very well, thanks.
- 4 I'm really impressed. The nature is fascinating. I hope I'll have time to enjoy it.
- 5 Right in the centre.
- 6 Very comfortable and the service is first class.
- 7 Terrible. There was a lot of turbulence.
- 8 I enjoy jogging when I get the time.





Listening

3 Now listen to the conversation. Were your questions the same as on the recording?

4 You are about to meet a foreign business contact socially for the first time. Choose four of the topics below and prepare to talk about them.

- ▶ Places of interest in your country/town
- ▶ The building you are in
- ▶ The weather
- ▶ Cars
- ▶ Families
- ▶ Food and restaurants
- ▶ Hobbies
- ▶ Holidays
- ▶ How to travel and where
- ▶ IT topics
- ▶ Jobs

D Reading and Language

Content Determines the Shape

1 Read the text below and use the word given in capitals at the end of the line to form a word that fits into the space on the same line.

Professor Claus J. Riedel was the first (1) _____ to recognize that the bouquet, taste, balance and finish of wines are (2) _____ by the shape of the glass from which they are consumed. More than 50 years ago he began his (3) _____ work to create stemware that would complement (4) _____ wines and spirits. In the late 1950s, Riedel started to (5) _____ glasses which at that time were a design revolution. Thin-blown, (6) _____, reducing the design to its essence: bowl, stem, base. Working with (7) _____ tasters, Riedel discovered that wine enjoyed from his glasses showed more (8) _____ and better balance than when served in other glasses.

Claus J. Riedel laid the groundwork for stemware which was (9) _____ as well as (10) _____, and made according to the Bauhaus design principle: form follows function.

DESIGN
AFFECT

PIONEER
DIFFERENCE
PRODUCTION
ADORN
EXPERIENCE
DEEP

FUNCTION
BEAUTY

(Source: <http://www.riedel.com/>.)

2 Fill in the gaps with do or make.

- | | |
|------------------------|--------------------------|
| 1 ___ a mistake | 11 ___ a noise |
| 2 ___ progress | 12 ___ a phone call |
| 3 ___ someone a favour | 13 ___ sure that... |
| 4 ___ a speech | 14 ___ an exam |
| 5 ___ my homework | 15 ___ a complaint |
| 6 ___ one's best | 16 ___ up my mind to ... |
| 7 ___ money | 17 ___ nothing |
| 8 ___ a will | 18 ___ sense |
| 9 ___ friends with | 19 ___ a mess |
| 10 ___ business with | 20 ___ the housework |

3 Discuss these questions with your partner before you read the article.

- 1 Why is the size of a wine glass important?
- 2 What shape should a wine glass have?
- 3 What is the serving quantity for white/red wine?
- 4 What messages are transmitted once the tongue is in contact with the wine?
- 5 How should wine glasses be stored?

Wine Glasses

There are many different types of wine glasses, of varying styles and quality. Most wine drinkers agree that different styles of wines need different types of wine glasses.

Type

A wine glass should be:

- ▶ colourless
- ▶ transparent
- ▶ unadorned
- ▶ thin-walled
- ▶ with a cut and polished lip
- ▶ egg-shaped or tulip-shaped
- ▶ stemmed
- ▶ made of lead crystal

Size

The size of a glass is important, showing the quality and intensity of aromas. The bowl should be large enough to allow a fair measure to be poured, but leaving enough room for the wine to be gently swirled without being spilt. The evaporation space has to be chosen according to the “personality” of the wine. It is best to respect the appropriate serving quantities:

General rules:

- ▶ red wines and their character require large glasses
- ▶ white wines require medium-sized glasses

Serving quantities:

- ▶ approximately three ounces* for white wine
- ▶ four, up to a maximum of five ounces for red wine

Shape

Riedel has always viewed the wine glass as an instrument to bring together the personality of the wine, the smell, taste and the sense of sight.

To appreciate the personality of different grape varieties and the subtle character of wines, it is essential to have an appropriately fine tuned glass shape, as it determines the flow of the wine and consequently where it touches the various taste zones of the tongue. The initial contact point depends on the shape and volume of the glass, the diameter of the rim, and its finish (whether it is cut and polished or has a rolled edge) as well as the thickness of the crystal.

When you put your wine glass to your lips, your taste buds are on the alert. Once the tongue is in contact with the wine three messages are transmitted at the same time: temperature, texture and taste. The combination between the sense of smell and taste leads into the wonderful world of flavour.

* Fluid Ounces to Milliliters Conversion

How many milliliters in an ounce?

- ▶ Fluid ounces to milliliters conversion table shows the most common values for the quick reference.
- ▶ 1 Ounce [Fluid, US] = 29.5735296 Milliliters
- ▶ 1 Ounce [Fluid, UK] = 28.4130625 Milliliters
- ▶ 1 Milliliter = 0.0338140227 Ounce [Fluid, US]
- ▶ 1 Milliliter = 0.0351950797 Ounce [Fluid, UK]
- ▶ Ounce (fluid) is an imperial and US customary unit. Fluid ounces are volume units and should not be mistaken with ounces which is mass (weight) unit. The abbreviation is "fl oz".
- ▶ Milliliter is a volume unit in the metric system. Spelled as millilitre in most of the countries. Used mostly in cooking recipes to measure the liquids. The abbreviation is "ml".

Looking after wine glasses

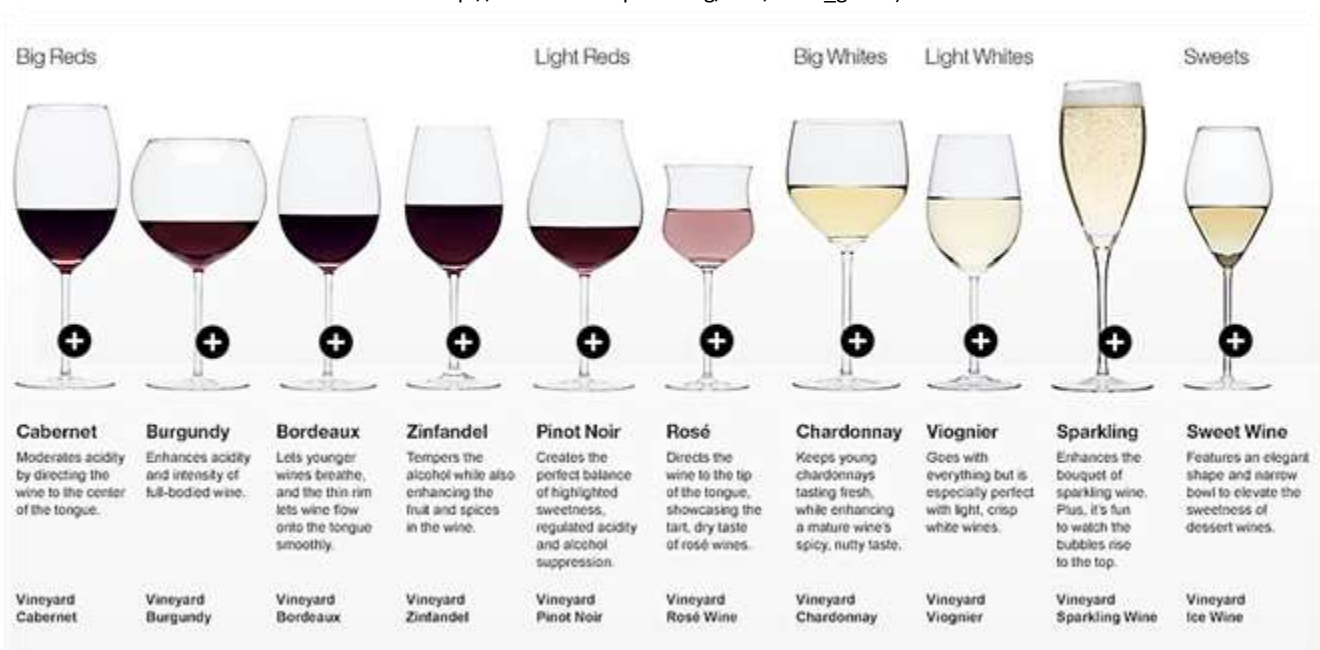
A lot has been written about how to treat glasses, but one should follow only a few simple rules. Glasses should be washed between use either in hot water alone or with detergent. If detergent is used, ensure that the glasses are given a thorough rinsing afterwards, as even just a trace of lemon or any other similar scented washing-up liquid can ruin the nose of wine.

Once washed, they should be allowed to drip dry. When dry, a quick polish will rid them of any residual water marks. Then the glasses should be held up to the light to check they are clean.

They should be stored standing upright in a clean, odour-free cupboard ready for use.

(Sources: <http://www.riedel.com/> and Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc.

http://www.en.wikipedia.org/wiki/Wine_glass.)



E Language Review

Vocabulary

Antonyms and Synonyms

1 For the words in A, write their opposites in B, using prefixes or suffixes.

A	B	C
adjectives		
colourful		
adorned		
tasty		
real		
plausible		
normal		
professional		
credible		
probable		
important		

2 In column C write synonyms for the words in B using the words in the box.

flavourless	unbelievable
simple	achromatic
fake	unlikely
trivial	bizarre
ridiculous	amateur

F Reading and Speaking

1 Read the definitions and decide which professions they describe.

1 This person is in charge of the science and taste of the wine: a wine steward.

2 This person is a waiter in a restaurant who is in charge of wines and their service.

1 _____

2 _____



An Oenologist

2 Read the article and insert the following headings into the text where appropriate.

- 1 Job Description of an Oenologist
- 2 Essential Information
- 3 Requirements to Become an Oenologist
- 4 Duties of an Oenologist

A _____

An oenologist manages the different stages of wine production, including fermentation, aging and bottling. They can also perform business duties for a winery, such as sales and marketing.

B _____

Oenologists supervise and manage the stages of wine production. They coordinate with viticulturists to grow and harvest grapes, direct the fermentation process, supervise the aging process and oversee bottling. Oenologists can also develop new wines and participate in the administrative side of the winemaking business.

C _____

Generally, an oenologist's first duty in the winemaking process is to decide the appropriate time to harvest grapes. After harvest, they direct the grape crushing process that results in a mixture called must. Oenologists heat the must after adding ingredients, such as yeast, sulfites and sugar, to trigger fermentation. They direct and manage the work of cellar assistants, who operate and maintain the various machines utilized during winemaking.

Oenologists supervise laboratory technicians who analyze samples of wine while it ages. Based on a wine's chemical composition, oenologists decide when a wine can be blended and bottled. Additional duties may vary by winery, but can include keeping production records, composing copy for wine bottle labels, developing new vineyards and selling to distributors and customers.

D _____

Winemakers must have refined senses of taste and smell. Knowledge of grape varieties is also essential. It's possible for an oenologist to learn on the job by working low-level positions and advancing to winemaker over time.

Completion of a bachelor's degree program in viticulture and oenology can provide the scientific knowledge necessary for making wine. Relevant coursework includes sensory wine evaluation, wine technology, soil science and organic chemistry. Additional coursework in business and marketing may be beneficial for positions at some smaller wineries, where oenologists have duties outside of production.

3 Write down questions to be answered by your fellow students.

1 _____
2 _____
3 _____
4 _____
5 _____
6 _____

A Sommelier

4 Read the article and insert the following headings into the text where appropriate.

- A Stay Connected to the Industry
- B How to Present Yourself
- C How to Become a Sommelier
- D Where to Start Working Without Prior Experience
- E Get Comfortable Serving and Pouring Wine

1 _____

Learn to assess wine and take useful wine tasting notes.

Everyone has a different way to taste wine, but there is a standard set of steps that you will want to observe to make a professional assessment of wine.

Increase your knowledge of the most important wine regions of the world.

France, Italy, Spain and the US are the top 4 wine regions of the world. Of course, you'll need to know about more regions than just these. Learn the major regions of each country and get to know what wines they make.

2 _____

The most overlooked and often forgotten art of presenting, opening and pouring wine is something a sommelier takes a lot of pride in perfecting. This part of your education requires attention to etiquette and the physical ability of the job. You'll want to practice the physical act of opening Champagne, presenting and pouring wine. You might consider getting a book on hospitality to learn additional tips on tact and more nuanced procedures.

As a sommelier, you end up busying a lot of tables. This is to say, that you need to learn the craft of restaurants at the same time that you're learning about wine if you want to be a restaurant sommelier.

3 _____

Look for opportunities to be a server at a wine-driven restaurant, a wine bar, a tasting room, a catering business, or even as hotel banquet staff. These are all great opportunities to build your

experience. If you realize during this process that the industry is not for you, you can at least walk away with exciting wine knowledge and less upfront cost.

There are many restaurants who have a lot of wine where no one cares that the junior staff know anything about it. Who you work under, i.e. someone you consider a mentor, is much more crucial than what you're actually doing.

4 _____

The very best restaurants employ people who anticipate the needs of their guests and maximize sales, all while being ingratiating, humble and often invisible. For this, you'll want to be squeaky clean, well-groomed and dressed appropriately.

5 _____

Being a sommelier may be fun at on the job, but it's even more fun when you get to know your peers off the job.

G Skills

Taking Notes from the Video and Answering the Questions



Video



1 Watch the video:

An Interview with Ian Cauble, Master Sommelier

(Source: <https://www.youtube.com/watch?v=ImPICOOc7fs>)

While listening write notes to be able to answer the following questions:

- 1 What kind of exam did he pass?
- 2 How many times did he take the exam?
- 3 How did he feel when he passed the exam?
- 4 When did he realize that being a sommelier could be a career?
- 5 Why is tasting so important in the process of training for the exam?
- 6 How much money did he spend on his training?
- 7 What great wines does he like?
- 8 What is the best wine he ever had?

Write your notes in the following table.

Video Title: _____

Information from Video	My Thoughts

2 Translate the following text

U vinskom svijetu postoje dva zanimanja koja se stalno isprepleću i greškom poistovjećuju. Naime, sommelier i enolog dva su potpuno različita zanimanja.

Riječ sommelier(vinotoča, konobar za vino, vinslužitelj) podrijetlo vuče iz francuskog jezika, a označava osobu koja služi vino. Sommelier je obrazovana osoba, vrhunski poznavalac vinske kulture koja gostu daje preporuku i poslužuje određeno vino uz određeno jelo. Sommelier brine o vinu od trenutka njegove kupovine, čuvanja, pa sve do posluživanja. Ne opskrbljuje podrume lijepim etiketama, već razumnim izborom vina koja se slažu s jelovnikom i određenom trenutku u kojem će biti korišteno.

Sommelier je stručni radnik, ali i osoba široke kulture, staloženih elegantnih pokreta, nenametljiv, pristupačan i duhovit, kojemu je zadatak da kod gosta probudi interes za jelo i dakako, za piće.

Također mora znati servirati vino. To znači dekantirati vino, servirati šampanjac, odnosno pjenušac, odabrati pravu čašu za pojedino vino i sl. Također, treba znati odrediti pravu temperaturu vina.

Osim toga, sommelier mora poznavati vinske kulture cijeloga svijeta i neprestano učiti, puno kušati i razvijati se i stalno ulagati u sebe. Mora poznavati enološko-gastronomsku kulturu. Najvažnije, sommelier mora znati sljubiti vino s jelom te znati objasniti zbog čega je to tako da bi taj eno-gastronomski doživljaj bio potpun.

Enolog je vinski stručnjak, osoba koja posjeduje diplomu studija s područja vinarstva odnosno enologije. Enologija je znanost o kultiviranju vinove loze, proizvodnji i naposljetku, čuvanju vina.

Naime, ta znanost prati put vina – od trenutka sadnje grožđa do arhiviranja vina. Enolog je taj koji kreira vino, te mora poznavati svaki segment kako vinarstva tako i vinogradarstva da bi s lakoćom mogao djelovati u svom području. Enolog je uključen u sve procese koji se događaju kod vina što znači da mora imati znanja i s područja kemije, biologije i srodnih znanosti.

Vještina proizvodnje vina seže još u doba starih Grka i do danas nije mnogo promijenjena, dok su najveće promjene došle u smislu osuvremenjivanja tehnologije s kojima enolozi idu u korak.

(Source: www.wineshop.hr)

3 Choose the best word to fill each gap from the alternatives given in the box below. There is one extra word that you don't have to use.

presenteeism punctuality humour business
absenteeism gestures entertainment

- 1 Our overseas clients expect _____ when they visit so I take them out every evening.
- 2 He is very keen on _____, so get there early.
- 3 I don't like _____ lunches because they go on for too long.
- 4 There was a culture of _____ with people at their desks even at the weekend.
- 5 You can learn a lot from watching the _____ that people make when they are talking.
- 6 An important business meeting is not the place for _____. It can go horribly wrong.



(Source: <https://www.vecernji.hr/media/img/c3/20/b4186ca9ad49b71ec572.jpeg>)

H Reading and Speaking

The Marriage of Food and Wine



Source: <https://s-media-cache-ak0.pinimg.com>

Wine and food matching is the process of pairing food dishes with wine to enhance the dining experience. In many cultures, wine has had a long history of being indispensable at the dinner table and in some ways both the winemaking and culinary traditions of a region have evolved together over the years. Rather than following a set of rules, local cuisines were paired simply with local wines. The modern "art" of food pairings is a relatively recent phenomenon which offers guidelines for pairings of particular foods and wine. In the restaurant industry, sommeliers are often present to make food pairing recommendations for the guest. The main concept behind pairings is that certain elements (such as texture and flavour) in both food and wine interact with each other, and thus finding the right combination of these elements will make the entire dining experience more enjoyable. However, taste and

enjoyment are very subjective and what may be a "textbook perfect" pairing for one taster could be less enjoyable to another.

While there are many books, magazines and websites with detailed guidelines on how to pair food and wine, most food and wine experts believe that the most basic element of food and wine pairing is understanding the balance between the "weight" of the food and the weight (or body) of the wine. Beyond weight, flavours and textures can either be contrasted or complemented.

(Source: https://en.wikipedia.org/wiki/Wine_and_food_matching)

1 Translate the following sentences.

Osnovna pravila odabira vina uz jelo su sljedeća:

Uz lagano jelo ide lagano vino.

Uz teško jelo ide jako vino.

Uz kiselkasta jela idu kiselkasta svježa vina.

Uz bijelo meso ili kuhanu ribu idu bijela vina.

Uz školjke i rakove pristaju neutralna bijela vina.

Uz tamna mesa, divljač ili pečenu ribu idu crna vina.

Uz slatka jela piju se desertna vina ili pjenušci.

Uz kavu idu likeri, konjak i slična pića.

Poslužujemo li tijekom obroka više vrsta jela, na stol treba najprije iznijeti bijela vina, zatim ružičasta ili opola i tek na kraju crna vina.

(Source: <http://dobarzivot.net/hrana/pice/eno-gastro-vodic-koje-vino-posluziti-uz-tradicionalna-jela-istre-dalmacije-hrvatskog-zagorja-i-slavonije/>)

The following list gives some suggestions for pairing wine and food.

White or sparkling wine is usually best with starters. Soups call for no wine at all.

Salads are difficult for wine because of the dressings, especially those that are vinegar-based.

Poultry

Chicken has the reputation of going well with almost any wine white or red. Chicken can be served in many different ways so you might wonder which type of wine makes the best pairing. The truth is there's no single answer, but white wine is generally a more flexible match, smooth dry whites like Chardonnay are always a good choice for many chicken dishes.

When to Drink White Wine with Chicken

A lightly oaked Chardonnay or other smooth dry white go with:

- ▶ Chicken in a creamy sauce, especially with mushrooms or creamy chicken pies
- ▶ Creamy or cheesy pasta dishes like chicken tetrazzini
- ▶ Chicken Caesar salad.

Aromatic whites like medium-dry Riesling and Pinot Gris match well with spicy chicken dishes such as:

- ▶ Stir-fries with chicken
- ▶ Sweet and sour chicken
- ▶ Asian-style noodle dishes.

A crisp dry white like a Pinot Grigio or Sauvignon Blanc is good with:

- ▶ Fried chicken dishes.

When to Drink Red Wine with Chicken

- ▶ With tomato and pepper-based sauces try a medium-bodied southern French or Spanish red or a Merlot.
- ▶ Chicken with a barbecue sauce can take a more full-bodied red with a touch of sweetness like a Shiraz Grenache or Zinfandel.

When Either Red or White Would Do

- ▶ Simply roast chicken. Either an oaked Chardonnay or a Pinot Noir will be a good choice.
- ▶ Grilled chicken with herbs. You could go for a crisp dry white or a light red.

Duck means red. Still, lots of people enjoy a Merlot or Cabernet Sauvignon with their duck.

Goose can get it on with some bigger red wines.

For Thanksgiving roast turkey, a Zinfandel and Barbaresco are tempting, however, a really big white Chardonnay can also work.

Which Wines Pair Best With Pork

Roast pork

White wine is a better match than red with most roast pork dishes. With more delicate roast suckling pig a light to medium-bodied red can work well.

Grilled pork in a creamy sauce - with mushrooms or mustard both red and white burgundy work well.

Pork casserole or pie with cider or apples

Cider is by far the best match but if you want to drink wine a good Chardonnay or easy-going inexpensive southern French red that's relatively modest in alcohol will also do.

Barbecued pork

The combination of spice and sweetness tends to strip the fruit out of whites so a robust jammy red would be a good choice.

Sweet and sour pork

A good choice would be a fruity new rosé, especially a Merlot rosé.

Goulash

The paprika is always more important than the pork so a suggestion would be a rustic red.

Which Wines Pair Best With Beef & Lamb

'Baby/milk fed' lamb

A delicacy popular in Mediterranean countries such as Spain, Italy, southwest France and Croatia deserves to be paired with fine wines - top quality Bordeaux, Burgundy and Rioja, all with a few years' bottle age. (Mature wines go well with this style of lamb).

Spring lamb served pink with fresh herbs and/or spring vegetables.

Cuts like rack of lamb, noisettes and leg of lamb should be served with top quality Bordeaux, Burgundy and Rioja, all with a few years' bottle age.

Roast lamb served medium-rare to well-done, with garlic or rosemary and/or a wine sauce or gravy

The way many households would prepare a leg of lamb for a multi-generational family get-together should be served with younger, more fruit-driven wine such as a younger red Bordeaux, Cabernet or Merlot blend.

Slow-roast shoulder of lamb

A fattier, more flavourful dish, especially if made with older lamb such as hogget or mutton. A slightly gamey Rhône or Spanish red is a good choice with this.

Typically British/Irish lamb stews and hotpots, shepherd's pie

The characteristic of these types of dishes is their very simple flavours - sweet-tasting lamb, stock and a few root vegetables with maybe a sprig of thyme or bay. A good suggestion would be to stick to inexpensive country reds.

Game

For game such as venison, bison, or kangaroo good choice is a spicy red like Sangiovese or Shiraz.

Veal, like chicken, is wine flexible, and Chardonnay is recommended, though a light red is understandable.

Plain **rabbit** calls first for a white, perhaps a Riesling, though with a particularly hearty preparation and sauce, reds from Pinot Noir to Merlot to Syrah can work.

Which Wines Pair Best with Fish and Shellfish

Lobster goes well with a Chardonnay.

Crab can match with a Sauvignon Blanc as well as Chardonnay and Champagne.

With **shrimp** try a Riesling, Pinot Grigio, Pinot Gris, Pinot Blanc or Sauvignon Blanc.
For fish of delicate taste such as **red snapper** or **striped bass**, Chardonnay is more the rule than the exception.

Salmon goes well with red wine, particularly Pinot Noir.

Red is a good choice for **tuna** as well, perhaps a Merlot, though you could also consider a Sauvignon Blanc or Chardonnay.

Swordfish works with the same wines as tuna.

As for **sushi**, a white such as a Riesling or Sauvignon Blanc will be fine.

(Sources: <http://winefolly.com/tutorial/what-wine-goes-with-chicken-and-poultry/>, <http://www.foodandwine.com/articles/best-wines-for-seafood>, <https://www.matchingfoodandwine.com/news/pairings/top-wine-pairings-for-lamb/>)

2 Connect the wines from a- l with the corresponding dishes 1-13 and then translate the names of traditional Slavonian dishes.

Preporuke slaganja hrvatskih jela i vina

Slavonija

- | | |
|--|------------------------|
| 1 Kulen, slavonska šunka i kobasica, turšija | A Đakovački rizling |
| 2 Svježi kravlji sir sa crvenom paprikom | B Iločka graševina x 2 |
| 3 Čobanac | C Zeleni silvanac |
| 4 Fiš-paprikaš s domaćim rezancima | D Bijeli pinot |
| 5 Šaran u rašljama | E Kutjevačka graševina |
| 6 Som u vinu | F Crni pinot |
| 7 Smuđ u češnjaku | G Cabernet |
| 8 Miješano meso s roštilja, sataraš, ajvar | H Frankovka |
| 9 Punjeni odojak, pekarski krumpir, pečena paprika | I Rizling |
| 10 Srneći hrbat, pirjano crveno zelje | J Zweigelt |
| 11 Zečji but | K Rajnski rizling |
| 12 Uz gužvaru | L Traminac |
| 13 Uz orahnjaču i makovnjaču | |

(Source: <http://dobarzivot.net/hrana/pice/eno-gastro-vodic-koje-vino-posluziti-uz-tradicionalna-jela-istre-dalmacije-hrvatskog-zagorja-i-slavonije/>)

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10 ___ 11 ___ 12 ___ 13 ___



Photo courtesy of D. Nedela

3 As a group prepare a short presentation of three to five minutes on suggestions for pairing traditional Istrian, Dalmatian, Hrvatsko zagorje and Slavonian dishes with corresponding wines. In addition, present a traditional recipe for one of the characteristic dishes of the region of your choice. Make your presentations in groups.

After each presentation, fill in the following Feedback form.

Feedback form

	Poor	OK	Yes!	Wow!	Comments
Start Who Why What How Variety					
Signposting					
Pausing					
Organisation					
Finish Signal Summary Present perfect Conclusion Closing remarks					

(Williams, 2008)

4 Complete the following sentences with missing words. Use your knowledge of pairing food and wine.



Source: <http://tastychomps.com/wp-content/uploads/2017/03/Carrabbas-Food-Wine-Pairing.png>

- 1 _____ is very suitable for desserts.
- 2 _____ is a good accompaniment to grilled trout.
- 3 Roast beef benefits from a glass of _____ .
- 4 Turkey is best with _____ .
- 5 Chicken is complemented by _____ .
- 6 _____ is a very good food wine.
- 7 Merlot is a good choice for _____ .
- 8 _____ goes well with various dishes.
- 9 _____ complements pasta dishes.
- 10 _____ is an appropriate partner for roast pork.
- 11 _____ is an ideal partner for light dishes.

What Is Culture?

5 Choose the five factors which you think are the most important in creating culture. Give your reasons.

climate	ideas and beliefs
geography	cuisine
language	arts
religion	social customs and traditions
historical events	ceremonies and festivals
institutions	architecture

Defining the Word CULTURE

'Culture' can mean different things to different people.

6 Look at these five definitions of culture.

- 1 Select the one you think is closest to your own idea.**
- 2 Identify any missing elements in each definition.**
- 3 Produce your own definition.**

- A The sum total of all the beliefs, values and norms shared by a group of people.
- B The way you have been conditioned in a society to think, feel, interpret and react.
- C The collective programming of the human mind.
- D A large pool of experience composed of learned programmes for action and passed on from generation to generation.
- E All you need to know and believe in order to be accepted in a society.

Cross-cultural Communication

7 Work in pairs and give your opinion on each of the listed areas of potential cultural misunderstanding:

- a distance when talking to people:** what is comfortable?
- b eye contact:** how much of the time do people look directly at each other?
- c gesture:** do people make lots of facial gestures? How much do they move their arms and hands?
- d greetings/goodbyes:** do people shake hands every time?
Are there fixed phrases to say?
- e humour:** is this a good way of relaxing people? Or is it out of place in some contexts?
- f physical contact:** how much do people touch each other?
- g presents:** when should you give them? When should you open them? What should you say when you receive one?
- h rules of conversation and the role of silence:**
How long can people be silent before they feel uncomfortable?
Is it acceptable to interrupt when others are speaking?

8 Look at the list below. Prepare a short introduction which would be useful for people about to make a trip to Croatia.

Attitudes to alcohol	Money – paying restaurant bills
Attitudes to foreigners	Political system
Demography- population spread	Regions
Formality of dress in business	Religion and its importance
Geography	Respect for authority
History	Shop opening times
Hospitality	Silence – its acceptability in conversation and meetings
Local products	Tipping in restaurants
Meal times	Titles – Mrs, Dr, etc., and their equivalents



Photo courtesy of D. Nedela

Culture and Tradition

As a part of Croatian culture and tradition it would be unfair not to mention Croatian cuisine which is abundant in its diversity offering various regional dishes which vary according to season and region. Croats enjoy celebrating with food festivals.

9 The following sentences describe two events which take place in Požega annually. Rearrange them in order to get a short description of each.

- A Kulenijada is a special event dedicated to presentation and tasting of the very best kulen.
- B It is being held every year as a part of the Aureafest at the beginning of September.
- C It is being held every year in June.
- D Slavonia is a sausage heaven and no product is more highly praised than the spicy kulen.
- E It is a wonderful family day out in the park close to the chocolate factory Zvečevo.
- F Kulen is an original Slavonian smoked and cured product made in the process of smoking of pork intestine filled with the stuffing composed of pork minced meat finely seasoned with grind paprika.
- G It goes well with Graševina.
- H Kulenijada is the oldest event that promotes this kind of Slavonian speciality.
- I Fisherman's soup is a hot, spicy paprika-based freshwater fish soup, a bright red hot soup prepared with generous amounts of hot paprika and carp of mixed river fish.
- J The annual Fišijada brings together the catch of the region's best fishermen with some of the best recipes.

Fišijada

1 _____ 2 _____ 3 _____ 4 _____ 5 _____

Kulenijada

1 _____ 2 _____ 3 _____ 4 _____ 5 _____

10 Read the text and fill it in with the words from the box.

blessing baptism November bishop appreciation
gather Vincent bonfires numerous culinary

Cultivating and drinking wine is a tradition deeply embedded in the roots of Croatian culture. Numerous holidays, feasts and traditions have developed around the (1) _____ of wine in Croatia.

The most important tradition is the Feast of Martinje. St. Martin's feast is a ritual of wine (2) _____ that has been celebrated since the 17th century in the northern parts of Croatia. Wine lovers (3) _____ in vineyards of their hosts in the middle of (4) _____. In the ritual of baptizing, actors dress up and take the roles of (5) _____, judge, godmother and godfather of the wine. On Saint Martin's Day people cherish the tradition of turning grape juice "must" into wine. At the celebrations they usually prepare Martin's goose. Traditionally big celebrations of St. Martin's Day in Croatia are held in Sveti Martin na Muri, Požega, Kutjevo, Velika Gorica, Dugo Selo and Sv. Ivan Zelina.

The second important feast is the Feast of Saint (6) _____ celebrated each winter on January 22nd (Roman Catholic Church) and is called "Vincelovo" or "Vincekovo". The Feast gives thanks and pays homage to the vineyard, celebrates another successful harvest and the

promise of a new growing year. St. Vincent's Day marks the mid-point between the onset of dormancy and bud-break in the vine's growing cycle.

A typical St. Vincent's celebration consists of religious services, the (7) _____ of the vineyards, the lighting of (8) _____, live folk music and dancing, regional (9) _____ specialties cooked over open fires, and of course plenty of local wine.

Besides Martinje and Vincelovo (10) _____ local customs associated with various saints' days, developed in different regions, and many of these customs are still celebrated to this day.

(Sources: <http://www.thedubrovniktimes.com/information/item/1426-saint-martin-s-day-in-croatia>,
<https://uncorkingcroatia.com/2012/01/20/a-time-for-pruning-partying-the-feast-of-saint>)



Photo courtesy of J. Mesić



Photo courtesy of D. Nedela



Photo courtesy of D. Nedela

I The Lighter Side

Half Full or Half Empty?

Pessimists believe the glass is **half empty**. **Optimists** believe the glass is **half full**.

1 What might people from different walks of life say about the half full or half empty glass?

Connect the people from 1 to 7 with what they might say from a to g.

- 1 government
- 2 opposition
- 3 a philosopher
- 4 an economist
- 5 a banker
- 6 a psychiatrist
- 7 a physicist

A would ask: "What did your mother say about the glass?"

B would say that the glass has just under 50% of its net worth in liquid assets.

C would say that the volume of this cylinder is divided into two equal parts; one a colourless, odourless liquid, the other a colourless, odourless gas. Thus the cylinder is neither full nor empty. Rather, each half of the cylinder is full, one with a gas, one with a liquid.

D would say that, in real terms, the glass is 25% fuller than at the same time last year.

E would say that if the glass was in the forest and no one was there to see it, would it be half anything?

F would say that it is irrelevant because the present administration has changed the way such volume statistics are collected.

G would say that the glass is fuller than if the opposition party were in power.

(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc.
http://www.en.wikipedia.org/.../Is_the_glass_half_empty_or_half_full%3F.)

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____

An Englishman, a Scotsman, and an Irishman in a Pub

One day an Englishman, a Scotsman, and an Irishman walked into a pub together. They each bought a pint of Guinness. Just as they were about to enjoy their creamy beverage, three flies landed in each of their pints and were stuck in the thick head. The Englishman pushed his beer away in disgust. The Scotsman fished the fly out of his beer and continued drinking it as if nothing had happened. The Irishman, too, picked the fly out of his drink, held it out over the beer, and started yelling, "SPIT IT OUT, SPIT IT OUT, SPIT IT OUT!!!!"

(Source: www.having-fun-with-wine.com/wine-jokes-and-humor.html.)

UNIT 8

Grow and Shine



Photo courtesy of J. Mesic

"Education is only a ladder to gather fruit from the tree of knowledge, not the fruit itself."

Anonymous

A Starting up

1 Look at these proverbs. What do they mean?

2 Are there any similar proverbs in your language?

1 Knowledge has bitter roots but sweet fruits. (Italian proverb)

2 Deeds are fruits, words are leaves. (English proverb)

3 The oldest trees often bear the sweetest fruit. (German proverb)

4 Beauty may have fair leaves, yet bitter fruit. (English proverb)

5 As the tree so the fruit. (German proverb)

Fruit

3 Read the following definitions carefully. Which definition is most understandable?

Why? Which is a botanical definition?

Fruit is an organ that contains seeds, protecting these as they develop and often aiding in their dispersal.

Fruit is an edible reproductive body of a seed plant; especially one having a sweet pulp associated with the seed.

Fruit is an edible seed-bearing structure consisting of fleshy tissue produced by a perennial.

4 Read the article about fruit classification.

Fruit is, in its strict botanical sense, the fleshy or dry ripened ovary of a plant, enclosing the seed or seeds. The word comes from the Latin *frui*, meaning enjoy. However, fruits are not only colourful and flavourful components of the human diet, but also a source of energy, vitamins, minerals, dietary fibre and antioxidants.

Millions of tons of fruit are grown throughout the world annually. Fruit growing is a branch of horticulture, a field of agriculture. Horticulturists define a fruit as an edible seed-bearing structure consisting of fleshy tissue produced by a perennial. A perennial is a plant that lives for more than two years without being replanted.

Fruits are commonly classified by growing region as follows:

1 temperate zone fruits

- ▶ pome fruits: apple, pear, quince
- ▶ stone fruits: apricot, cherry, nectarine, peach, plum
- ▶ small fruits and berries: grape, strawberry, raspberry, blueberry, blackberry, cranberry

2 subtropical fruits

- ▶ citrus fruits: grapefruit, lemon, lime, mandarin, orange, pummelo (pomelo), tangelo
- ▶ non-citrus fruits: avocado, cherimoya, fig, kiwi-fruit, olive, pomegranate

3 tropical fruits

- ▶ major tropical fruits: banana, mango, papaya, pineapple
- ▶ minor tropical fruits: stair fruit (carambola), cashew apple, durian, guava, longan, lychee, mangosteen, passion fruit, sapota, tamarind

Temperate fruits must have an annual cold season to grow properly. They are raised in the Temperate Zones, the regions between the tropics and the polar areas.

Subtropical fruits need warm or mild temperatures throughout the year but can survive an occasional light frost. They are grown mainly in subtropical regions.

Tropical fruits are raised mainly in the tropics and cannot stand even a light frost.

How Botanists Classify Fruit

Fruit is the seed-bearing structure of a flowering plant developed from the *ovaries* of the flowers. An ovary is a hollow structure near the base of a flower. It may hold one or more seeds. The wall of an ovary of a mature fruit in which the seed is fully developed has three layers. The outer layer is called the *exocarp*, the middle layer is known as the *mesocarp*, and the inner layer is the *endocarp*. The three layers together are called the *pericarp*.

There are two broad categories of fruits: **fleshy fruits**, in which the pericarp and accessory parts develop into succulent tissues and **dry fruit**, in which the entire pericarp becomes dry at maturity.

Fleshy fruits include (1) berries, such as oranges and cherries, (2) aggregate fruits, such as blackberries and strawberries and (3) multiple fruits, such as pineapple. Dry fruits include cereal grains, capsulate fruits and nuts.

Adapted from: Kader: Fruit Quality and its Biological Basis.

(Sources:<http://theseedsite.co.uk/fruits.html> and Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. <http://www.en.wikipedia.org/.../Fruit.>)

5 Match the words or phrases from the article to these definitions.

- | | |
|---|-------|
| 1 to be formed from | _____ |
| 2 fit or suitable to be eaten | _____ |
| 3 a weather condition in which the temperature drops below 0° | _____ |
| 4 the part of a plant that produces seeds | _____ |
| 5 relating to a period of one year | _____ |
| 6 to arrange sth in groups according to features that they have in common | _____ |
| 7 to continue to live or exist | _____ |
| 8 having empty space inside | _____ |

6 Translate the following text.

Podjela voća

Botanički gledano, voće je specijalizirano biljno tkivo koje okružuje sjemenku. Različita su mjerila po kojima se voće može razvrstati u određene skupine, a jedno od njih je Matasovićevo, zasnovano na njihovim osnovnim obilježjima i građi ploda:

1. Jabučasto voće: dunja, jabuka, kruška, mušmula, oskoruša
2. Koštičavo voće: breskva, kajsija (marelica), nektarina, šljiva, trešnja, višnja
3. Jagodičasto (bobičasto) voće: stolno grožđe, jagoda, kupina, malina, ogrozd, ribizl
4. Orašasto (jezgrasto, lupinasto) voće: badem, pitomi kesten, kikiriki, lješnjak, orah, pistacija
5. Agrumi ili citrusi: grejpfрут, limeta, limun, mandarina, naranča
6. Južno, subtropsko i tropsko voće: ananas, banana, datulja, kaki, maslina, smokva, rogač
7. Egzotično voće: avokado, guava, karambola, kivi, mango, papaja, šerimoja
8. Samoniklo ili divlje voće: brusnica, drijenak, jagoda, kupina, malina, oskoruša, šipak

(Source: http://www.nutricionizam.com/index.php?view=article&catid=9%3Avoe&id=8%3Avoe&tmpl=component&print=1&page=&option=com_content&Itemid=12.)



Photo courtesy of D. Nedela

7 Underline the most appropriate word to complete each sentence.

- 0 This tree was struck by lightning/thunder/a storm last week.
- 1 I like spring best, when the apple trees are in flowers/blossom/blooming.
- 2 In coastal areas of our country, the earth/the land/the soil is very expensive.
- 3 Something must be done to protect wildlife/wilderness/wild.
- 4 When I want to relax, I go for a walk in the nature/ the outside/the countryside.
- 5 We got soaked to the skin in the torrential snow/downpour/drizzle.
- 6 While I was eating cherries I accidentally swallowed a stone/pip/nut.
- 7 David discovered a new make/species/category of fruit-fly.

B Reading and Language

Growing Fruit

1 Complete the text with the words from the box.

perennials crop planting unproductive original
remain replanted branch called apples

The **1** _____ of horticulture that deals with fruit growing is **2** _____ pomology. The word “pomology” comes from the Latin word for “apple,” but pomology is about a lot more than just **3** _____. Pomologists have developed highly efficient methods of **4** _____ and caring for fruit crops. There are three main steps in growing fruit: planting, caring for the **5** _____ and harvesting. Fruit crops are **6** _____ which means that they do not have to be **7** _____ annually. After the **8** _____ planting, a fruit farmer only replaces plants that become **9** _____. Many fruit plants **10** _____ productive for 30 to 50 years.

Instructions for Planting an Orchard

2 Rearrange the letters A to F in order to get the steps in growing an orchard.

- A** Plant trees according to recommend directions from a nursery. Never plant fruit trees deeper than the original soil line, which is where the trunk transitions from gray to brown.
- B** Review the harvest times for trees in the orchard. Different varieties of fruit allow you longer harvest times. For example, selecting several different types of peaches can result in harvest times from May to August.
- C** Water new orchard trees every four days for two weeks. Switch to every five days for two weeks after the initial watering period. Work the plan until you can water the orchard every 10 or 20 days, deeply and infrequently.

- D** Make a plan for your fruit orchard. Write down the desired fruit you want to plant. Sketch a basic outline for planting your orchard.
- E** Select an orchard site that has well-drained soil. Dig a 3-foot hole with a shovel. Fill the hole with water. If the hole is dry in 24 hours, you have well-draining soils; a dry hole after 48 hours indicates acceptable soil. Anything else can result in problems growing the orchard.
- F** Prune fruit trees heavily in the early years of growth. Roots will grow and establish themselves better after a good pruning.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____

(Source: http://www.ehow.com/how_2164509_plant-orchard.html)



Source: http://www.weaversorchard.com/wp-content/uploads/2015/04/IMG_2234-e1428521809998.jpg

Caring for the Crop

Most fruit growers use special machinery to fertilize, cultivate and care for their crops. Fruit crops must be fertilized at least once a year. Some fertilizers can be applied to the soil, others are sprayed onto the plants. Most fruit growers cultivate the soil around young fruit plants periodically. This practice helps control weeds. Most fruit crops grown in extremely dry regions must be irrigated. Farmers use various methods, such as ditches and sprinklers to distribute irrigation water.

The majority of fruit growers use chemical pesticides to protect their crops against diseases and insect pests. Most pesticides are sprayed or dusted onto crops by tractor-driven machinery or specially equipped light airplanes or helicopters.

(Source: <http://www.wilsonirr.com/>)

Use of discourse markers/linkers

Grammatically, two types of linkers are distinguished. While *conjunctions* are used to connect clauses, *connecting adverbs* link two independent sentences. The latter mostly occur at the beginning of a sentence and are mostly separated by commas.

Conjunctions are used to connect clauses and are subdivided into:

- **co-ordinating conjunctions** (and, but, or, so, for, nor) creating compound sentences consisting of two or more independent clauses. Commas may be used to separate the independent clause.

Synthetic bottle stoppers look like corks, but are made from elastic polymers.

• **subordinating conjunctions** (for, as, since, because, while, although) building complex sentences, which consist of a main clause and one or more subclauses. Subordinating conjunctions may express reason (for, as, because, since, due to), choice (or, either ... or, neither ... nor), condition (if, unless, provided (that), in case (that)), concession (although, though, even though, while, whilst), contrast (but, yet, still, however, unlike, while, whereas), effect (and so, so that, thus, hence, therefore), purpose (so, so that, in order to), time (after, as, before, over, when, whenever, while, till), connection (with reference to, with respect to, regarding, in terms of) and so on.

3 Complete the sentences using a word from the box.

in order to unless therefore whenever whereas

- 1 Real property refers to land and anything permanently attached to the land, _____ personal property refers to all other property.
- 2 They had no real knowledge of agriculture and _____ no way to make a wise decision.
- 3 They won't pay _____ you provide the goods immediately.
- 4 I met the restaurant manager _____ make the arrangements for dinner.
- 5 Jane becomes nervous _____ she has to speak in public.

Vocabulary

4 Complete the table

	Noun	Verb	Adjective	Opposite Adjective
1		fertilize		
2		cultivate		
3		care		
4		protect		
5		use		

5 Complete the sentences using the words from Exercise 3 changing the form of the words as necessary.

- 1 We need to provide poor people with better dental _____ .
- 2 He knew it was _____ to protest.
- 3 A _____ tariff is a tariff intended primarily to protect domestic producers rather than to yield revenue.
- 4 _____ are substances that supply plant nutrients or amend soil _____ .
- 5 From a distance they saw miles of _____ land that had never been touched by a plough or an axe.

Beneficial Insects

6 Discuss these questions before you read the article.

- 1 What do you think beneficial insects are?
- 2 How do they reduce pest populations?
- 3 What is augmentation?
- 4 What is inundation?

7 Now read the article. How many categories for the use of beneficial insects are mentioned?



Source: s-media-cache-ak0.pinnimg.com

Beneficial insects and mites reduce pest populations in orchard ecosystems via parasitism or predation, termed biological control. Parasitoids are smaller than their prey and slowly kill them by developing as external or internal parasitic larvae. Predators are free-living, beneficial insects that are as large as, or larger than their prey and kill and consume more than one prey item in their lifetime.

The use of beneficial insects can be classified into one of the following categories: conservation, augmentation, inundation or introduction. Conservation involves creating habitat for the beneficial insects by reducing pesticide applications that harm them and by adding alternate food sources. Augmentation involves the release of mass-reared beneficial insects to bolster the existing population. Inundation also utilizes the release of mass-reared beneficial insects, but with the goal of saturating the system and controlling the pest population within one generation. Introduction or classical biological control involves the release of an exotic beneficial to control a pest. The most common approaches used in orchard ecosystems are conservation and augmentation.

(Leskey, 2003)

Harvesting



Source: http://lagasseorchard.com

Several phases are recognised in the development of horticultural crops from the initiation of growth to the death of a plant or plant part. These are: growth, maturation, physiological maturity, ripening and senescence.

An additional term that is used in discussions of maturity is “horticultural or harvestable maturity.” This is a relative term representing a stage of development when a plant possesses the prerequisites for utilization by consumers for a particular purpose. Thus, many commodities may be harvested when physiologically immature. Temperate fruit,

however, usually are harvested when fully developed and physiologically mature. At the time

of harvest, ripening may also have occurred, but additional ripening can be required to meet consumer requirements.

Most fruits ripen rapidly after reaching their mature size and they taste best when they are allowed to ripen on the plant. Fruits are bruised more easily than most other crops, and so they must be harvested with great care. Most are picked by hand. However the increasing cost of hand labour has encouraged the use of fruit-harvesting machines. Some of these machines have arms that shake the fruit loose from the plants. The loosened fruit drops onto an outstretched cloth. Other mechanical pickers have fingers that “comb” fruit from the plants.

(Sources: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. http://www.en.wikipedia.org/.../Fruit_picking. and Watkins, 2003)

8 Notice the Simple Present Tense Passive in this sentence from the text:

Most fruits are picked by hand.

Find and underline other examples of the Passive.

9 Re-write the following sentences using an appropriate passive form so that they sound more formal.

- 1 You have made some kind of a mistake.
Some kind of a mistake _____
- 2 We remind you not to put bottles in the overhead lockers.
Passengers _____
- 3 We will refund your money in full if you are not satisfied.
Your money _____
- 4 Our customer relations office is dealing with your complaint.
Your complaint _____
- 5 We will send successful candidates a letter inviting them to attend a second interview.
Successful candidates _____
- 6 We sent the goods on 15th April.
The goods _____
- 7 If no-one has delivered the equipment by 15th May, please contact us again.
If the equipment _____
- 8 We will replace furniture that our employees damage in transit.
Furniture damaged in transit _____
- 9 Perhaps you would like another cup of coffee while we are preparing your bill.
Perhaps you would like another cup of coffee while your bill _____
- 10 We apologise for the delay. Technicians were checking the plane.
We apologise for the delay. The plane _____

10 Re-write each sentence in the Passive, omitting the words underlined.

1 The fruit pickers pick the apples early in the morning.

2 It is time the authorities did something about this problem.

3 You have to fill in an application form.

4 The government has announced that petrol prices will rise tomorrow.

11 Prepositions after passives

Choose the preposition that best completes each sentence.

1 My attention was drawn _____ the picture on the far wall.

- a) with b) to c) for d) on

2 The stolen paintings were eventually restored _____ their rightful owner.

- a) for b) by c) to d) with

3 Italy were knocked _____ the World Cup.

- a) into b) away from c) out of d) forward to

4 The argument is centred _____ whether or not to lower the age limit.

- a) on b) towards c) of d) about

5 Emphasis is placed _____ practical training.

- a) over b) with c) around d) on

6 The discussion will be divided _____ three parts for the sake of clarity.

- a) to b) for c) into d) with

7 The white Audi was eliminated _____ police enquiries at an early stage.

- a) with b) from c) of d) for

C Reading and Speaking

1 Before you read the article, answer these questions.

- 1 What is marketing?
- 2 What does the marketing of fruit involve?
- 3 Name a few agents involved in marketing fruit.

Marketing Fruit

There are four ways of disposing of orchard products: selling the fruit on the trees to a buyer, who comes to the orchard and makes a lump sum offer; selling through a commission merchant; selling through a fruit growers' association; or selling to the consumer direct.

Marketing is the key activity for any commercial fruit enterprise. It involves not only successfully transferring the product from the producer to a distant consumer, but also ensuring the flow of payment for the product back to the producer. Activities in the orchard or packing shed can influence successful marketing, but most producers are dependent on a wide array of intermediaries to carry out other marketing functions.

Most fruit scheduled to be sold fresh is taken from the orchard or field by a lorry and delivered to a packing house. Many large fruit farms have their own packing facilities. Commercial packing houses are centrally located in fruit-growing regions. Most large packing houses are fully mechanized. Machines wash the fruit, sort it according to size and quality, and pack each batch into containers. The fruit is then shipped to market or stored for future delivery. Railroads and lorries carry most overland shipments of fruit. Most overseas shipments travel by ocean freighter or airplane.

Fruits can be stored under controlled conditions. Temperate tree fruits for example, must be stored at temperatures near freezing.

Much fruit is shipped directly from farms to food processors. Processing plants preserve fruit by methods as tinning, drying and freezing.



Producers bear the responsibility for choosing and monitoring all the agents involved in marketing their fruit and for seeing that the consumer is satisfied. Some of the agents involved in marketing fruit are packers, processors, storage houses, shippers, marketers, promotional agencies, transportation companies, brokers, wholesalers, exporters, importers, retailers and restaurants. Other entities such as banks, insurance companies, information providers and government inspection services help facilitate marketing.

Marketing is dynamic by its nature. Competitors must constantly seek to stay ahead of their rivals by offering consumers improvements in quality and price. As the market changes they have to adapt to the new situations.

(Source:<http://www.agalternatives.aers.psu.edu/Publications/MarketingFruitAndVeggie.pdf>.)

Verbs be and have

2 Match the words and expressions with be or have. Tick the correct column.

	be		have
		fed up with sb/sth	
		a right to do sth	
1		the nerve to do sth	
2		on the safe side	
3		in touch with sb	
4		a word with sb	
5		no point in doing sth	
6		on one`s mind	
7		up to date	
8		no chance of doing sth	

3 Complete the sentences with one of the expressions in the correct form.

My job is so boring. I'm really fed up with it.

- 1 If you don't like your meal, you _____ complain to the manager.
- 2 Thank you for your interview, Miss Clark. We _____ you as soon as we've made a decision about the job.
- 3 I can't stop thinking about my ex-girlfriend. She _____ always _____ .
- 4 Mrs Bennett! Can I _____ you for a minute? It's about your son Ben.
- 5 Jack was so cheeky! He _____ tell me that this dress didn't suit me.
- 6 I've got extra holiday insurance just in case. I always like _____ .
- 7 Well, I'll apply for the manager's job, but I know I _____ getting it.
- 8 Wait here. If you don't like heights, there's _____ climbing up the tower with us.
- 9 I got an email from my old friend Suzanne the other day. I _____ her for twenty years now!

(Soars, 2003)

4 Match the definitions with the words listed below.

- 1 delay
- 2 net price
- 3 order
- 4 overdue
- 5 query
- 6 invoice
- 7 inquiry, enquiry
- 8 purchase price
- 9 discount
- 10 enclosure

- A request to make, supply or send goods
- B information/question about something
- C something that is placed in an envelope with a letter
- D the price that sb pays for goods or services after any reductions in price have been taken off and any tax has been added
- E an amount of money that is taken off the usual cost of sth
- F postponement
- G the amount of money that somebody actually pays for something
- H a list of goods that have been sold, work that has been done etc. showing what you must pay
- I a question, especially one asking for information
- J not paid, done, returned by the required or expected time

1 ____ 2 ____ 3 ____ 4 ____ 5 ____ 6 ____ 7 ____ 8 ____ 9 ____ 10 ____

5 The following letter has been sent to remind a customer of an unpaid invoice.
Choose seven items from the box to complete it correctly.

cheque delay faithfully information order overdue
dates queries receipt settlement sincerely terms invoice

Mr D Horvat
Vinoprodukt
78 Cesaric Square
10000 Zagreb

18 March 2017

Dear Mr Horvat,

I would like to bring to your attention the fact that our _____ MN/2017, dated February 10, is _____ for payment.

I would like to remind you that our _____ of payment are 30 days. Therefore, we would be pleased if you could arrange prompt settlement.

If you have any _____ about the invoice in question, please contact my department immediately.

I look forward to hearing from you.

Yours _____,

Richard Green

Supervisor, Accounts Department

6 Match the group of computer related words (1-10) with their meaning (a-j).

- 1 bookmark
- 2 database
- 3 download
- 4 hardware
- 5 mainframe
- 6 network
- 7 password
- 8 software
- 9 toolbar
- 10 username

- a) to copy information
- b) a large powerful computer
- c) computer programmes
- d) to mark a URL address
- e) computer file
- f) computer parts
- g) two linked computers
- h) secret code
- i) a row of symbols (icons) on a computer screen
- j) the name you use in order to be able to use a computer programme or system

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___ 10 ___

Computing

7 Fill in the missing words in the sentences below. Choose from the words in the box. There are two possible answers to number 3.

database desktop publishing directories disk drive
folder help Internet laptop modem software
spreadsheet word processing

- 1 The screen and the keyboard are part of the hardware.
The Operating system is part of the software.
- 2 One way to safeguard information in your computer is to copy files from the hard_____to a zip drive.
- 3 To keep your files in order, you can make and keep them in different_____.
- 4 If you want to work mainly with text on your computer, you need _____ software.
- 5 If you want to work mainly with figures, you need_____ software.
- 6 If you want to produce a good-looking magazine or in-house newsletter, you need some _____ software.
- 7 If you want to manage and manipulate large amounts of information, for example about your company's clients, you need _____ software.
- 8 If you want to use a computer when you are on the move, the best kind of computer to use is _____.
- 9 If you do not know how to do something in a particular programme, you can use the _____.
- 10 To be able to run CD-ROMs on your computer, you need a CD-ROM _____.
- 11 For your computer to be able to send and receive information via a telecom link, you need a _____.
- 12 You can use the _____ to get all kinds of information from the computer databases all over the world.

D Skills

Writing Meeting Minutes

At every business meeting someone is assigned to take the minutes. This person notes down all the important points made at the meeting and later writes up a clear summary on what was said and decided. Minutes should be sent within 24 hours to all the participants. Minutes are sent to make sure that things discussed at meetings actually get done.

The style of language is quite formal. Sentences should be short, clear, concise and easy to read.

The minutes of a meeting shouldn't be longer than one page.

The following example of Minutes Format should help you when writing minutes.

Name of Organization:

Purpose of Meeting:

Date/Time:

Chair:

List of participants:

Topic	Discussion	Action agreed upon	Person responsible	Deadline
1.				
2.				
3.				

Next meeting

(Date/Time/Location)

E Language Review

Fruit Quiz

1 Test your knowledge with this curious and fun fruit fact quiz.

- Where was the kiwi-fruit first grown?
a) New Zealand b) China c) Australia d) Chile
- Which fruit has the highest oil content?
a) peach b) avocado c) olive d) mango
- What percentage of the watermelon is water?
a) 34% b) 80% c) 66% d) 92%
- The flower of the cherry tree is the national symbol of which country?
a) India b) Canada c) China d) France
- Apple pips contain:
a) juice b) vitamin H c) sodium d) cyanide
- In the Hindu culture, the leaves of which fruit are hung at weddings to ensure fertility?
a) mango b) papaya c) banana d) lychee
- There is a museum in Belgium dedicated to:
a) chocolate b) Detective Poirot c) strawberries d) beer
- The only fruit to have seeds on the outside is the:
a) pineapple b) raspberry c) lychee d) strawberry
- According to American research, which fruit is No. 1 when it comes to antioxidants?
a) blueberry b) orange c) pear d) cherry

- 10 In Greek mythology, in the stories of Persephone, which fruit seeds has she eaten in the land of the dead?
 a) grape b) pineapple c) pomegranate d) orange
- 11 And finally, if you have 4 bananas in one hand and 5 mangoes in the other, what do you have?

(Source: <http://www.fruitexpert.co.uk/fun-fruit-quiz.html>.)



Photo courtesy of J. Mesic

2 Complete the text with the words from the box.

**technology maintaining present commercial loss biblical
 reproduction saved sexual propagate ranging spreading**



(Source: [.piazascala.altervista.org/omero/8.jpg](http://piazascala.altervista.org/omero/8.jpg))

Propagation is a form of plant **1** _____ that creates genetic clones of a parent tree using asexual, rather than **2** _____ means. Propagation **3** _____ has been around for a long time, and is often necessary when growing **4** _____ or personal fruit trees, depending on the type of tree. There are several ways to **5** _____ a fruit tree, including grafting, rooting and layering. In some plants, including fruit trees, such as apples, pears, cherries, olives and plums, sexual reproduction and planting from **6** _____ seeds would mean the **7** _____ of the fruits' desirable characteristics. Since all the apple genes are

still **8** _____ in the seed and only some are expressed, they revert back to the expression of their "wild" genes within a generation.

Because it is essential for **9** _____ the characteristics humans love, including sweet flavour and textures **10** _____ from juicy to crunchy, asexual propagation of fruit trees has been practiced since pre-classical times. **11** _____ from China, the ancient Greeks and Romans wrote about it extensively. Olive and fig trees were propagated in **12** _____ times.

(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation
Inc. http://www.en.wikipedia.org/wiki/Fruit_tree_propagation.)

3 Discuss these questions before reading.

- 1 What is sexual propagation? When is it used?
- 2 What is vegetative propagation? When is it done?
- 3 How many methods in vegetative propagation can you name?

Sexual propagation is used almost entirely for the production of rootstocks that will be grafted or budded. It cannot be used to propagate the parent tree. In sexual propagation, seeds extracted from mature fruit are cleaned to remove any adhering fruit pulp prior to being stratified. Seeds can be stratified either naturally, by planting them outdoors in nursery beds, or artificially by placing them in moist media and holding them at 4°C. It takes approximately 60 to 90 days to fulfil the dormancy requirement and the seeds can then be planted at the desired location.

4 Complete the following text by filling in the missing prepositions.

Dormancy

Fruit trees express dormancy **1** _____ different times **2** _____ the year as a survival tool to prevent growth **3** _____ unfavourable conditions. **4** _____ instance, when the temperature is too hot or too cold, tissues or organs may become dormant. Additionally, environmental factors such as light or water stress, either **5** _____ excess or limited, may cause plant parts to become dormant. Then, when more favourable conditions prevail, tissues are released **6** _____ dormancy and begin growth, as indicated **7** _____ cell division and expansion. Thus, plant parts, whole plants or seeds may survive **8** _____ season **9** _____ season, flourishing **10** _____ conditions favourable **11** _____ growth.

(Rom, 2003)



Photo courtesy of D. Nedela

5 Translate the following terms from the text.

- a) survival tool _____
- b) unfavourable conditions _____
- c) water stress _____
- d) become dormant _____
- e) favourable for growth _____

F Reading and Speaking

Vegetative Propagation

Vegetative propagation is done through a number of methods, including cuttings, layering, grafting and budding or tissue culture.

1 Use the letters in brackets to form a word to complete the sentences.

Grafting

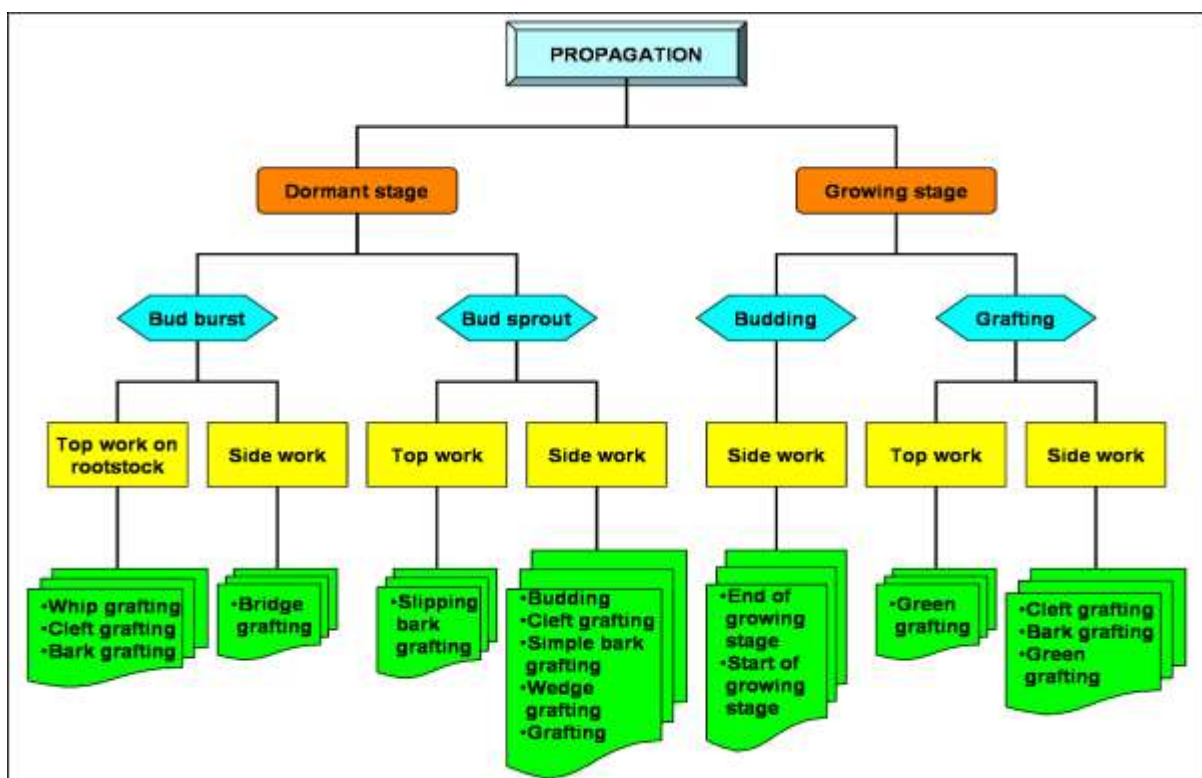
Grafting is the process of 1 _____ (n t i u i n g) parts of two plants to form a single plant.

Grafting requires two plant pieces: a scion and a 2 _____ (k t s o c).

The stock or rootstock is the 3 _____ (i e e c p) to which the scion is grafted.

The stock 4 _____ (s o r p v d e i) the root system and may also include part of a stem.

For grafting to be successful, the scion and the stock should belong to the same species or to species that are closely 5 _____ (t d l e e a r).



Definitions of terms

2 Match the definitions with the words listed below:

1 bark 2 budstick 3 cambium 4 graft 5 grafting 6 propagation
7 rootstock/ understock 8 scion 9 union

- a) a finished plant that comes from joining a scion and a rootstock
- b) the upper portion of the graft that will provide the shoot system
- c) the lower part of the graft which develops into the root system of the grafted plant
- d) a technique used to connect two parts of different plants by bringing the plant tissue together in such a manner that they will unite and grow together
- e) all tissues lying outward from the vascular cambium
- f) a thin layer of cells located between the bark and the wood
- g) the point where the scion and rootstock are joined
- h) a piece that will be grafted onto another plant
- i) the production of new plants from a parent plant

1 ___ 2 ___ 3 ___ 4 ___ 5 ___ 6 ___ 7 ___ 8 ___ 9 ___

Words and phrases

Do

3 Match each sentence (A-J) with one of the explanatory sentences (1-10).

- | | |
|---------------------------------------|--------------------------------------|
| A) He'll do you a favour. _____ | 1 He is unsatisfactory for the job. |
| B) It does him credit. _____ | 2 The dog is quite safe. |
| C) He's having a do. _____ | 3 He will help you. |
| D) He just won't do. _____ | 4 He can manage, don't worry. |
| E) He was doing over a hundred. _____ | 5 He talks all the time. |
| F) He does go on. _____ | 6 He needs one of those. |
| G) He'll make do. _____ | 7 It's his party on Saturday. |
| H) He likes do-it-yourself. _____ | 8 His hobby is fixing his own house. |
| I) He won't do you any harm. _____ | 9 It shows how good he is. |
| J) He could do with one. _____ | 10 He was driving extremely fast. |

Methods of Grafting

Commonly used grafting methods include whip grafting, cleft grafting and bark grafting. In all methods, the cambium of the scion and the stock must touch. The scion and stock unite as new cells grow from their cambium. While these cells form, the scion and stock must remain firmly in place. Gardeners wrap most graft joints with tape or rubber bands and spread a preparation called grafting paste over the joint to prevent drying.

4 Read the instructions carefully and match the following words and expressions with the corresponding numbers.

- a) **Tying and covering**
- b) **Use**
- c) **Cut**
- d) **Aftercare**
- e) **Union**

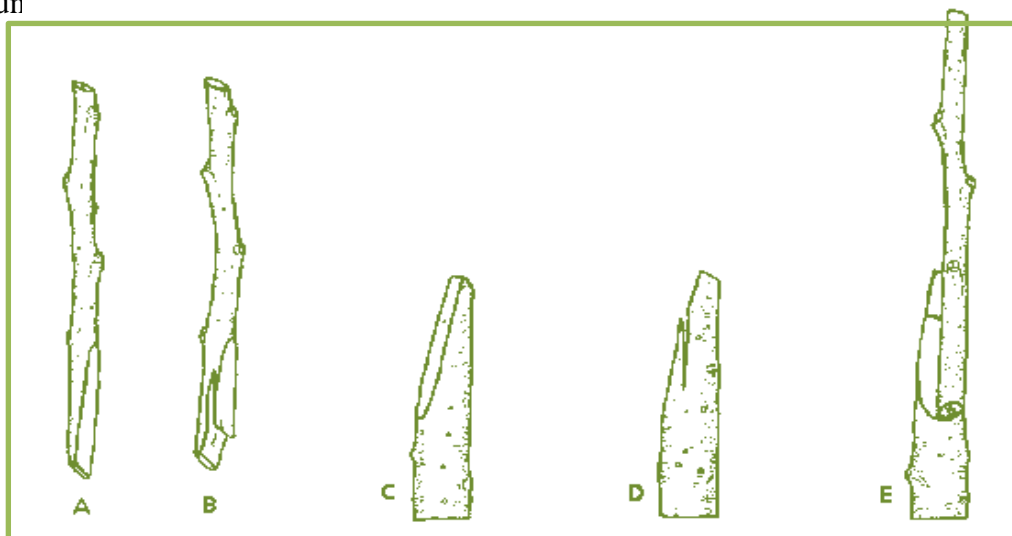
The Whip Graft

1 The whip graft is used mostly on young apple and pear trees when the branches are relatively small (not more than ½-inch in diameter) and the understock is about the same diameter as the scion of the new cultivar.

2 Cut off a branch of the understock, leaving a stub at least a foot long. Make a straight, slanting cut about 1½ inches long on both the scion and the stock (see A and C in Figure 8.2.). Make the cut straight and even—one stroke with a sharp knife will do it. For the tongue, make a straight draw cut (not split), beginning near the top and cutting about the full length of the level (B and D).

3 Match the two parts together (E). Unless the scion and stock are the same size, be sure the scion is in contact with the inner bark on one side. If the toe of either the stock or scion extends beyond the heel of the other, cut it off evenly.

4 Bind tightly with tape, and then carefully cover the union and binding material with grafting compound.



(Source: <https://www.ag.ndsu.edu/hort/info/fruit/graft/whip.gif>)

This type of graft is difficult for the beginner but is used extensively by experienced operators. It lends itself to the tape method of binding. Tape serves to seal the wound and bind the parts together.

5 Remove the wrapping as soon as the scion has started to grow to prevent a girdling of the tree.

1 _____ 2 _____ 3 _____ 4 _____ 5 _____

(Source: Wikipedia: The Free Encyclopedia. Fl. Wikipedia Foundation Inc. <http://en.wikipedia.org/wiki/Grafting>.)



(Source: <https://s-media-cache-ak0.pinning.com/originals/ff/09/63/ff0963e5037d2d033c91dcd36f3b48fa.jpg>)

5 Read the text again and underline all irregular verbs.

6 Complete the table with the past simple and past participle of these irregular verbs. One example has been given.

Base form	Past Simple	Past Participle
grow	grew	grown
1 dig		
2 choose		
3 do		
4 cut		
5 know		
6 bind		
7 make		
8 put		
9 saw		
10 split		

7 Match the verb forms in 1-12 with tenses a-l.

- 1 ____ I'd never been to Japan before.
- 2 ____ It hasn't been repaired yet.
- 3 ____ He'll be working in Brussels next week.
- 4 ____ The products are not tested on animals.
- 5 ____ She's already met him.
- 6 ____ We are being followed.
- 7 ____ I'll speak to him at the end of the lesson.
- 8 ____ He was kept in hospital overnight.
- 9 ____ They were eating popcorn during the film.
- 10 ____ The photocopier's been breaking down a lot recently.
- 11 ____ She applied for the post.
- 12 ____ They're always arguing.

- a Present Perfect Passive
- b Past Perfect
- c Present Continuous Passive
- d Present Perfect Continuous
- e Future Continuous
- f Past Simple
- g Future Simple
- h Present Perfect
- i Present Continuous
- j Past Continuous
- k Present Simple Passive
- l Past Simple Passive

8 Work in groups.

Group A reads Case 1.

Group B reads Case 2.

Prepare a presentation explaining your method of grafting using the following steps:

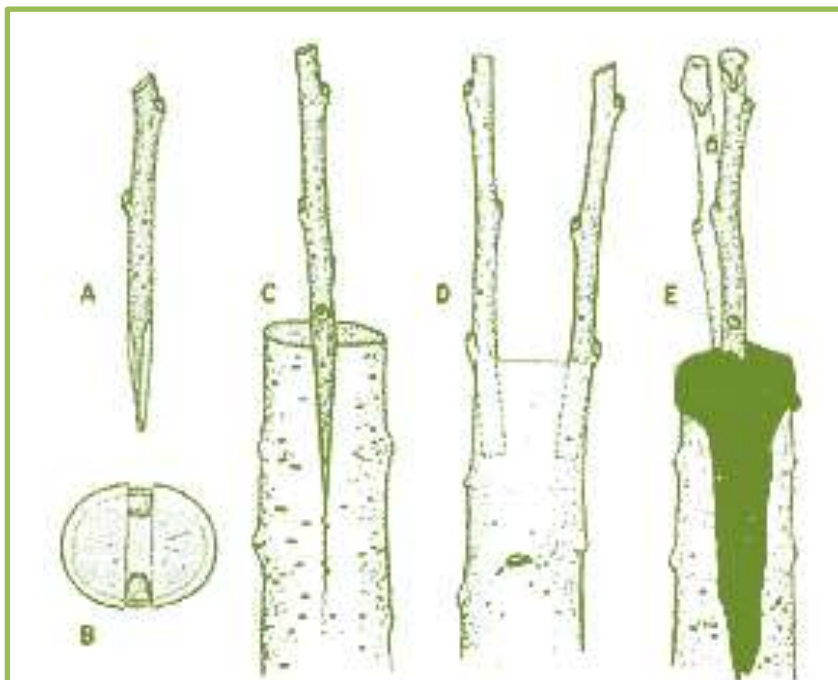
- a) Use
- b) Cuts
- c) Union
- d) Tying and covering
- e) Aftercare

Case 1

Cleft Grafting

It is done in midwinter, when the plant is dormant. This type of graft is used for top working older established trees when the scion has a smaller diameter than the stock. For a cleft graft, select the stock from a place free from knots, and cut it off with a saw straight across. Split the sawed-off stock across the centre to a depth of a few inches. Smooth the surface with a sharp knife.

With a sloping cut about $\frac{1}{4}$ inch above the upper bud, cut the scions to include three buds, and to a blunt wedge about $1\frac{1}{2}$ inches in length with one side slightly thicker than the other. If the scion wedge is cut to a sharp point there is danger of the bark peeling. Open the cleft slightly with a grafting tool or screw driver. On each side of the split or cleft insert a scion so that its cambium touches the cambium of the stock. Spread grafting paste over the exposed surfaces. Scions that are growing vigorously will need attention to prevent breakage by birds, ice or storm.



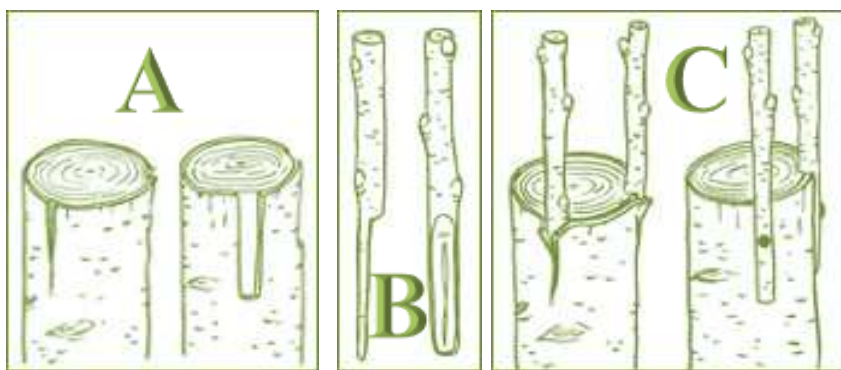
(Source: <https://www.ag.ndsu.edu/hort/info/fruit/graft/cleft.gif>)

Case 2

Bark Grafting

Bark grafting is used primarily to top work flowering and fruiting trees and is done in early spring when the bark slips easily from the wood but before major sap flow.

Several scions are cut in winter and stored until spring. When you are ready to graft, saw the stock straight across and peel back its bark in several places just enough to make room for the scion. Pare the bottom of each scion diagonally for about $1\frac{1}{4}$ inches (3.2 centimetres) on one side and about $\frac{1}{2}$ inch (1.3 centimetres) on the opposite side. Insert each piece between the bark and wood of the stock with its long cut against the wood. Drive a nail through the bark and bottom of the scion and into the wood to hold the scion in place. Cover the graft with grafting paste.



A The stock may be prepared with a single cut, left, or a double cut. B Cut the scion to form a shoulder. C For a single cut, left, insert scion under bark, making a tight fit. For double cut, use small nails to secure scions.

Once the scions have begun to grow, leave only the most vigorous one on each stub; prune out all the others. Bark grafts tend to form weak unions and therefore usually require staking or support during the first few years.

Other kinds of grafting include bud grafting, bridge grafting, chip grafting and inarching.

(Sources: http://www.ehow.com/how_4494843_graft-fruit-tree.html#ixzz1G8iotgeU,
http://www.ehow.com/facts_5910794_propagation-fruit-trees.html#ixzz1GBvosdcu,
<http://www.suite101.com/content/grafting-fruit-trees-a193911#ixzz1GBEKQMBm>)

9 Translate the following text:

Prednosti dviju biljaka u jednoj

Kada se voćke razmnožavaju putem sjemena, gotovo nikada ne zadržavaju svojstva izvorne biljke. Kako bi se ta svojstva sačuvala, u praksi se najčešće primjenjuje oplemenjivanje.

Spajanjem dviju različitih biljaka, iste ili slične vrste nastaje nova jedinka, od koje će jedna dati korijenje, a druga krošnju, a takozvana podloga, iz tla crpi vodu i sve hranidbene čestice neophodne za rast stabla i stvaranje ploda, dok druga, takozvani kalem, u lišću razrađuje organsku materiju i donosi željeni plod.

Oplemenjivanje nije bilo nepoznato starim Kinezima, Egipćanima i Fenićanima, a Rimljani su o njemu dosta pisali. Iako je do danas opisano barem 137 načina oplemenjivanja, u suvremenoj praksi primjenjuje se svega desetak.

(Boffelli, 2004)



Homework

Write a short description on one of the following methods:

- a) Bud grafting
- b) Bridge grafting
- c) Chip grafting
- d) Inarching

Use the Internet to find out more on each method. Go to:

http://www.ehow.com/how_4494843_graft-fruit-tree.html#ixzz1G8iotgeU
http://www.ehow.com/facts_5910794_propagation-fruit-trees.html#ixzz1GBvosdcu
<http://www.suite101.com/content/grafting-fruit-trees-a193911#ixzz1GBEKQMBm>

10 Complete each sentence with the most suitable word from the box.

**bay horizon pass slope strait
cliff landscape plain spring tide**

- a) This water comes from a spring near the bottom of the mountain.
- b) The hills could be seen faintly outlined against the _____ .
- c) The ship won't be able to sail until the _____ comes in.
- d) There was a rocky _____ rising a hundred feet above the beach.
- e) The two islands are divided by a narrow _____ .
- f) There is only one _____ through the mountains.
- g) Many small boats could be seen moored in the wide curving _____ .
- h) The children amused themselves by rolling down the grassy _____ .
- i) At the foot of the mountain was a wide, well-cultivated _____ .
- j) The whole _____ had turned white after the overnight fall of snow.



(Source: <http://theancientbridge.com/wp-content/uploads/2014/09/grafted.jpg>)

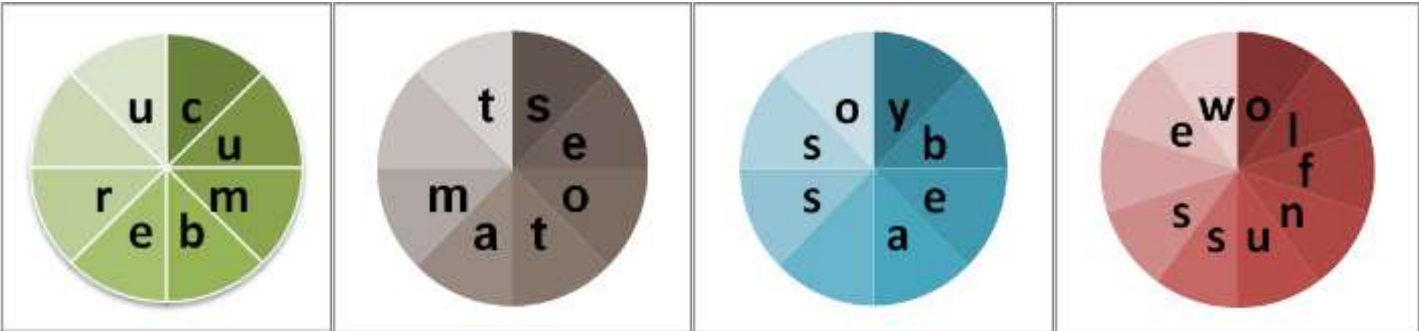


(Source: <http://theancientbridge.com/wp-content/uploads/2014/09/grafted2.jpg>)

G The Lighter Side

Word Pies

Add a letter to each pie to make a complete word. When each of the missing letters is put together, they form a word that represents a major agricultural product of the U.S.A. You'll have to figure out where the word begins, and if it is to be read forward or backward.



Farmer John said “I had a hen that sat on a piece of ice and hatched out a quart of warm water.” “That's nothing,” answered farmer Tom. “I had a hen once that I fed sawdust to by mistake. She laid twelve eggs; and when they hatched, eleven of the chicks had wooden legs, and the twelfth was a woodpecker.”

(Source: www.retrojunkie.com/jokes/farming.)



(Source: http://i.telegraph.co.uk/multimedia/archive/02002/training-trees-1_2002711b.jpg)

UNIT 9

Fruit Mosaic



Photo courtesy of J. Mesić

"There's small choice in rotten apples."

William Shakespeare (1564-1616), English poet and playwright

A Starting up

1 Read the text carefully and give it a title.

Tree fruit have been the subject of genetic improvement for thousands of years. From simply planting a seed of the most desirable fruit, to vegetatively propagating the best trees by grafting, to cross-pollination, to the use of gene transfer and genetic mapping, humans have striven for the “perfect” fruit. Our expectations of fruit quality and availability have changed a lot. Long gone are the times of limited availability, marketing and the consumption of locally produced fruit.

We now expect year-round, high-quality and blemish-free fruit. Fruit may be grown thousands of miles from the point of consumption, travel weeks to market and be stored for nearly a year. Breeders strive to develop cultivars that meet the demands of growers, packers, shippers, wholesalers, retailers and consumers.

Modern fruit-breeding objectives can be divided into two broad classes, those aimed at improving the fruit, and those aimed at improving the tree. Fruit traits include size, flavour, texture, colour, disease resistance and the ability to maintain quality during and following storage. Tree traits include precocity, vigour, size as well as resistance to diseases, insects, cold, heat, drought and flooding.

(Hessayon: 2005)

2 Re-read the text above and find words and expressions that mean the following:

- | | |
|--|-------|
| 1 thing that is being discussed or described | _____ |
| 2 goal | _____ |
| 3 worth having | _____ |
| 4 a particular quality | _____ |
| 5 the power not to be affected by sth | _____ |
| 6 to try very hard to achieve sth | _____ |
| 7 to try or plan to achieve something | _____ |
| 8 without spots | _____ |
| 9 all through the year | _____ |
| 10 buying and using products | _____ |

B Reading and Language

Choosing the Right Type

Fruit-bearing plants come in all shapes and sizes. The tree you propose to plant will bear fruit for 20-60 years, depending on the type and location. You can choose one which will grow knee-high or as tall as a house.

The usual growth pattern is the free-standing tree or where space is limited, a supported tree. The eventual height of the tree will be determined by type, growing conditions and by the rootstock on which the variety has been grafted. The growth pattern is determined by pruning and training.

The sunniest spot available should be selected. The soil should be reasonably deep, not prone to water-logging and ideally it should be slightly acid. If the site is exposed, you will have to provide some protection from strong winds. Frost can be a serious menace at blossom time. If you live in a frost-prone area, choose a late flowering variety or one with a high frost tolerance. Having chosen the fruit you wish to grow and the spot where it will live, it is now time to choose the variety. Most tree fruits require a pollinating partner to ensure a satisfactory fruit set.

You will have to plant a partner if fruit trees are not common in your area.

(Hessayon, 2005)

1 The words on the left are from the text *Choosing the right type* above. Fill in the slots to make words that have a similar meaning.

- | | |
|-----------|-----------------|
| shape (n) | f _ _ _ |
| choose | s _ _ _ _ _ |
| height | e _ _ _ _ _ _ _ |
| variety | s _ _ _ |
| spot | p _ _ _ _ |
| acid | s _ _ _ |
| prone | t _ _ _ _ _ _ |
| menace | d _ _ _ _ _ |
| tolerance | e _ _ _ _ _ _ _ |
| common | f _ _ _ _ _ _ _ |
| area | r _ _ _ _ _ |

2 Find the Conditional Sentences in the text above and translate them.

3 Grammar books often divide structures with *if* into three types: the so-called "first, second and third conditionals". How good is this analysis?

- A. All structures with *if* can be explained in terms of these three sentence types.
- B. Some, but not all, structures with *if* can be explained in terms of these three sentence type.
- C. Structures with *if* can never be explained in terms of these three sentence types.

4 Which two are right?

- A. **If it hadn't been for** Liz, I don't know what I would have done.
- B. **If there hadn't been** Liz, I don't know what I would have done.
- C. **If Liz hadn't been,** I don't know what I would have done.
- D. **But for Liz,** I don't know what I would have done.

5 Re-write each sentence three times so that it contains the word in capitals.

- a) We won't go away if the weather is bad.

We'll go away unless the weather's bad.

UNLESS
ONLY
STAY

- b) If you hurry up, you won't be late.

DON'T
OR
WANT

- c) If they offered you the job, would you accept?

WERE TO
SHOULD
HAPPENED

- d) Without your help, I would have given up years ago.

HADN'T BEEN
BUT
HADN'T HELPED

C Reading and Speaking

Thousands of fruit cultivars exist throughout the world. Some are only of local interest, while others are planted worldwide.

1 Connect the varieties of apples with the country of their origin.

The countries are: U.S.A., Japan, Australia, the Netherlands and New Zealand.

- 1 Idared
- 2 Fuji
- 3 Gala
- 4 Elstar
- 5 Jonagold
- 6 Golden Delicious
- 7 Granny Smith

2 Can you name the Top Ten Apple Cultivars in the World?

Six are mentioned in the previous exercise .

1 _____ 2 _____ 3 _____ 4 _____ 5 _____

6 _____ 7 _____ 8 _____ 9 _____ 10 _____



Photo courtesy of D. Nedela

3 Complete each sentence below with an adjective or a noun of nationality or the name of a country, using the information in the accompanying passages.

1 Champagne is a sparkling wine produced exclusively within the Champagne region of _____ .

2 Port wine is a _____ fortified wine.

3 The Elstar apple is an apple cultivar that was first developed in the _____ .
The _____ are proud of their apple cultivar.

4 Due to a very difficult economic situation, the authorities in Japan now allow foreign companies to manage investment funds on the Tokyo market. The Tokyo market was previously restricted to _____ companies.

5 Cork is the second largest town in the Republic of Ireland. This _____ town is built on the River Lee.

6 Tequila is a well known _____ drink.

7 Applejack is a strong alcoholic beverage produced from apples, popular in the _____ colonial period and thought to originate from the _____ apple brandy Calvados.

8 A bouzouki is a typical _____ instrument.

9 _____ folklore holds that William Tell courageously shot an apple on his son's head with his crossbow.

10 A native of Poland is called _____ .

4 Complete the table

	Country/region	Adjective	Person	Population
	Brazil	Brazilian	a Brazilian	the Brazilians
A	Europe			
B	Italy			
C	England			
D	Turkey			
E	Scotland			
F	China			
G	Spain			
H	Britain			

5 Which of these are right?

- A. He's a **H**indu.
- B. She's **j**ewish.
- C. He's **r**ussian.
- D. She studies **e**uropean **h**istory.
- E. She studies **E**uropean **h**istory.
- F. She studies **E**uropean **H**istory.

The Apple

6 Read the article and match the headings below to paragraphs 1, 2, 3, 4, 5 and 6

- A. Apple Breeding
- B. Health Benefits
- C. Botanical Information
- D. Uses of Apples
- E. Pests and Diseases
- F. Apple Cultivars

1 The apple (*Malus domestica*) is the most widely cultivated tree fruit. Its flowers, white, usually tinged pink at first and with white petals, are produced in spring, along with the leaves. The fruit matures in autumn and is typically 5-9 cm in diameter. The centre of the fruit contains five carpels arranged star-like, each carpel contains one or two seeds. Apple trees will grow easily in most countries in the right conditions, provided they get a cold resting period in winter and are not hampered by frost during flowering.

2 There are more than 7,500 known cultivars of apples. Commercially popular apple cultivars are soft but crisp. Other desired qualities are colourful skin, the absence of russeting, ease of shipping, lengthy storage ability, high yields, disease resistance and popular flavour. Apples can be divided into two basic categories, eating and cooking. Some are cultivated for producing cider.

3 Apples are ordinarily propagated asexually by grafting. Apple orchards are established by planting trees two or four years old. The small trees are usually purchased from a nursery where they are produced by grafting or budding. They will grow in a wide range of pH values and fertility levels. Some protection from wind is required as well as a good drainage. In order to develop fruit, apples must be cross-pollinated. Symptoms of inadequate pollination are excessive fruit drop when marble sized.

4 Apple trees are prone to a number of fungal and bacterial diseases and insect pests. It is important not to spray against insect pests during flowering because it kills pollinators. Additionally, no bee-attractive plants should be planted on the orchard floor if insecticides are used. The most serious disease problems are fire blight, *Gymnosporangium* rust, apple scab and black spot, the last three are fungal diseases. Among insect pests, the most serious is the plum curculio. Others are the apple maggot and codling moth. Young apple trees are additionally affected by mammal pests like mice and deer, which feed on the soft bark of the trees. This is the reason why growers sheathe juvenile trees with wire mesh for protection.

5 There are many by-products from apples, such as apple juice, cider, vinegar and pectin. Cider is made from varieties of apple with a high tannin content. From cider, a distilled liquor is made, which is called apple brandy or Calvados in France and Applejack in America. Cider vinegar is also produced from cider. Pectin used for setting jams and jellies is extracted from the skins and cores of apples. Dried apple rings are popular in compotes and muesli-type cereals.

6 "An apple a day keeps the doctor away" is an old proverb that suggests the importance of the fruit. Research suggests that apples may reduce the risk of colon cancer, prostate and lung cancer. Apples contain vitamin C as well as a host of other antioxidant compounds. The fibre content helps regulate bowel movements. The consumption of apples can help remove trapped food and clean between the teeth, but the malic acid from the fruit can erode tooth enamel over time.

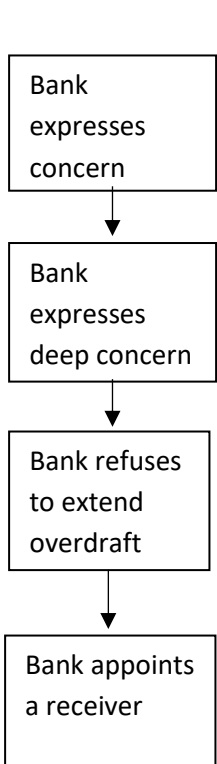
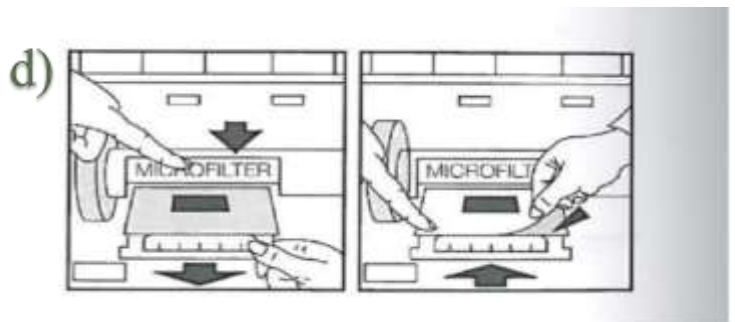
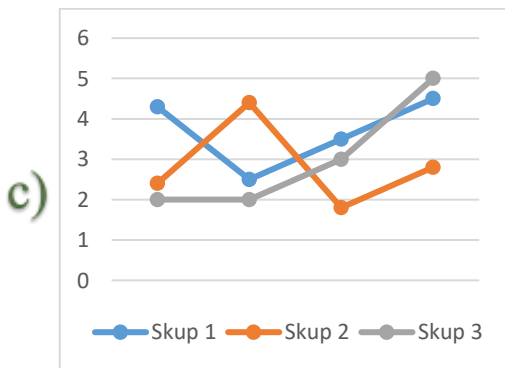
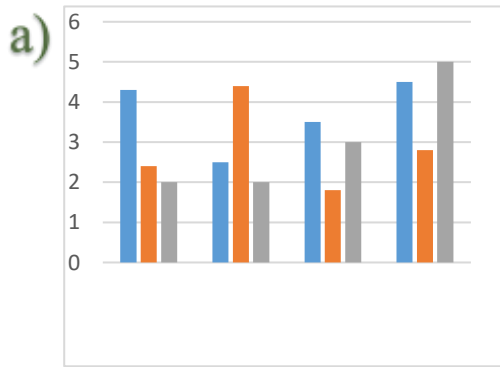
(Sources: Wikipedia: The Free Encyclopedia. FI. Wikipedia Foundation Inc.
<http://www.en.wikipedia.org/wiki/Apple> , Hessayon,2005)

D Language Review

Visuals in Written Communication

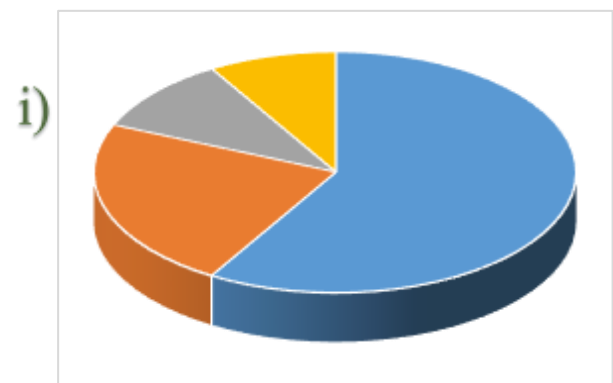
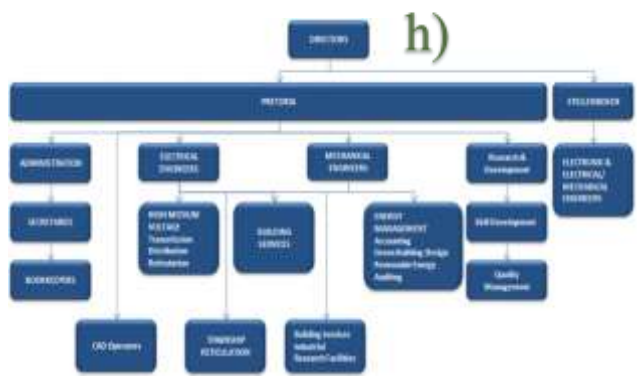
1 Match the pictures (a-i) with the correct types of visual (1-9).

- | | |
|---------------|----------|
| 1) bar graph | <i>a</i> |
| 2) diagram | _____ |
| 3) flow chart | _____ |
| 4) line graph | _____ |
| 5) map | _____ |
| 6) organigram | _____ |
| 7) pie chart | _____ |
| 8) plan | _____ |
| 9) table | _____ |





f) SUNRISE AND SUNSET TIMES

DAY	Belfast	Glasgow	London
Sat 6	08.45	16.14	08.05
Sun 7	08.44	16.16	16.07
Mon 8	08.44	16.17	08.05
Tue 9	08.43	16.19	16.08
		16.01	16.10
		08.44	08.04
		16.03	16.10
		08.44	08.04
		16.04	16.11







Describing Charts and Graphs

Increase and decrease

Upward movement		
Verbs		Nouns
to rise to grow to improve* *(only for positive situations)	to increase to climb to get better*	a rise a growth *(only for positive situations)
		an increase an improvement*
Downward movement		
Verbs		Nouns
to fall to decrease to deteriorate* *(only for negative situations)	to decline to drop to get worse*	a fall a decrease a deterioration*
		a decline a drop *(only for negative situations)

High points, low points, and staying the same

To reach the highest point and then go down	To reach the lowest point and then rise
to peak to top out to reach a peak to reach a maximum	to hit bottom to bottom out to reach a low point
	
To stay at the same level on the graph or chart	To go up and down continuously
to remain stable to stabilize to remain constant to level off	to fluctuate
	

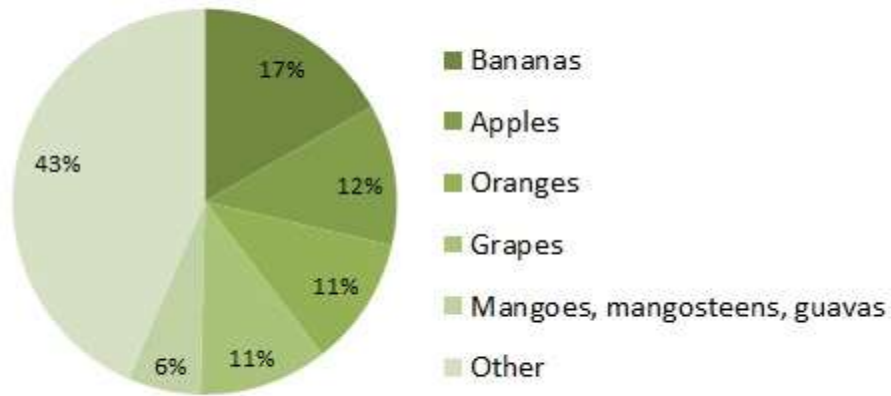
Rate of change

Adjectives and adverbs can describe both the quantity and the speed of a change.

Large changes	Fast changes	Regular changes
considerable - considerably dramatic - dramatically sharp - sharply significant - significantly substantial - substantially	abrupt - abruptly quick - quickly rapid - rapidly sudden - suddenly	gradual - gradually steady - steadily
Small changes	Slow changes	
moderate - moderately slight - slightly	slow - slowly	

2 Chose one of the graphs or the chart. Use some of the words from Describing Trends to describe it.

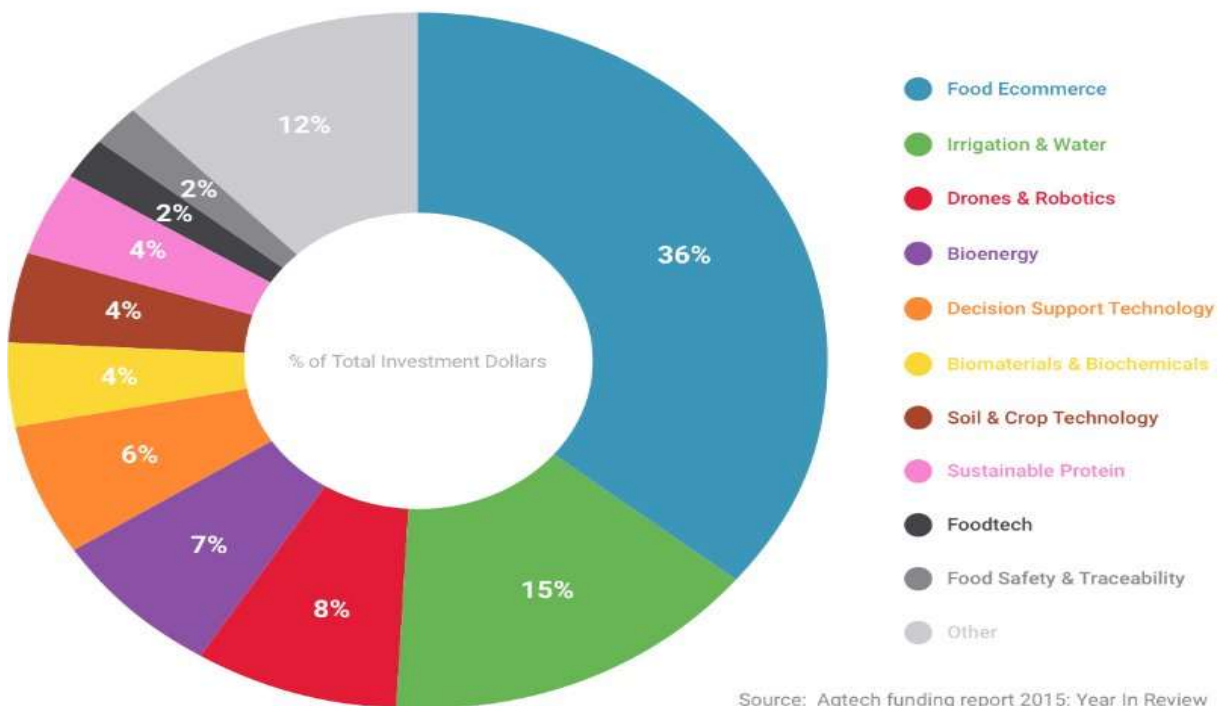
World fruit production, 2011 (tonnes)



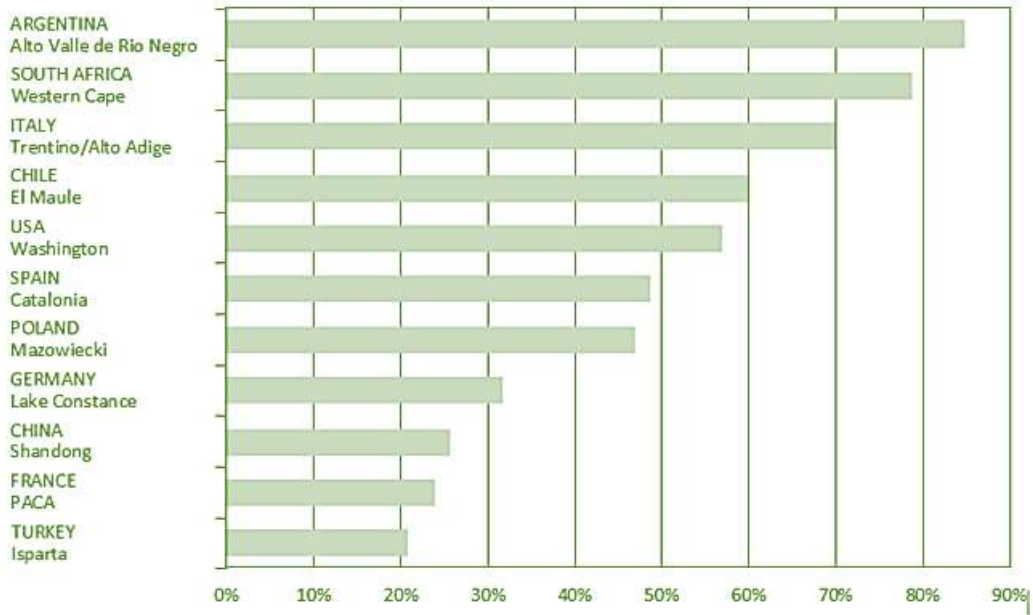
Source: FAOSTAT

total: 637,575,622 tonnes

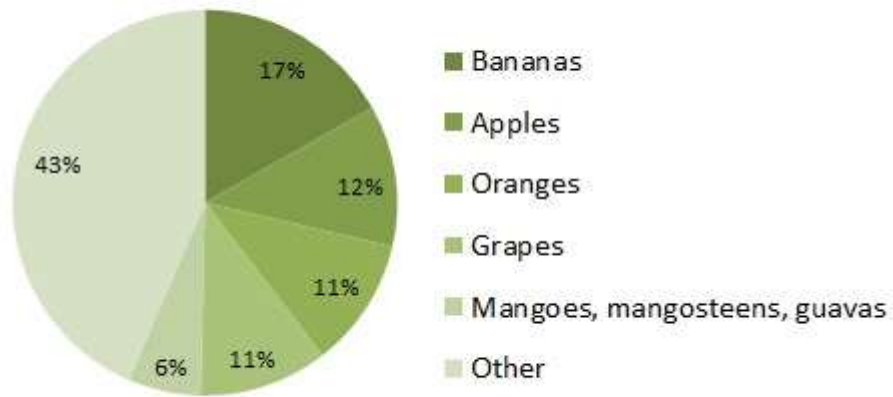
2015 AgTech Investment Subsector Breakdown



Source: Agtech funding report 2015: Year In Review



World fruit production, 2011 (tonnes)



Source: FAOSTAT

total: 637,575,622 tonnes

E Reading and Speaking

The Big Apple

1 Read the article and answer these questions.

- 1 What does the article say about:
 - a) New York's five boroughs.
 - b) Manhattan
- 2 When did New York come to be called “The Big Apple”?
- 3 When was the campaign to increase tourism in New York launched?
- 4 Why did the campaigners adopt the term “Big Apple”?

New York City is the main port of the U. S. on the Atlantic coast at the place where the Hudson River joins the East River. The Manhattan skyline is such a well known sight that many foreigners mistakenly believe that Manhattan is New York. In fact, Manhattan is one of New York's five boroughs. It is not the largest. The Bronx, Brooklyn, and Queens are now larger. Only Staten Island has a smaller population. The Bronx is part of the U. S. mainland, the other boroughs are islands.

Manhattan is a well-planned borough. It is easy to find the way around because the streets run east and west and are numbered in order, while the avenues run north and south and most have numbers. Unfortunately, this is not true as far as Lower Manhattan is concerned (Chinatown, Soho, Greenwich Village).

New York is a city of contrasts and one of the frequently asked questions is: When and how did it come to be called 'The Big Apple'? There are actually several answers. The most frequently mentioned one is connected with jazz musicians. In the late 1920s and early 1930s, New York City's jazz musicians began referring to New York City as the “Big Apple”. An old saying in show business was “There are many apples on the tree, but only one Big Apple.” New York City being the premier place to perform was referred to as the Big Apple.

In 1971 a campaign to increase tourism to New York City adopted the Big Apple as an officially recognized reference to New York City. The idea was to feature red apples as a bright image of the city, in contrast to the common belief that the New York City was dark and dangerous.

(Source: Šoletić et. al, 1992)



2 Ask questions to get the following answers.

- 1 There are five.
- 2 Brooklyn, Queens, Manhattan and Staten Island.
- 3 No. It is part of the U. S. mainland.
- 4 They run east and west.
- 5 New York City's jazz musicians.

3 Match these sentence halves.

- | | |
|--|---|
| 1 New York City is | a) run east and west and are numbered in order |
| 2 Manhattan is one | b) part of the U. S. mainland |
| 3 Chinatown, Soho and
Greenwich Village are | c) in Lower Manhattan |
| 4 Manhattan streets | d) of New York's five boroughs |
| 5 The Bronx is | e) the main port of the U. S. on the Atlantic coast |



Homework

Describe the town where you live, or your place of work, or your college, incorporating;

- (a) comments on its disadvantages or shortcomings ('*If they had installed a lift in the building, we wouldn't have to walk up so many stairs*')
- (b) suggestions for future projects ('*If the authorities improved the road system, we wouldn't get so many traffic jams.*')
- (c) comments on the possible outcome of ideas or plans already under discussion ('*They're talking of widening the main street. If they do, a lot of houses and shops will have to come down.*')

Discussion

4 Read the text and use the Internet to answer the following questions on apples and pears.

- 1 What is the normal life span for an apple tree?
- 2 What kind of soil and air creates a problem for an apple tree?
- 3 When does the apple blossom open, before or after the pear blossom?
- 4 Do bullfinches prefer buds of apples or pears?
- 5 How many varieties of pears are grown worldwide?
- 6 How can you tell a ripe pear?
- 7 Which is the best way to judge the ripeness of pears?
- 8 Explain the expression "Check the neck".
- 9 What did the Ancient Greeks treat with pears?
- 10 What is manufactured from pear wood?

The Pear

Pears are closely related to apples, however, there are many differences. Some of these differences include:

- ▶ Pears generally live for a century or more.
- ▶ Pears are more temperamental. Dessert types need more sun than apples and they detest cold easterly winds.
- ▶ Pears thrive in heavier soil, but they are less happy in sandy soil, chalky soil and in salt-laden air.
- ▶ Pears are less sensitive to frost.
- ▶ Pears usually give lower yields and are slower to come into fruit (4-8 years).
- ▶ Pears are less able to withstand drought but they are generally less prone to pests and diseases.
- ▶ Pears have a more limited storage time. There is hardly a desert pear which can be kept until after Christmas.

(Source: Wikipedia The Free Encyclopedia. Fl. Wikipedia Foundation Inc.
<http://www.en.wikipedia.org/wiki/Apple> and Hessayon, 2005)

5 Underline all the adjectives in the text above.

6 Complete the following table with the correct positive, comparative or superlative form of given adjectives.

Positive	Comparative	Superlative
happy		
	less	
heavy		
	colder	
		worst
	more	
fertile		
thin		
		sweetest

7 Read the text carefully. Some of the lines are correct and some are not. If a line is correct, put a tick (✓) next to it. If a line is not correct, write the word which should not be there or which is wrong in its form next to that line. There is an example of each to start with.

Dubrovnik



(Source: <http://www.valamar.com/cmsmedia/destinacije/dubrovnik/topici/dubrovnik-destination-overview.jpg>)

No cars, no bikes, no rip-offs, no pretensions – Dubrovnik is the ideal location for a romantic European break.

There are towns in Italy stiff with the masterpieces	0	<u>√</u>
of the Renaissance, cities in the central Europe stuffed	00	<u>the</u>
with cakes and romances. There is Paris and Barcelona	1	<u> </u>
and all that. Go there for the weekend and come back	2	<u> </u>
and tell the tale. But to walk through the gates of the	3	<u> </u>
old towns of Dubrovnik is to enter a milieu of deeply	4	<u> </u>
moving in perfection. The guide books will mention	5	<u> </u>
certain artefacts and buildings which are more important	6	<u> </u>
than the others, and they will tell the history of the	7	<u> </u>
centuries-old capital of a maritime empire, its triumphs	8	<u> </u>
and its troubles. But this is not a place that depends on	9	<u> </u>
the thunder of portentous these old facts or bruted	10	<u> </u>
masterworks to beguile you. It is a small walled modern	11	<u> </u>
city in the Adriatic with so marble streets and four-storey,	12	<u> </u>
flat-fronted, light grey buildings.		

F Skills

How to Write a Successful Motivation Letter for Studying at the University as an Erasmus Student

- 1 What is a motivation letter?
- 2 Why do we write motivation letters?
- 3 Where to start?

The motivation letter (or cover letter) is probably the most personalized document of your application in which you give some relevant and interesting insights about yourself, prove that you are the right and most motivated person to be chosen for studying at the University as an Erasmus Student.

Why do we write motivation letters?

The purpose of the letter is to explain why you want to participate in the mobility and what makes you think that you are the man or woman for participating in the mobility.

Where to start

Do your homework

Before starting your own letter it is best to find out as much as possible about the University that is offering Erasmus mobility programme

Ideas and main points

Start with writing down some of the main ideas:

- how does the Erasmus mobility contribute to your personal and professional development
- how should/could your mobility contribute to the sustainable development of your home country from the educational, cultural, social and economic perspective
- make your goal clear

Personal & original

- give your readers some insight into you as an individual

Be professional and consistent

- present your letter in a professional format, style and grammar
- have it checked (spelling, style and grammar)
- be consistent (eg. use the same font, the same abbreviations etc.)

Motivation letter layout

→ your name

→ your address

→ your contact details

→ location and date

(Požega, 29 May 2017)

→ name and address where the letter is going

Erasmus Programme Coordinator

Ph. D.....

→ salutation

Dear Dr,

→ **first paragraph** → *introduction*

My name is

I would like to apply for a three/six month study mobility/ practical training Erasmus program for the 2017-2018 academic year.

I am pleased to write to you to apply for the Erasmus program for the 2017-2018 academic year.

I am currently studying: Accounting
 Commerce
 Administrative Law
 Food Technology
 Viticulture-Oenology-Pomology

at the Polytechnic in Požega

I have just started the first/second..... semester

→ **second paragraph** → *what do you want to achieve during your mobility period and what are your expectations*

I would appreciate being able to spend

I would like to visit and gain experience

Erasmus mobility grant period will help to increase my written and spoken English/German skills, improve my communication skills and give me an opportunity to present my ideas in a fluent and confident manner.

As I am determined to continue my education the experience I could gain from this study period would be a valuable tool for my further education.

The opportunity to meet students from other European countries will broaden my horizons

and improve my knowledge of their higher education system, their society and customs. By completing my study mobility programme I will benefit educationally, linguistically and culturally from the experience of learning in another European country.

→ **third paragraph** → *why do you think you are the right person for this program*

Through my previous education I have gathered knowledge and experience to work towards and achieve my aims with great commitment and perseverance. I relate to people easily and I am able to adapt quickly to new surroundings and situations. My experience of working in ... (Students association, political party, volunteer service) helped me feel comfortable both working in a team environment and on individual tasks.

I am sure that this study period will help me build a long-term relationship for professional purpose and eliminate prejudices because of cultural barriers.

With my knowledge and skills I will help to promote co-operation between the two institutions and enrich the educational environment.

My experience will contribute to the development of a pool of well-qualified open minded and internationally experienced young people as future professionals.

→ **optional** →

I wish to thank you in advance for your consideration.

→ **closure** →

Yours sincerely,
Your Signature

Your Name Typed

G Reading and Speaking

The Plum



Photo courtesy of J. Mesić

A plum is a soft round stone fruit with smooth red or purple skin, sweet flesh and a large flat seed inside. There are plums whose stone is closely attached – clingstone, and others whose stone is quite loose – freestone. Mature plum fruit may have a dusty-white coating that gives it a glaucous appearance and is easily rubbed off. This epicuticular wax coating is known as "wax bloom". The plum skin may be particularly tart.

Plums can be roughly divided into three categories: cooking, dessert or eating, and wild plums. Plum juice can be fermented into plum wine; when distilled, this produces a brandy known in Eastern Europe as Slivovitz, Rakia, Tuică or Pálinka. In central England, a cider-like alcoholic beverage known as plum jerkum is made from plums.

Dried plums (or prunes) are also sweet and juicy and contain several antioxidants. They are also known for their laxative effects.

Plums flower very early in the season and cropping should start when the tree is about five years old. The mature tree is easily cared for, but the dreaded silver leaf disease is a constant threat.

(Sources: Wikipedia The Free Encyclopedia. Fl. Wikipedia Foundation Inc. <http://www.en.wikipedia.org/wiki/Apple>, Hessayon, 2005)

1 Translate the following words and expressions from the text above.

- 1 stone fruit _____
- 2 clingstone _____
- 3 freestone _____
- 4 dusty- white coating _____
- 5 to rub off _____
- 6 wax bloom _____
- 7 cropping _____
- 8 dreaded _____
- 9 silver leaf disease _____
- 10 constant threat _____

2 Underline the most appropriate word to complete each sentence.

- 1 I like spring best when the plum trees are in *blooming/blossom/flowers*.
- 2 Last year this olive tree was struck by *thunder/a storm/lightning*.
- 3 Something must be done to protect *wild/wilderness/wildlife*.
- 4 While I was eating cherries I accidentally swallowed a *nut/pip/stone*.
- 5 Helen recently discovered a new *category/make/species* of fruit fly.

3 Read the text below. Use the word given in CAPITALS at the end of each line to form a word that fits in the same line.

<p style="text-align: center;">HAPPY IS HEALTHY</p> <p>Medical research has found that (0) <u>happiness</u> has a strongly beneficial effect on health. The healing properties of (1) _____ are such that humour is now being used alongside more (2) _____ courses of (3) _____ in some hospitals. In a London children's hospital, for example, two clowns are provided for the (4) _____ of patients. Doctors say that these clowns are (5) _____ in making the children feel better.</p> <p>It seems that when we laugh, there can be a (6) _____ in both blood pressure and the amount of (7) _____ in our muscles. Although it is (8) _____ to prove at the moment, this may also mean that people who feel unhappy and who are, therefore, (9) _____ to laugh so much, suffer more often from physical (10) _____.</p>	<p>(0) HAPPY (1) LAUGH (2) TRADITION (3) TREAT (4) ENTERTAIN (5) SUCCESS</p> <p>(6) REDUCE (7) TENSE (8) POSSIBLE (9) LIKELY (10) ILL</p>
--	---

Answer Box – Happy is Healthy	
(1)	(6)
(2)	(7)
(3)	(8)
(4)	(9)
(5)	(10)

4 Look at the examples and complete the rule for the use of at, in and on to talk about time.

in 2011 in June in the morning at 4.15 at lunchtime
on Sunday on Monday afternoon at Christmas at the weekend

Rule

- 1 ___ + clock time
- 2 ___ + part of a day
- 3 ___ + part of a particular day
- 4 ___ + particular day
- 5 ___ + weekend, public holiday
- 6 ___ + longer period

5 Only one of these expressions has a preposition. Which one?

- 1 I'll see you ___ next Monday.
- 2 I'm not free ___ this Thursday.
- 3 Tell me ___ what time it starts.
- 4 The exam's ___ my birthday.
- 5 Let's meet ___ one weekend.
- 6 I train ___ every day.
- 7 She phoned ___ this evening.

H Reading and Language

1 Complete the text with the words from the box.

process fruits edible source (2x) calories
flavour juicy laxatives cellulose

Fruit Processing

Fruits are an important **1 _____** of energy for human-beings but they are perishable items. From the consumer's point of view, fruit is generally characterized as the **2 _____** the product of a plant or tree that includes the seed and its envelope and can typically be described as **3 _____**, sweet, and pulpy. Fruits are a high-moisture, generally acidic food that is relatively easy to **4 _____** and that offers a variety of **5 _____**, aroma, colour, and texture to the diet. They are usually low in **6 _____** but are an excellent **7 _____** of dietary fibre and essential vitamins. Owing to the presence of **8 _____**, pectin, and various organic acids, **9 _____** can also act as natural **10 _____**. Fruits are therefore a valuable part of the diet.



(Source: <http://www.olimpias.gr/cache/files/d3a68e729b5b926edfc4c995acc620e99949dc3a.jpg>)

2 Read the article and fill it in with the following sentences.

- 1 Other sources include most berries and melons
- 2 Fibre is usually made up of cellulose, hemicellulose, and pectic substances.
- 3 Exceptions to this rule are avocados and olives, the flesh of which may contain as much as 20 percent oil.
- 4 In general, fruits are acidic, with pH ranging from 2.5 to 4.5.
- 5 Actual quantities of vitamin C in fruits are not especially large.

Fruit characteristics

Fresh fruit is typically between 75 and 95 percent water. **1** _____. The most common acids in fruits are citric acid, malic acid, and tartaric acid.

Of all the vitamins present in fruits, the most noted is vitamin C or ascorbic acid.

2 _____. However, the vitamin is particularly important in the diet because of its role in the prevention of disease and in the general promotion of good health. Citrus fruits, such as oranges, lemons, and grapefruits, are well known for their vitamin C content.

3 _____ carotene, a chemical common to fruit, is easily converted in the body to vitamin A; peaches and apricots are significant sources of this nutrient.

Typically, fruits are high in carbohydrates, although a large range is possible—between 2 and 40 percent, depending on the type of fruit and its maturity. Free sugars usually include fructose, glucose, and sucrose; other sugars may be present in smaller quantities.

A large portion of the carbohydrates present in fruits is fibre, which is not digested and passes through the digestive system. **4** _____. A small amount of starch may also be present in fruit, but starches are typically converted to sugars during the ripening process.

A negligible quantity of protein is found in fruits, and they usually contain less than 1 percent fat. Fats are most typically associated with the waxy cuticle surface of the fruit skin.

5 _____ .

3 Read the article Ripening and Senescence and match the words or phrases from the article to these definitions.

- 1 emit
- 2 restricted
- 3 to become progressively greater (as in size, amount, number, or intensity)
- 4 those processes necessary for the maintenance of a living organism.
- 5 the final stages of differentiation of cells, tissues, or organs
- 6 an aggregate of cells usually of a particular kind together with their intercellular substance that forms one of the structural materials of a plant or an animal
- 7 the physical and chemical processes (such as breathing and diffusion) by which an organism supplies its cells and tissues with the oxygen needed for metabolism and relieves them of the carbon dioxide formed in energy-producing reactions
- 8 any of various neutral compounds of carbon, hydrogen, and oxygen (as sugars, starches, and celluloses) most of which are formed by green plants and which constitute a major class of animal foods
- 9 the growth phase in a plant or plant part (as a leaf) from full maturity to death
- 10 liable to spoil or decay

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
6 _____ 7 _____ 8 _____ 9 _____ 10 _____

Ripening and Senescence

Fruits are living biological entities that perform a number of metabolic functions. Two functions of particular importance in fruit processing are respiration (the breaking down of carbohydrates, giving off carbon dioxide and heat) and transpiration (the giving off of moisture). Once the fruit is harvested, respiration and transpiration continue, but only for as long as the fruit can draw on its own food reserves and moisture. It is this limited ability to continue vital metabolic functions that defines fruit as perishable.

Fruit development can generally be divided into three major stages: growth, maturation, and senescence. The period of growth generally involves cell division and enlargement, which accounts for the increasing size of the fruit. Maturation is usually reached just prior to the end of growth and may include flavour development and an increase in sugar content (detectable as increasing sweetness). Senescence is the period when chemical synthesizing pathways give way to degradative processes, leading to aging and death of tissue. Fruit ripening is thus the result of many complex changes, some interactive but many independent of one another.

4 Read the article and give it a title. Pose questions covering the topic sentence and supporting details.

After being harvested fruit ages, therefore it is crucial to manage the temperatures under which it is stored. For example, respiration largely involves enzymatic processes, which are significantly controlled by ambient temperature. The rate of chemical change in fruit generally doubles for every increase of 10° C.

Changes that take place during storage as fruit begins to overripe may include extreme colour formation, development of strong off-flavours with an intense aroma, softening of the flesh, onset of physiological disorders, and manifestations of the disease. In addition, fruit can be injured by overcooling. Chilling injury may be manifested by pitting and browning of the surface and by pitting and darkening of the flesh.

Microorganisms can also cause problems during senescence and storage. Many bacteria and fungi are involved in decay after harvest. Efforts to control infection begin in the orchard, usually with the application of fungicides. Cooling of the fruit or, conversely, hot-water dipping may also enhance storage quality. In addition, the careful application of ionizing radiation has been shown to inhibit microbial growth.

5 Read the article *Fresh Fruit Storage* and find the answers to the following questions.

- 1 Why do some fruits need to be precooled before the storage?
- 2 How can precooling be accomplished?
- 3 Which is the most frequent storage system for fruit?
- 4 Describe controlled-atmosphere (CA) storage
- 5 Describe hypobaric storage
- 6 How can controlled-atmosphere (CA) storage conditions be generated?
- 7 How does hypobaric storage contribute to the high quality of stored fruit?

Fresh Fruit Storage



Source: <http://www.galster.pl/templates/images.jpg>

Once harvested, fruits are moved to storage. In the case of highly heat-sensitive products such as raspberries or cherries, the fruit should be pre-cooled prior to storage. Pre-cooling can be accomplished by hydrocooling (immersion of the fruit in cold water) or vacuum cooling (moistening and then placing under vacuum in order to induce evaporative cooling).

A typical storage system for fruit is cold storage, using refrigerated air. Other techniques include controlled-atmosphere (CA) storage and hypobaric storage. In CA storage the oxygen and carbon dioxide content of the storage environment are controlled in such a way as to retard senescence and further deterioration of the fruit.

In general, oxygen levels are reduced and carbon dioxide levels increased. CA conditions can be generated in a number of ways. Conventional CA depends on the respiration of the fruit to generate carbon dioxide, and the concentration of this gas is controlled by wet scrubbers, hydrated lime, or other commercial carbon dioxide removal systems. Liquid nitrogen and compressed nitrogen gas have also been used to flush out the ambient air of the storage facility. In other systems, oxygen is converted to carbon dioxide by reaction with liquid propane or by catalytic burning.

Hypobaric storage involves the cold storage of fruit under partial vacuum. Typical conditions include pressures as low as 80 and 40 millimetres of mercury and temperatures of 5° C. Hypobaric conditions reduce ethylene production and respiration rates; the result is an extraordinarily high-quality fruit even after months of storage.

6 Read the article and answer these questions individually. Then compare your answers with a partner.

- 1 What is modified-atmosphere packaging?
- 2 What is the basic purpose of packaging?
- 3 What should packaging provide?
- 4 Which are the most commonly used packaging materials?
- 5 Do canned fruits have the same nutrients as fresh or frozen?
- 6 Do canned fruits lose their nutritional value the longer they are stored?
- 7 What is the cost differential between fresh, frozen and canned fruits?
- 8 How long can canned fruits be stored?

Packaging

Packaging systems for fresh fruit usually involve a simple plastic breathable bag or overwrap. However, as the market value of high-quality fruit has increased, so too have efforts to develop improved packaging. These efforts have been primarily in the area of modified-atmosphere packaging (MAP). In this type of packaging, the barrier properties of the material are carefully selected according to the respiration characteristics of the fruit. The goal is to allow an exchange of gases and moisture that produces the optimal storage environment. Continued work in this field is producing “smart” films, which not only produce the optimal atmosphere for storage but also change their barrier properties depending on the ambient temperature and on the respiration rate of the fruit. If the fruit is adequately packaged its shelf- life may be extended and it can be distributed to other areas.

Functions of packaging

Packaging should provide the correct environmental conditions for food starting from the time food is packed through to its consumption. A good package should, therefore, perform the following functions:

- ▶ it should provide a barrier against dirt and other contaminants thus keeping the product clean
- ▶ it should prevent losses. For example, packages should be securely closed to prevent leakage
- ▶ it should protect food against physical and chemical damage. For example the harmful effects of air, light, insects, and rodents. Each product will have its own needs
- ▶ the package design should provide protection and convenience in handling and transport during distribution and marketing
- ▶ it should help the customers to identify the food and instruct them how to use it correctly
- ▶ it should persuade the consumer to purchase the food.

Inadequate packaging may be the result of:

- ▶ a lack of knowledge of the materials and/or the requirements for packaging different foods. Each product has its own characteristics and packaging requirements vary in many countries.
- ▶ packaging can represent a large part of the total cost of a processed food. This may be in part the result of the higher unit cost when small quantities are ordered for small-scale production.

Packaging materials

In many developing countries the most commonly used packaging materials include:

- ▶ leaves
- ▶ vegetable fibres
- ▶ wood
- ▶ papers, newsprint
- ▶ earthenware
- ▶ glass
- ▶ plastics
- ▶ metals

(Source: <http://www.fao.org/Wairdocs/X5434E/x5434e0g.htm>)



(Source: http://www.sciencebuddies.org/Files/2981/5/MatSci_img055.jpg)

7 Match the words or phrases from the article to these definitions.

- 1 A thing or things belonging to someone
- 2 A vigorous or determined attempt
- 3 Cause (someone) to believe something, especially after a sustained effort; convince
- 4 The action of breathing
- 5 Pottery made of clay fired to a porous state which can be made impervious to liquids by the use of a glaze
- 6 The action of eating or drinking something
- 7 An act of giving one thing and receiving another (especially of the same kind) in return
- 8 A gnawing mammal of an order that includes rats, mice, squirrels, hamsters, porcupines, and their relatives, distinguished by strong constantly growing incisors and no canine teeth. They constitute the largest order of mammals
- 9 The action or business of promoting and selling products or services, including market research and advertising
- 10 Cover with a wrapping

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
6 _____ 7 _____ 8 _____ 9 _____ 10 _____

8 Re-arrange the following paragraphs (1-7) in order to describe the processing of fruit juice.

A _____ B _____ C _____ D _____ E _____ F _____ G _____

9 Match the headings below to paragraphs 1-7.

- Washing**
- Juice extraction**
- Preparation
- Pressing
- Liquefaction
- Clarification**
- Pectinization
- Filtration
- Preservation**

Fruit Juice

Fruit juice can take on many forms, including a natural-style cloudy product, a “nectar”-type product containing suspended solids, a fully clarified juice, juice concentrate, and fruit drinks. The processing of fruit juice involves:

1 _____

Fruit is prepared for juice extraction by removing unwanted parts. This may include pitting operations (apricots, cherries, or plums) or peeling for such fruits as pineapples. In one large class of fruit, citrus fruit, juice extraction, and separation from the peel are combined. Two major juice extraction systems for citrus exist. One is a reaming technique, in which the fruit is cut in half and the individual halves reamed to extract both the juice and the inner fruit solids.

In the second major system, a hole is punched in the fruit and the juice squeezed out at the same time.

If the entire fruit is to be used in the juice, then typically it is disintegrated in a drum grater or a hammer mill. Care must be taken to control disintegration so that the particle size of the mash is compatible with the press system.

2 _____

Once the juice has been clarified, it is ready to be preserved. In some cases, large reserves of single-strength juice are kept in juice silos after having been pasteurized, but usually, the juice is immediately processed into retail or institutional packages. For a single-strength juice packaging line, a typical process is to heat the juice to 88° C and then bottle it. This produces a shelf-stable product.

For producing concentrate, the juice is passed through an evaporator, where the level of soluble solids is typically brought to 70 percent by weight.

3 _____

Filtration systems are varied in design, operation, and application. The most traditional system is diatomaceous earth (DE) filtration, in which DE is used to aggregate and collect suspended solids. The DE is collected on filter paper inside the pressure filter as the juice passes through the unit. The resulting juice is sparkling clear.

4 _____

If the juice is to be clarified further or concentrated after extraction, treatment with pectinase may be required. The juice is monitored for pectin content using a qualitative pectin check, consisting of combining one part juice with two parts ethanol. If a gel forms, pectin is still present and depectinization must continue. When depectinization is complete, a floc is typically formed by the aggregation of partially degraded pectin-protein aggregates.

5 _____

Many different types of press are used for juice extraction. The most traditional is a rack-and-frame press, in which ground fruit (mash) is pumped into cloth partitions, called cheeses, which are separated by wooden or metallic racks. After a stack of cheeses has been produced, the press is activated and the juice expressed from the assembly.

Many variations of the rack-and-frame press exist. These include the continuous belt press, the bladder press, and the basket press.

6 _____

Fruit is usually washed prior to any processing. Washing is most frequently conducted with a high-pressure soak or spray system. Under some conditions, a surfactant or detergent may be added in order to release stubborn soil attached to the fruit. In apple processing, a high-quality wash is necessary to ensure the safe removal of microorganisms responsible for mycotoxin formation and possible gastrointestinal poisoning.

7 _____

As an alternative to press systems, some processors have gone to total enzymatic liquefaction of the fruit mash. Cellulase and pectinase enzymes are added, and the mash is heated in order to accelerate the enzyme's performance.

(Sources: <https://en.wikipedia.org/wiki/Juice>, <https://www.britannica.com/science/>)

Fruit Jam, Jelly, Marmalade and Compote

Before the use of sugar as a successful preserve drying, smoking, fermenting and salting were used. The ancient Greeks and Romans stored fruits in honey. Jams and jellies didn't become common until the 19th century when sugar became cheap enough to be used in large quantities. The primary difference between jam and jelly is that jelly is strained for a gem-like clarity without fruit solids. To get that bright, crystal-clear consistency, most fruits are crushed and cooked to extract their juice. The mixture is strained through a jelly bag, which is made of a fine mesh fabric that ensures that no fruit particles slip through. Jams are made from the entire fruit, including the pulp.

The word marmalade was derived from the Greek melimelon, which referred to quince stored in honey. Today, marmalade is a soft jelly that contains pieces of fruit rind (usually citrus). Marmalades have both a sweet and sour flavour, and the rind of the fruit imparts a mild bitterness. Although cooked rinds become tender, they maintain their structure, giving the spread a distinct candy-like bite.

The compote can be made with fresh or dried fruit (whole or cut into pieces) that is slowly cooked in a sugar syrup (sometimes containing liquor and spices). Slow cooking is important for the fruit to maintain its shape.

The essential ingredients for a successful preserve are sugar, acid, and pectin. These three ingredients lower the pH of the preserve and bind available water, thus creating an environment in which the growth of microorganisms is retarded. In some cases the fruit can provide all the pectin and acid that are needed. Sugar is always added, and in general, all of the three essential ingredients have to be added in order to create a successful product.

(Sources: <https://www.britannica.com/topic/fruit-processing/Fruit-preserves-jams-and-jellies>
www.seriousseats.com/.../difference-between-jam-jelly-compote-conserve-apple-butter)



(Source: <https://localkitchen.files.wordpress.com/2010/12/canjam2.jpg?w=800>)

10 Match words or phrases from the article to these definitions.

- 1 the state or quality of being clear or transparent to the eye
- 2 to keep in existence or continuance; preserve; retain
- 3 different in nature or quality; dissimilar
- 4 a constituent element of anything; component
- 5 any knit, woven, or knotted fabric of open texture
- 6 to give; bestow; communicate
- 7 the soft, juicy, edible part of a fruit
- 8 a thick and firm outer coat or covering, as of certain fruits, cheeses, and meats
- 9 to supply or equip
- 10 occurring, found, or done often; prevalent

1 _____ 2 _____ 3 _____ 4 _____ 5 _____
6 _____ 7 _____ 8 _____ 9 _____ 10 _____

11 Discuss these questions with your pair.

- 1 How would you define alcohol?
- 2 Write the chemical formula of ethanol (or ethyl alcohol).
- 3 What is distillation?
- 4 Name some apple brandies.
- 5 Which are the basic ingredients for the production of Travarica?

Brandy



Source: <http://68.media.tumblr.com>

Brandy is distilled from wine or a fermented fruit mash. The name comes from the Dutch *brandewijn* (“burnt wine”), referring to the application of heat in distillation. The term used alone generally refers to the grape product. Brandies made from the wines or fermented mashes of other fruits are commonly identified by the specific fruit name. Brandies are usually aged in wooden containers and they contain about 50 percent alcohol by volume.

Brandy is produced in most wine-producing countries. Outstanding French brandies include cognac, however, the sherry-producing centres of Spain and the port-producing centres of Portugal are also known for brandy. Greek brandy includes Metaxa, sweetened and usually darkened with caramel, and ouzo, colourless and flavoured with anise or licorice. American brandy, produced mainly in California, tends to be neutral and uniform in character. Brandies distilled from grape pomace, or marc, the material remaining in the winepress after grape pressing include grappa, an unaged, sharp-tasting brandy produced in both Italy and California.

Apple brandies, produced from fermented cider, include calvados, from the Calvados region of France, and the American applejack. Other fruit brandies, often characterized by a bitter-almond flavour contributed by the release of oil from the fruit pits during mashing include *Kirschwasser*, or kirsch, distilled from cherries produced mainly in Alsace, Germany and Switzerland and slivovitz, a golden-brown plum brandy produced in various Balkan countries. *Šljivovica* is produced in Croatia, however, there are much more varieties of *rakija* produced in different regions of the country and depending on the ingredients used for their production they are called: Travarica, Medica, Loza, Komovica, Viljamovka, Mastika, Orahovica, Biska or Višnjevac.

(Source: <https://www.britannica.com/topic/brandy>)

11 Find the opposites in the text above.

- | | |
|---------------|-------|
| 1 least | _____ |
| 2 sweet | _____ |
| 3 exclude | _____ |
| 4 flavourless | _____ |
| 5 colourfull | _____ |
| 6 biased | _____ |
| 7 uncommonly | _____ |
| 9 few | _____ |
| 10 irregular | _____ |

12 Work in pairs. Read the following text carefully and prepare a short presentation on the topic.



Photo courtesv of D. Nedela

Kvalitetna proizvodnja voćnih rakija

1. Potrebne sirovine:

zdravo kvalitetno voće primjerenog sortimenta za preradu u voćno vino ili voćne rakije

2. Postupak prerade:

- ▶ utvrđivanje optimalne tehnološke zrelosti i redovito branje otpalog voća, obiranje voća i 'trešnja voća';
- ▶ močenje voća u vodenoj kupki, pranje, cijedenje;
- ▶ mljevenje, obrada sredstvima protiv oksidacije, obrada enzimima za ubrzanje procesa vrenja;
- ▶ mjerenje sastojaka, tipizacija do postavljenog standarda kvalitete;
- ▶ šećerenje (samo iznimno), reguliranje kiselosti pH vrijednosti;
- ▶ dodatak kvasaca, dodatak hranjivog supstrata;
- ▶ namještanje vrelnjače;
- ▶ kontroliranje postupka vrenja (temperatura, kraj vrenja).

3. Prva destilacija:

- ▶ prva destilacija ili prvo kuhanje odmah po završenom vrenju (može s drvima)
- ▶ temeljito se očisti kotao za kuhanje rakije, deflagmacijska kapa, vezna cijev i hladnjak;
- ▶ učini se destilacija barem 50 l vode;
- ▶ počnemo s destilacijom koma ili mošta;
- ▶ pazimo da je destilacijski tok lagan;
- ▶ destilat uzimamo do 5 vol.% alkohola u 0,5 litarskoj menzuri;
- ▶ iz svakog kotla uzima se destilat u posebnu posudu, koji se spaja u zajednički destilat tek nakon kontrole ispusta koma;
- ▶ zajednički prvi destilat (sirova rakija) zatvori se i čuva na 15 - 20 °C.

4. Druga destilacija (prekuhavanje):

Preporučeno je da se učini 4-8 tjedana nakon prve destilacije (obavezno s plinom radi lakše destilacije toka destilata, a time i bolje kvalitete):

- ▶ temeljito se očisti kotao za kuhanje rakije;
- ▶ destilira se barem 50 litara vode;
- ▶ izmjeri se volumni postotak alkohola u sirovoj rakiji i prema formuli (broj litara sirove rakije u kotlu x vol.% sirove rakije x 0,08) dobije se potrebna količina izlučenog prvog toka, odnosno metilnog alkohola u litrama;
- ▶ počinje se pažljiva lagana destilacija sirove rakije;
- ▶ izdvaja se prvi tok po izračunu u jedan, dva, tri, do najviše šest posuda do izračunane količine prvog toka;
- ▶ odvaja se srednji tok po litru do 52 vol.% kao etanol jedan;
- ▶ odvaja se srednji tok po 2 dl do 45 vol.%, i to se ulijeva u novu posudu kao etanol dva;
- ▶ odvaja se srednji tok po 2 dl do 42 vol.%, i to se ulijeva u novu posudu kao etanol tri;
- ▶ odvaja se posljednji tok, odnosno dio viših alkohola oko 0,5 l do 20 vol.% i dodaje u sirovu rakiju namijenjenu sljedećem pečenju;
- ▶ destilacije po frakcijama daju se prije tipizacije degustirati znalcu i poštujemo njegove upute za tipizaciju.

5. Zrenje i starenje rakije:

rakija mora dozrijevati najmanje 4-8 tjedana, i u tom periodu se zračno pretače svakih 14 dana;

- ▶ rakija se razrijedi i tipizira;
- ▶ rakija se stabilizira i filtrira;
- ▶ slijedi punjenje rakije;
- ▶ pripreme se boce za prodaju;
- ▶ zapamtimo da nije dobro prodavati mladu rakiju

(Source: www.savjetodavna.hr/savjeti/15/27/vocna-rakija/)

I The Lighter Side

Fruit and Vegetable Idioms

1 Each of the following sentences contains an idiom (indicated in italics). Complete each explanation by choosing one of the following adjectives:

expert embarrassed angry calm
identical wrong lively perfect

- 1 The project was very successful at first, but then it *all went pear-shaped*. Everything went completely _____ .
- 2 Robert *went bananas* when he found his wife had crashed his car. I've never seen him so _____ .
- 3 Liz is *the apple of her father's eye*. He's convinced she's _____ .
- 4 When the fire broke out everybody panicked, except Tom. He stayed *as cool as cucumber*. He stayed completely _____ .
- 5 They're nice kids, but they're so *full of beans* it gets a bit tiring. They're so _____ .
- 6 Paul and his father are *as alike as two peas in a pod*. It's incredible - they're completely _____ .
- 7 Brian went *red as a beetroot* when he realized that we'd overheard what he said. He was so _____ .
- 8 If you want to know about the pros and cons of GMO, ask William. He really *knows his onions*. It's a field which he's _____ in.

2 Translate the idiomatic expressions from the above sentences.

3 Are there any similar expressions in your language?

Fred came rushing into his Dad. "Dad!" he puffed, "is it true that an apple a day keeps the doctor away?" "That's what they say," said his Dad. "Well, give me an apple quick? I've just broken the doctor's window!"

(Source: www.sumitkhemka.com/Ideas/Jokes/Category/Fruit/Apple.aspx.)

GLOSSARY

U ovome glosaru samo je mali dio primijenjene lingvistike u poljoprivredi. Kako su vinogradarstvo, vinarstvo, voćarstvo i prehrambena tehnologija područja s vrlo opsežnom, zahtjevnom i izazovnom građom, jer uključuju i brojne srodne discipline, ponuđena značenja u glosaru vezana su samo uz tekstove i zadatke koji se nalaze u knjizi. Stoga upućujemo studente da se uz njega služe i drugim jednojezičnim i dvojezičnim rječnicima, općim i poljoprivrednim, radi stalnog usavršavanja i praćenja literature. Izbor preporučenih rječnika je u popisu literature na kraju knjige.

A	
abaca	abaka
abandoned	napušten
abandoned orchard	napušten voćnjak
aberration	aberracija, odstupanje, promjena
abiotic	abiotički
above-ground tree volume	nadzemni volumen stabla
abscission agent	sredstvo za pospješivanje odvajanja peteljke
absorb	upiti, apsorbirati
absorbent	apsorbent, sredstvo za upijanje
absorption	apsorpcija, upijanje
abstain	kloniti se, apstinirati
abundance	obilje, mnoštvo
acacia	akacija, bagrem
access	pristup, prilaz
acclimatisation	aklimatizacija
according to	prema
accumulate	akumulirati, nakupiti (se)
acerola	acerola, antilska trešnja
acetaldehyde	acetaldehid
acetic acid	octena kiselina
acetic wine	octikavo vino
acid (n)	kiselina
acid-base	kiselo-lužnati
acid rain	kisela kiša
acid resisting	otporan na kiselinu
acid test	proba na kiselost
acid wine	kiselo vino
acidification	dokiseljavanje
acidity	kiselost
acorn	žir
acre	jutro, ral
active ingredient	aktivna tvar
add	dodati, pridružiti
addition	dodatak, dodavanje
additive	dodatak, primjesa
adhere	prijanjati
adjunct	pomoćan, dodatan
adjuvant	kemijski dodatak
adulterated wine	patvoreno vino
aerate	prozračiti
aerated sparkling wine	gazirano pjenušavo vino
aerial vine roots	brandusi, zračno postrano korijenje vinove loze
aftertaste	naknadni okus/aroma/osjet vina
aggregate fruit	sastavljeni plod, sraslac

agricultural	poljoprivredni
agricultural botany	poljoprivredna botanika
agricultural chemistry	poljoprivredna kemija
agricultural engineer	inženjer agronomije
Agricultural Land Act	Zakon o poljoprivrednom zemljištu
agricultural machinery	poljoprivredni strojevi
agricultural management practice	agrotehnika, agrotehnička mjera
agricultural meteorology	agrometeorologija
agricultural products	poljoprivredni proizvodi
agriculture	poljoprivreda, poljodjelstvo, ratarstvo
agriculturist	poljoprivrednik, ratar
agrobiology	agrobiologija
agronomist	agronom
agronomy	agronomija
aid	pomoć
aid application	zahtjev za potporu
aid scheme	plan potpore
aim at	ciljati
airborne (pests/pathogen/disease)	iz zraka (štetnik/patogen/bolest), koji se prenosi zrakom
airtight	hermetičan, nepropustan za zrak
airtight gas container	hermetičan spremnik za plin
albedo	albedo (unutarnji bijeli dio kore agruma)
alcohol	alkohol
alcohol- free wine	bezalkoholno vino
alcoholmeter	alkoholometar, gradir
alcoholometry	određivanje alkohola
alcohol percentage(content) by weight	težinski postotak alkohola
alcohol volume grade	volumni postotak alkohola (vol % alk.)
alert	uzbuniti
alimentary yeast	prehrambeni kvasac
alkaline	lužnat
alley cropping system	uzgoj poljoprivrednih kultura u drvoredima
allocate	dodijeliti, odrediti, dotirati
allocation	dodjeljenje, izdvajanje, dotacija
allotment, community garden system	dodjela javnih parcela(gredica) hobi vrtlarima
almond	badem
almond bark beetle	bademov potkornjak
almond in shell	badem u ljusci
allochthonous variety/cultivar/species	alohtona sorta/kultivar/vrsta
alter	izmijeniti, prepraviti
amber yellow	jantarnožuta (boja)

amend	popraviti, poboljšati
ampelography	ampelografija
analysis	analiza, ispitivanje
analytic	analitički
analyse	analizirati, raščlaniti
anchorage of the plant roots	ukorjenjivanje
animal husbandry	uzgoj stoke
anise	anis
annual	godišnji, jednogodišnji
annual growth	godišnji rast
anomalous	nepravilan
anomaly	anomalija, nepravilnost
antibiotic	antibiotik, antibiotičan
antibody	antitijelo
anticyclone	anticiklona
antioxidant	antioksidans
antiseptic	antiseptik, raskužno sredstvo
apparatus	sprava, pomagalo
appearance	izgled
appellation	ime vina (vezano uz zemljopisno podrijetlo)
apple brandy	rakija od jabuke
apple jack	rakija od jabuke
apple maggot fly	jabučna muha
apple rust	jabukova rđa
apple scab	čađava jabukova krastavost
applicable	upotrebljiv, primjenjiv
approach grafting	ablaktacija, cijepljenje priljubljanjem
approved mill	ovlaštena uljara
approved-health mother tree	zdravstveno ispravno matično stablo
approximate	približan, približno točan
apricot	marelica, kajsija
arable crop	ratarska kultura, ratarski usjev
arboriculture	arborikultura
archive wine	arhivsko vino
are	ar
area	područje
area-based production subsidy	poticaj po jedinici površine
area of special state concern	područje od posebne državne skrbi
area payment	plaćanje po površini, površina
arid area	aridno područje, sušno područje
arm	ogranak
vertical arm	ogranak čokota
aroma persistence	aromatska postojanost(vina)
aroma; nose	aroma (vina)

primary/secondary/tertiary aroma	primarna/sekundarna/tercijarna aroma
aromatic wine	aromatično vino
aromatized wine	aromatizirano vino
array (n, v)	niz; poredati
arsenic	arsen
arterial cholesterol deposit	naslaga kolesterola u arteriji
artesian	arteški
ascertain	ustanoviti, utvrditi
ascorbic	askorbinski
ascorbic acid	askorbinska kiselina, vitamin C
asexual reproduction	vegetativno razmnožavanje, aseksualno razmnožavanje
assembly	skupljanje
assessment	ocjena, vrednovanje
assurance	sigurnost, uvjerenje
astringent	trpak okus, opori okus
augmentation	povećanje, umnožavanje, prirast
authorised (grape) variety	dopuštena sorta (vinove loze)
autochthonous variety/cultivar	autohtona sorta/kultivar
average	prosjek, prosječno
avocado	avokado
awl graft	vrsta postranog cijepljenja
axe (n, v)	sjekira; sjeći sjekirom
axillary bud	pazušni (aksilarni) pup
B	
back label	stražnja etiketa
bacterial disease	bakterijska bolest
bacterisation	bakterizacija
bagged fruit	plod zaštićen vrećicom na stablu
balance (n)	vaga
balanced pruning system	mješovita rezidba
balanced wine	uravnoteženo vino
Balthazar	Balthazar, boca zapremnine 12 L
bamboo	bambus
ban on new planting	zabrana sadnje (novih nasada)
bare-rooted plant	sadnica s golim korijenom, biljka bez posude
bark	kora
bark grafting	cijepljenje pod koru
barley	ječam
barrel	bačva
barrel fermented	fermentirano u bačvama
barrique	barik, bačva
basic (-plant propagation) material	osnovni sadni materijal
basket	košara

batch	jedna grupa, jedna serija
batonnage (Fr) /lees stirring	miješanje taloga, (miješanje vina s talogom)
beading (of wine)	perlanje (vina)
beady wine	biser vino
beaker	čaša u obliku pehara
be consistent with	slagati se sa, uklapati se
bear-bore-borne	nositi (plod)
bearing surface (per hectare)	rodna površina, površina u rodu
bearing unit/fruiting unit of vine	rodni element (čokota)
bearing vineyard	rodni vinograd
bed	gredica, uska lijeha
bedded plant	biljka u gredici
bedrock	temelj
bedrock prices	najniže moguće cijene
beech	bukva
beneficial	koristan, blagotvoran
beneficial insect	koristan kukac
benefit	korist, blagodat
bentonite	bentonit
berry	bobica, boba
berries	jagodičasto voće, bobičasto voće
biennial	dvogodišnji (biljka)
biennial bearing	alternativna rodnost
bilge pump	drenažna pumpa
bilge suction	drenažni usis
bind	vezati, pričvrstiti, umotati
biocatalyst	biokatalizator
biocenosis	biocenoza
biodiesel	biodizel
biodiversity	bioraznolikost
biofuel	biogorivo
biological pest control	biološko suzbijanje štetnika
biomass	biomasa
bionomics	bionomija
bird damage	oštećenje od ptica
bird net/bird netting	mreža za zaštitu od ptica
bitter	gorak
bitter almond	gorki badem
bitter orange	gorka naranča
bitter pit	gorke pjege (jabuke)
bitter rot	gorka trulež
bitter rot of grape	gorka trulež vinove loze
bitter wine	gorko vino
bitterness taint	gorčina vina

blackberry	kupina
black currant	crni ribizl
black frost	mraz bezinja
black mould rot	crna plijesan
black mulberry	crni dud, crna murva
black pepper	papar
black rot	crna trulež grožđa
bleeding/sap bleeding	suzenje vinove loze
blemish-free	bez mrlja, bez mana
blend	mješavina, spoj
blended wine	višesortno vino
blending (wines)/ coupage (Fr)	sljubljanje (vina), kupaža
blending machine	automatska mješalica
blizzard	snježna oluja
blood clot	krvni ugrušak
blood pressure	krvni tlak
blossom	cvijet (voćke), cvat, doba cvatnje
blossom drop	uvenuće cvjetova
blossom fade	opadanje cvjetova
blossom fall	ocvalost
blossomless	bescvjetan
blossomy	pun cvijeća
blueberry	borovnica
blunt	tup
bolster	pojačati, potpomoći
boost (n, v)	poticaj; poticati
Bordeaux mixture	bordoška juha
Bordeaux barrique	hrastova bačva zapremnine 225 L
borough	gradska općina
botanical	botanički
botany	botanika
botrytis	botritis
botrytis-free (grapes)	nezaraženo (čisto) grožđe
botrytized (grape/wine)	napadnuto plemenitom plijesni (grožđe/vino)
bottle	boca
bottle neck	grlo boce
bottle opener	otvarač za boce
bottle sickness/shock	prolazni poremećaj kvalitete vina uslijed punjenja u boce
bottling	puniti u boce
bottling and capping machine	punilica i zatvaračica boca
bouquet	buke
bouteille (Fr)	butelja (0,75 L)
bract	brakteja, pokrovni list
breed (n)	vrsta, pasmina

breed (v)	uzgajati, razmnožavati se
breeder	oplemenjivač, uzgajatelj (stoke), rasplodna životinja
breeder queen	matica (pčela)
breeding	uzgajanje, razmnožavanje
breeding of new varieties	nova selekcija
bridge grafting	cijepljenje na most
broadband	širokopojasni
broker	burzovni posrednik, broker
broth	gusta juha
bruise (n, v)	modrica; nabiti, povrijediti
brush (of a grape berry)	čtkica (bobice grozda)
bud	pup
bud break/ bud burst	otvaranje pupova
bud eye	pup, oko
bud grafting	cijepljenje okulacijom
budstick	plemka za okuliranje
budget	proračun
bulb	lukovica
bulk/ in bulk	u rinfuzi
bulk wine	vino u rinfuzi
bullfinch	zimovka
bumblebee	bumbar
bunch	grozd (vinove loze)
bundle	snop, sadnica
<i>vascular bundle</i>	žila (kod biljke)
bung (n, v)	čep; začepiti bačvu vranjem
<i>rubber bung</i>	gumeni čep
Bunsen burner	Bunsenov plamenik
burette	kapaljka, pipeta
burner	plamenik
butt	vinska ili pivska bačva (oko 443 L)
butter	maslac
butterfly	leptir
by-product	nusprodukt, sporedni proizvod
C	
cacao	kakao
cadastral	katastralni
cadastral map	katastarski plan
cadastral parcel	katastarska čestica
cadastre	katastar
calcareous soil	vapnenasto tlo, karbonatno tlo
calcium carbonate	kalcijev karbonat
calcium reserve	pričuva kalcija (u tlu)
calcium salt	kalcijeva sol
callus	kalus

calyx/calix	čaška
cambium	kambij
camomile	kamilica
can (n)	limenka
cancer	rak
candied fruit	ušećereno voće, kandirano voće
candy	kristalizirati, ušećeriti se
cane	izdanak, lucanj
cane pruning	rez na lucanj
<i>vine cane</i>	rozgva, prut
<i>two-year-old cane</i>	dvogodišnja rozgva
canned vegetables	konzervirano povrće
cannery	tvornica konzervi
canopy	krošnja (drveta), nadstrešnica
capacity	sadržaj, obujam
capillary	kapilaran, kapilara
capsule (fruit)	tobolac (plod)
carafe	stolna posuda za vino (vodu)
carambola (stair fruit)	karambola
caramel	karamel
carbofertilizers	karbonatna gnojiva
carbohydrate	ugljikohidrat
carbon	ugljik
carbon footprint	utjecaj ugljika na atmosferu
cardboard packing	kartonska ambalaža
cardiovascular	krvožilni
carotene	karotin
carpel	oplodni listić, pestić
case	sanduk
cashew apple	indijski oraščić, kešu, kažuj
cask	bačva
catch (n, v)	zahvat, hvatanje
catching frame/canvas	platno za sakupljanje/berbu
cell	stanica
cell membrane	stanična membrana
cell wall	stanična stijenka
cellar	podrum
cellarage	podrumarstvo, podrumski prostor
cellarer	podrumar
cellulose	celuloza, staničevina
centre pivot system	kružno-pomične rampe
centre pivot sprinkler	samohodni automatizirani uređaj za kružno kišenje
centrifugal	centrifugalan
centrifugal separator	centrifugalni odjeljivač
cereals	žitarice, žitni

chalky	kredast
chamomile	kamilica
chemical (n, adj)	kemikalija, kemijski
chemical composition	kemijski sastav
<i>hazardous chemicals</i>	štetne kemikalije
chemistry	kemija
cherimoya	šerimoja
cherry	trešnja
chestnut	kesten
chlorophyll	klorofil
chlorosis	kloroza, žutica
cider	jabukovača
cinnamon	cimet
clamp	kliješta
claret	crveno vino
clay	glina
clear (adj)	bistar
clearance	klirens, slobodni prostor između tla i osovine motora
cleft grafting	cijepljenje na raskol
clementine	klementina
clingstone (peach/plum)	durancija (breskva/šljiva) (meso se ne odvaja od koštice)
clogging	začepljenje
clot	ugrušak
clove	klinčić
cluster	grozd (vinove loze)
cockchafer	hrušt
cocoa bean	zrno (sjeme) kakaa
cocoa butter	kakao maslac
cocoa liquor	kakao liker
cocoa powder	kakao prah
codling moth	jabučni savijač
cognac	konjak
coherent	dosljedan
cold storage	hladnjača
colon cancer	rak debelog crijeva
colourless	bezbojan, proziran
combat	suzbijati
combine (harvester)	kombajn
combustion	izgaranje
Common Agricultural Policy (CAP)	Zajednička poljoprivredna politika
Common Catalogue of Varieties (of agricultural plant species)	Zajednička sortna lista Zajednice
Common Customs Tariff	Zajednička carinska tarifa

Community Plant Variety Office (CPVO)	Ured Zajednice za biljnu raznolikost
Community Plant Variety Right (CPVR)	pravo zaštite sorte u EU
commodity	roba, proizvod
comply	udovoljiti molbi, popustiti
compound	sastavljen, složen
compound leaf	sastavljen list
compulsory	obvezatan
concession	olakšica, koncesija
conche	konča
connoisseur	dobar poznavalac, stručnjak
consequence	posljedica, zaključak
consistent	u skladu s
consumption	potrošnja
contain	sadržavati
content (n)	sadržaj, količina
contract production	ugovorna proizvodnja
contribute	pridonjeti
controlled atmosphere (CA)	kontrolirana atmosfera, CA komora
converted	pretvoren
cooper	bačvar
cooperage	bačvarstvo
cooperative	zadruga
copper casse	bakreni lom (mana vina)
cordon	kordonac (uzgojni oblik)
grapevine cordon	kordonac vinove loze
low/mid/top-wire cordon	kordonac na donjoj/srednjoj/gornjoj žici
vertical/horizontal cordon	uspravni/horizontalni kordonac
unilateral/bilateral cordon	unilateral/bilateral kordonac
cork	pluto, čep
corking	čepljenje
corked wine	vino koje smrdi po trulom čepu
corker/bottle corking machine	čepilica, stroj za zatvaranje boca čepovima
corkiness	vino koje je poprimilo miris plutenog čepa
corkscrew/cork puller/rabbit corkscrew	vadičep, vadičep s ručicama
coronary	koronarni, srčani infarkt
corrective pruning	korektivna rezidba
corrective spraying	korektivno prskanje
cotton	pamuk
cracking	pucanje plodova
cranberry	brusnica
creamy texture	kremasta tekstura
crisp	hrskav, svjež, čvrst

crispness	hrskavost
crop (n)	žetva, ljetina
crop (v)	žeti, uroditi, brati
crop coefficient	koeficijent usjeva
crop declaration	izjava o usjevima
crop insurance premium	premija osiguranja
crop load	opterećenje rodom
crop rotation	plodored
crop year	poljoprivredna godina
crossbow	samostrel
crossing	križanje
cross- pollination	unakrsno oprašivanje
cross-section	poprečni presjek
crown cap	krunski zatvarač (za boce)
crucible	talionik, lončić za taljenje kovina
crunchy	hrskav
crushing (of the grapes)	muljanje (grožđa), gnječenje
crusher-destemmer	runjača-muljača
crushing machine	drobilica
crystalline wine	kristalno bistro vino
cultivar	sorta, kultivar
cultivate	obrađivati
cultivation	obrađivanje, gajenje
cultivator	kultivator, ratar
cut	rezati, sjeći
cutaway disk harrow	tanjurača s nazubljenim tanjurima
cuticle	kutikula
cutting	reznik
cyanide	cijanid
cycle	ciklus, krug
cyclone	ciklona
cylindrical cluster	cilindrični grozd
cytology	citologija
cytoplasm	citoplazma
D	
daily	dnevni
daily maximum temperature	maksimalna dnevna temperatura
Dalmatian Prosecco	dalmatinski prošek
damage	šteta
damage assessment	procjena štete
data base	baza podataka
date	datulja
deacidification (of wine)	otkiseljavanje vina
deblossoming	odstranjivanje cvjetova

decant	dekantirati, pretakati (vino)
decanter	dekanter, posuda za taloženje
decanting	dekantiranje, taloženje
decease (n)	smrt
decompose	razgraditi
decomposition	razgradnja
deep-frozen fruit	duboko smrznuto voće
deficiency	nedostatak
defoliation	odstranjivanje listova, defolijacija
dehydrated fruit	dehidrirano voće
de-leafer	uređaj za odstranjivanje lišća
delivery network	dovodna mreža (za navodnjavanje)
demijohn	pletenka, demižon
dendrology	dendrologija
density	gustoća
density planting	gust nasad
depth	dubina
dessert grape/table grape	stolno grožđe
desert wine	desertno vino
destem	odstraniti peteljke
destemmer	runjača
destemming	odstranjivanje peteljki
deteriorate	pokvariti se
deterioration	kvarenje, pad kvalitete
detract	omalovažavati, podcjenjivati
detrimental	štetan
device	uređaj, naprava
dew	rosa
dig	kopati
dig out	iskopati
dilute	razrijediti
dilluvial deposit	diluvijalni nanos
diluted wine/watered wine	bevanda, vino razrijeđeno vodom
direct Internet sales	izravna prodaja putem interneta
direct on-farm sales	izravna prodaja na gospodarstvu
direct payment	izravno plaćanje, proizvodna potpora
direct sale	izravna prodaja
desiccator (n)	eksikator, sprava za sušenje
discount	popust
dispersal	rasprostranjivanje, širenje
dispose	prodati, rješavati, ukloniti
dissipate	raspršiti, rasuti
dissolve	otopiti
dissolved (in water)	otopljen (u vodi)
distil	destilirati

distinguish	razlikovati, dijeliti
disturbance of the lees	podizanje taloga
diversity	raznolikost
ditch (n)	jarak, jama, kopati jarak
ditch (v)	kopati jarak
diversity	raznolikost
domesticated variety/cultivar	udomaćena sorta/kultivar
dormancy	zimski san, mirovanje
dormancy break	buđenje (vegetacije)
dosage	doziranje
double distilling	druga destilacija
double distilled plum brandy	prepečenica
double magnum	boca od 3L
double row (-system)	dvored
dough	tijesto
downy mildew of vine	plamenjača vinove loze
drainage	isušivanje, drenaža, odvodnjavanje
drainage canal	odvodni kanal
dried fruit brandy	rakija od sušenog voća
dried fruits	sušeno voće
drip irrigation	kap po kap sustav navodnjavanja
drizzle	kišica koja sipi, rosulja
drop ring	hvatač kapljica
drop stop	umetak protiv prolijevanja vina
drought	suša
drought index	indeks suše
drought resistant plant	biljka otporna na sušu
dryer	sušionik
dry fruit	suhi plod
dry wine	suho vino
durian	durian
dust	zprašivati
duster	zprašivač
Dutch	nizozemski, holandski
dwarf	patuljak
E	
early botrytis rot of grapes	rani botritis
early-flowering variety	ranocvjetna sorta
eartheneare	lončarska roba, keramika
ecodormancy	ekološko mirovanje
economic threshold (of a pest population)	ekonomski prag štetnosti (nametnika)
edge row	rubni red
edible	jestiv

edible fruit	jestivo voće
elderberry	bazga
eligible	koji ispunjava uvjete
embody	utjelovljivati, uključivati
emulsifier	emulgator
enact law	donijeti zakon
enclose	okružiti
endocarp	endokarp
energy	energija
<i>non-renewable energy</i>	neobnovljiva energija
<i>renewable energy</i>	obnovljiva energija
enhance	povećati
enrich	obogatiti, pojačati
ensure	osigurati
entomologist	entomolog
entomology	znanost o kukcima
entrepreneur	poduzetnik
enterprise	poduzeće, pothvat
environment	okolina, okoliš
epicuticular wax	epikutikularni vosak, pepeljak
equation	jednadžba, izjednačenje
European Association for Research on Plant-Breeding	Europsko udruženje za oplemenjivanje bilja
evaporation	isparavanje
eventual	konačan, moguć
excess fertilisation	prekomjerna gnojidba
excise duty (on wine)	poseban porez na alkohol
exocarp	egzokarp
expand	proširiti, raširiti
experimental site	pokusno dobro
exposure	izlaganje, izvrgavanje
extensive farming	ekstenzivna poljoprivreda
extensively	opsežno, u velikoj mjeri
extraction	ekstrakcija
F	
face shield	štitnik za lice
facet	aspekt
fallow period	na ugaru, ležati neiskorišteno
family farm	obiteljsko poljoprivredno gospodarstvo, OPG
famine	glad, oskudica
farm	gospodarstvo
farm register	upisnik poljoprivrednih gospodarstava
farming	ratarstvo, obrađivanje zemlje
fat	mast
<i>saturated fat</i>	zasićene masti

farmyard manure	stajsko gnojivo
fence	ograda
protective fence	zaštitna ograda
fermentation	fermentacija
fermentation vessel/vat	posuda za vrenje
fertility	plodnost
fertilize	gnojiti, oploditi
fertilizer	gnojivo
fertilizer ban	zabrana korištenja mineralnih gnojiva
organic fertilizer	organsko gnojivo
fibre	vlakno
fig	smokva
filtered wine	filtrirano vino
filtrate	filtrat
fine (adj)	sitan
fine (v)	bistriti
fining agent	bistrilo
fire blight	bakterijska palež, bakterijska plamenjača jabučastog voća
fire hydrant	protupožarni hidrant
fire-toasted barrel	paljena bačva
firmness index	indeks tvrdoće ploda
fixed cost	fiksni trošak
fizzy drink	gazirano piće
flask	tikvica, laboratorijska čaša
flavour	okus
flax	lan
fleshy	debeo, mesnat
fleshy fruit	mesnati plod
floriculture	cvjećarstvo, uzgoj cvijeća
fold	svinuti, presaviti
foliage	lišće
food	hrana
foodstuff	prehrambeni proizvod, hrana
fast food	hrana "s nogu"
flesh	meso ploda
fleshy drupe	mesnata koštunica
fleshy fruit	mesnati plod
floral aroma	cvjetna aroma
food chain	prehrambeni lanac
food industry	industrija hrane
food processing industry	prehrambeno-prerađivačka industrija
foot-and-mouth disease	slinavka, šap
fortified wine	pojačano vino
foster	poticati, unapređivati
fragrance	(ugodan) miris

framework	okvir
free flame	otvoreni plamen
freestone (peach/plum)	kalanka, cjepača (breskva/šljiva) (meso se odvaja od koštice)
freighter	teretni brod, otpremnik
freshwater	slatkovodan
friction	trenje, frikcija
front label	prednja etiketa
frost	mraz
fructose	fruktoza, voćni šećer
fruit concentrate	voćni koncentrat
fruit flies	voćne muhe
fruit gatherer/picker	berač voća
Fruitgrowing Institute	Zavod za voćarstvo
fruit jelly making	želiranje voća
fruit liqueur	voćni liker
fruit load	opterećenje rodnom, težina plodova
fruit mash	komina (voćna)
fruit russeting	mrežavost ploda
fruit spirit drink	voćno alkoholno piće
fruit stem	stapka ploda
fruit stemming machine	stroj za uklanjanje voćnih peteljki
fruit syrup	voćni sirup
fruit wine	voćno vino
fulfil	ispuniti, izvršiti
fume (n, v)	isparavanje, ispuštati pare
fume cupboard	digestor
fungi	gljive
fungus	gljiva
funnel	lijevak
filter funnel	lijevak za filtriranje
furrowing irrigation	navodnjavanje brazdama
G	
game	divljač, lovina, igra
garlic	češnjak, bijeli luk
gather	pokupiti, pobrati plodove
gauze	mrežica
GDP -Gross Domestic Product	BDP - bruto domaći proizvod
girdle	opasati, okružiti
give off	širiti, ispuštati
glacier	ledenjak
glassware	stakleno laboratorijsko posuđe
glaucous	pokriven maškom, maškast, sivkasto-zelen
glucose	glukoza, groždani šećer

goggles	naočale za zaštitu
gooseberry	ogrozd
grafting paste	cjepljarska pasta
grafting wax	voćarski vosak, vosak za cijepljenje
grape	grožđe, loza
grapefruit	grejpfrut
grind	mrviti, drobiti
grinder	sjeckalica, brusilica, usitnjavač
electrical/mechanical grinder	električna/mehanička drobilica
ground glass top	vrh napravljen od brušenog stakla
grow	rasti
guava	guava
Guyot pruning	uzgoj Goyot
H	
habitat	stanište
hail	tuča, obilno padati
hammer mill	mlin čekićar
hamper (v)	priječiti, smetati
harmful	štetan
harmonize	uskladiti
harvest (n)	žetva, berba
harvest (v)	žeti, požeti
harvester	berač, stroj za berbu
hatch	izleći
haze	mutnoća, maglica
hazelnut	lješnjak
headspace (of a bottle)/ ullage	neispunjen (gornji) dio boce, prazan prostor u vratu boce
heat	toplina
heat injury	oštećenje ploda zbog previsoke temperature
heat wave	toplinski val
heavy crop	veliki rod
hectare (2.471 acre)	hektar
hectolitre (hl)	hektolitar (hl)
hemp	konoplja
herbaceous	zeljast
herbaceous wine	začinsko vino
herb-infused brandy (grappa)	travarica
herbivore	biljojed
high quality wines with controlled origin label	vrhunska vina s oznakom kontroliranog podrijetla
hogshead	velika bačva (za vino zapremnine 238 L)
hollow	rupa, šupljina, udubina
Holly week	Veliki tjedan

honey	med
horticulture	vrtlarstvo, hortikultura
humid	vlažan
humidity	vlaga
absolute humidity	apsolutna vlažnost
air humidity	vlažnost zraka
husbandry	poljoprivreda, poljodjelstvo
hydrate	hidrat
hydraulic press with stainless steel cage	hidraulični tjesak (preša) s košem od nehrđajućeg čelika
hydrochloric acid	solna (klorovodična) kiselina
hydrogen	vodik
hydrogen sulphide	sumporovodik
I	
ice cooler/bucket	posuda za hlađenje butelja, vedrica za led
ice wine	ledeno vino
immature	nezreo
immersion	zaronjavanje, uronjavanje
impart	pružati, davati
import duty	uvozna carina
inanimate	bez života, mrtav, prazan
inarching	cijepljenje priljublivanjem
inception	početak
inclusion	uključenje
indemnity period	brzina isplata štete
indigenous	prirodni, domaći
indigenous yeast/ natural yeast	prirodni kvasci
indispensable	neophodan, prijeko potreban
induce	potaknuti, izazvati
inducement	pospješivanje
ingredient	sastojak
insipid	neukusan, bljutav
insipid wine	neukusno vino
insoluble	netopiv
Institute of Viticulture and Enology	Zavod za vinogradarstvo i vinarstvo
insurance premium subsidy	subvencija premije osiguranja
intact	netaknut
integrated pest management	integrirana zaštita bilja
intensive farming	intenzivna poljoprivreda
interact	međusobno djelovati
intermediary	posrednik
internode	međukoljence, internodij
internodium	međukoljence, internodij

inter-row cultivation	međuredna kultivacija
inter-row spraying equipment	međuredna prskalica
inter-row weeding	međuredna zaštita od korova
intoxicating	opojan
inundation	poplava
invoice	faktura, račun
irrigation	navodnjavanje, natapanje
isinglass	riblji mjehur
issue (n)	pitanje, problem
J	
jam	džem
jelly	žele, voćni žele
joint	spoj, sastavak
jug wine	stolno vino u većim staklenim bocama (u SAD)
jute bag	jutena vreća
K	
kind	rod, vrsta, razred
knead	mijesiti, gnječiti
knot	kvrga
L	
label	naljepnica, etiketa
labelled	označen
labelling	deklariranje, označavanje
labour	ljudski rad
lactic acid	mlječna kiselina
lactose	laktoza, mliječni šećer
ladder	ljestve
land	zemljište
agricultural land	poljoprivredno zemljište
Land Parcel Identification System (LPIS)	Sustav identifikacije zemljišnih čestica
land register	zemljišne knjige
land-registry office	gruntovnica
landscape	krajobraz, pejzaž
landslide	klizište
larva	ličinka
larvae	ličinke
late blight	plamenjača
late crop	kasna kultura
late variety/cultivar	kasna sorta
late vintage	kasna berba
latent bud	latentni pup, spavajući pup
lateral (of a grape cluster)	ogranak (u grozdu vinove loze)

lateral move (linear move) irrigation system	samohodno bočno kišno krilo
latitude	zemljopisna širina
lawn	travnjak
layer	sloj, naslaga
layering	grebeničenje
lead	voditi
leaf	list
leafless	bez lišća
leak	propuštati tekućinu
leakage	istjecanje
leather	koža
lees	talog
leeway	odmicanje prema zavjetrini, nadoknaditi zaostatak
legislation	zakon, zakonodavstvo, donošenje zakona
lenticel	lenticela
lesser	manji
level (n)	razina, stupanj
level (v)	nivelirati
levelling	niveliranje
licorice	slatki korijen, sladić
lid	poklopac
life cycle	životni ciklus
lifespan	životni vijek
light exposure	osvjetljenje
light wine	lagano vino
lime	limeta, vapno
quick lime	živo vapno
limestone	kamen vapnenac
linear leaf	linearni list, uski duguljasti list
linger	zadržati se
liquefaction	ukapljivanje, topljenje
liqueur wine	likersko vino
litmus	lakmus papir
liver	jetra
livestock	stočarstvo kao grana privrede, stoka
loader	utovarivač
loading	utovar
loam	ilovača
loess	prapor, les
loessial soil	lesno tlo
longan	longan
longitude	zemljopisna dužina
loose grape cluster/bunch	rastresit grozd
loquat	japanska mušmula
loss	gubitak, šteta

lot	čestica, komad zemljišta
seed lot	partija sjemena
louse - lice	uš - uši
lumber	stablo, trupac za drvenu građu
lump sum	odjednom plativ iznos, paušalni iznos
lupine	lupina
lush	sočan, bujan
lychee	litchi, liči
lye	lužina, lug
lymph	limfa
M	
macerate	kvasiti, namakati, mekšati
maceration	kvašenje, namakanje
machine harvesting	strojna berba
machine pruning	strojna rezidba
maggot	ličinka, crvić
magnesium	magnezij
magnum	magnum (boca zapremnine 1,5 L)
maintain	održavati
maintenance	održavanje
maize	kukuruz
make-up	sastav, građa
malady	bolest
male	muški, mužjak
male bee	trut
malic acid	jabučna kiselina
malolactic fermentation	malolaktično vrenje
malt	slad
mammal	sisavac
management	upravljanje, gospodarenje
mandatory	obavezan
manganese	mangan
mango	mango
mangosteen	mangostin
manure	gnojivo, organsko gnojivo
manure distributor	raspršivač gnojiva
manure pit	jama za stajsko gnojivo
marine	morski, pomorski
market	tržište, sajam
market class	tržišna kakvoća
marketing	marketing, trgovački promet
marrying food with wine/paring/matching	sljubljivanje vina s jelima
mature	zreo, dozreo
maturity	zrelost, dozrelost

meaty	mesnat, sočan
mechanic	mehaničar
mechanization	mehanizacija
medlar	mušmula
melioration	melioracija, poboljšanje
mellow	(potpuno) zreo, mekan, bez trpkosti (oporosti)
melon	dinja
melt	topiti se
membrane	opna, membrana, kožica
membranous	opnast
menace	prijetnja, opasnost
merchandize	roba
mercury	živa
mesocarp	mezokarp
metabolism	izmjena tvari u organizmu, metabolizam
matamorphosis	probrazba, metamorfoza
microbe	mikrob
microbial activity	mikrobiološka aktivnost
microbiology	mikrobiologija
microclimate	mikroklima
microflora	dio biljne populacije na maloj površini
micronutrient	mikrohranivo
midrib	srednja žica na listu, lisno rebro
midseason variety	srednje kasni kultivar
migrant worker	sezonski radnik
mildew of grape	plijesan vinove loze
mildewy	snjetljiv, pljesniv, truo
mill	mlin, tvornica, predionica
mill stone	žrvanj
mince	sjeckati, kosati
mineral	mineral
mineralization	mineralizacija
mineral fertilizer	mineralno gnojivo
mingle	miješati, pomiješati
minimum	minimalan
minimum requirement	minimalna potreba
minimum standards	minimalni standardi
minimum value	minimalna vrijednost
Ministry of Agriculture	Ministarstvo poljoprivrede
minuscule	minijaturan, beznačajan
mint	metvica
mite	grinja
moist	vlažan, kišovit
moisture	vlaga
monitoring	praćenje, nadziranje

mold	kalup
mortar	tarionik, mužar
mortgage	hipoteka, založena nekretnina
moth	moljac, noćni leptir
mould	plijesan, sipka zemlja
mountain slope	padina, obronak
mow	plast, kup, gomila
mowing	košnja
muck	gnoj, blato
muroid	sluzav
mucosity	sluzavost
mucous membrane	sluznica
mulberry	dud
mulch	pokrivanje tla ili korijena stabla slamom, lišćem, biljnim ostacima zbog zaštite
multiple fruit	skupni plod
multiple row	višered
multiple sugar/polysaccharide	složeni šećer, polisaharid
multiply	umnožiti
muriate	klorid
muriatic acid	solna kiselina
mushroom	gljiva
must	mošt, mlado vino, plijesan
musty	pljesniv, bljutav
musty wine	vino s okusom (i mirisom) pljesni
mutton	ovčetina
mycology	nauka o gljivama, mikologija
mycosis	gljivično oboljenje, mikoza
N	
nail	čavao, nokat
namesake	imenjak
National List of varieties	nacionalna sortna lista
natural disaster	elementarna nepogoda
natural enemy	prirodni neprijatelj
Nebuchadnezzar	Nabuchodonosor, boca zapremnine 15 L
nectarine	nektarina
needy	potreban, oskudan
negociant	trgovac vinom
nematodes	nematode
net price	neto cijena
neutralisation of acidity	neutralizacija kiselosti
new planting	nova sadnja, novi nasad
niche	niša
nitrate	nitrat, dušikova sol

nitric acid	dušikova kiselina
nitrogen	dušik
noble rot	plemenita plijesan
node, nodium	koljence, nodij
non-volatile	nehlapljiv
nose/smell/odour/scent (of a wine)	miris (vina)
nourishment	ishrana
nursery	rasadnik, uzgajalište
nursery accreditation	akreditacija rasadnika
nut	orah, oraščić
nuts	orašasto voće/plodovi, jezgrasto voće
nutrient	hranjiva tvar, hranjiv
nutrition	ishrana
nutritional value	prehrambena vrijednost, nutritivna vrijednost
<i>plant nutrition</i>	ishrana bilja
O	
oak	hrast
oak barrel	hrastova bačva
objective	cilj
oblong (leaf)	duguljasti list
occur	dogoditi se, javljati se
odour	miris, zadah, vonj
odour-free	bez mirisa
odourless	bez mirisa
oenologist	enolog
offspring	djeca, potomstvo
olfactory	olfaktorno, mirisno
olive	maslina
one-litre bottle	litrenka
onion	luk
open cluster	rahli cvat
open mash fermentation	otvoreni postupak vrenja masulja
opt	odlučiti se za
order	red
organ	organ
organelle	organela (tjelešce u stanici)
organic agriculture	organska poljoprivreda
organic fertilizer	organsko gnojivo
organic grape/wine	organsko grožđe/vino
organoleptic	organoleptičko
organoleptic characteristic/trait	organoleptičko svojstvo, senzorno svojstvo
ornamental plants	ukrasno bilje
ounce	unca, mjera za težinu (28,35 g)

outbreak	početak, izbijanje, epidemija
output	proizvodnja
outstretch	rastegnuti, raširiti
ovary	plodnica
over-cropping	preopterećenost trsa (rodnim pupovima)
overdue	zakasnio
overflow	poplava, plaviti
overhead irrigation	navodnjavanje iznad krošnje
overhead sprinkler irrigation	navodnjavanje (natapanje) kišenjem
overripe	prezreo
over-supply	prevelika zaliha, prevelika ponuda
ovule	sjemeni zametak, jaje
ownership	vlasništvo
oxidation	oksidacija
<i>barrel oxidation</i>	oksidacija u bačvi
oxygen	kisik
P	
pack	omot, svežanj, bala
package	ambalaža, svežanj
packaging	pakiranje
pack equipment	oprema za tovarni transport
packer	radnik na konzerviranju, stroj za pakiranje robe
pair	spariti, sjediniti
palatable	ukusan
palate	nepce
paramount	najveće važnosti
parcel	komad, dio, čestica
pare	obrezivati, ljuštiti
pare off	ljuštiti, oljuštiti
parental	roditeljski
parsley	peršin
particle	čestica
parthenogenesis	partenogeneza
passion fruit	marakuja, pasionsko voće
pasteurization	pasterizacija
pasteurize	pasterizirati
pasteurizer	aparatus za pasterizaciju, pasterizator
pasture land	pašnjak
paternal	očev, očinski
path	put, staza
pathologic	patološki, bolestan
pay	plaća, nadnica
pay away	isplatiti
pay back	otplatiti

paying by instalments	isplata u obrocima
paying out	isplata u obrocima
pay off	isplatiti, amortizirati
pay over	preplatiti
pay up	isplatiti, namiriti zaostatak duga
peach	breskva
vineyard peach	vinogradska breskva
peanut	kikiriki
pear	kruška
pectin	pektin
ped	čestica tla
pedestrian orchard	niski voćnjak
pedicel	peteljčica (bobice)
pedological	pedološki
pedologist	pedolog
pedology	znanost o tlu, pedologija
peduncle	cvjetna peteljka
peel (n)	ljuska, kora, koža (voća)
peel (v)	oguliti, oljuštiti
peeler	stroj za ljuštenje
pepper	papar
pepper corn	plod papra (zrnce)
peptic	koji ubrzava probavu, peptičan
percentage	postotak, dio, količina
percolate	cijediti se, filtrirati
perennial	trajnica
perennial plant	višegodišnja biljka
pericarp	usplođe, perikarp
perilous	opasan, pogibeljan
perishable	pokvarljiv
pesticide	sredstvo za uništavanje biljnih bolesti i štetnika, pesticid
pestle	batić
petal	latica
petrolatum	vazelin, lab. mast
pH (potential of hydrogen) value	pH vrijednost, pH (mjera za stupanj kiselosti/lužnatosti)
pH adjustment	podešavanje pH vrijednosti
phenol	fenol
phenologic stage	fenološka faza, fenofaza
phosphorus	fosfor
phylloxera	trsov ušenac, filoksera
pick	kopati, bosti, kupiti
picker	berač, sakupljač
picking	branje, sakupljanje
pickle	slana voda, povrće spremljeno u octu
pickled	ukiseljen

pick off	skinuti, otrgnuti
pick out	izvaditi, iskopati
pick up	pokupiti, raskopati
pile	hrpa, gomila
pineapple	ananas
pip	koštica, sjeme (u voću)
pipe	cijev za dovod vode ili plina, velika bačva (477 L)
pipette	pipeta, laboratorijska cjevčica
pippy	pun koštica
pisciculture	ribogojstvo
pit	voćna koštica
pitcher	vrč za vodu
pith	srž, jezgra
plant (n)	biljka, postrojenje
plant disease	biljna bolest
plant food	biljna hranjiva
plant protecting agent	sredstvo za zaštitu bilja
plant (v, n)	saditi; sadilica
planter	sijačica, stroj za sađenje
plough (n)	plug, oranica
plough (v)	orati, preorati
ploughable	obrađiv, koji se lako ore
plum	šljiva
plum curculio	šljivin svrdlaš
pneumatic	pneumatski
pneumatic hammer	pneumatski čekić
pneumatic spraying machine	pneumatska prskalica
pod	mahuna, čahura
poisonous	otrovan
poisonous rubbish	otrovni otpad
pollen	pelud, cvjetni prah
pollinate	oprašivati, oploditi
pollination	oprašivanje
pomace	komina, pulpa
pome	koštunica
pome fruits	jezgričavo voće, jabučasto voće
pomegranate	šipak, nar
pomelo	pomelo
pomiculture	voćarstvo, uzgajanje voća s mesnatim plodom
pomiferous plants	jezgričavo voće
pomology	nauka o uzgoju jabučastog voća, pomologija
poplar	jablan
Port	porto (vino)
portable irrigation system	prenosni uređaj za navodnjavanje
portable sprayer	leđna prskalica

potassium	kalij
potassium carbonate	kalijev karbonat
potassium chloride	kalijev klorid
potassium sulphate	kalijev sulfat
poultry	živad, perad
pound	engleska mjera za težinu (453,59 g)
pour	lijevati, natakati
powdered	u prahu
powdery mildew	pepelnica
precipitate (n)	talog, ostatak
precipitation	količina padalina, taloženje
precocious (adj)	prerano sazreo
precocity (n)	prerana zrelost
predation	grabežljivost
predator	grabežljivac
premature	dozreo prije vremena
premium wine	vrhunsko vino
prerequisite	preduvjet
preservation	konzerviranje, ukuhavanje
preserve	očuvati
pressure	tlak
pressure cylinder	tlačni cilindar
pressure gauge	manometar
pressure regulator	redukcijski ventil
preventitious bud	spavajući pup
prey	plijen, žrtva
prior	prijašnji, raniji
produce	proizvod, prinos
produce broker	posrednik kod kupoprodaje proizvoda
productive	proizvodan
productive capacity	proizvodna sposobnost
profitable	rentabilan
profitable crop production	rentabilan uzgoj
propagate	rasplođivati (se), množiti (se)
propagation	razmnožavanje
proportion	omjer
protection	zaštita
provenance	podrijetlo, izvor, provenijencija
provide	pribaviti, priskrbiti
prune	podrezati, rezati lozu
pruning	obrezivanje voćne sadnice
pulp	voćno meso, pulpa
pulverization	mrvljenje, drobljenje
pulverize	drobiti, pretvoriti u prah
pure	čist

pure-bred	čistokrvan
pure culture	čista kultura, čisti uzgoj
putrid	truo, pokvaren
pyriform	kruškolik
Q	
quality label	oznaka kvalitete
quality wines with controlled origin label	kvalitetna vina s oznakom kontroliranog podrijetla
quality wine prs (produced in specified region)	kvalitetno vino proizvedeno na određenom području, kvalitetno vino s oznakom zemljopisnog podrijetla
quarter bottle/ piccolo	piccolo boca zapremnine 0,1875 L
query	pitanje, upitnik
quince	dunja
quintal	kvintal (50,8 kg UK, 45,36kg US)
quiescence	mir, mirovanje, zimski san
R	
radical (bot)	ukorijenjen
rain	kiša
rain gauge	kišomjer
torrential rain	prolom oblaka
raise	uzgajati, saditi
raisin	grožđica
ranch	stočarsko gospodarstvo, stočarska farma
rapid	brz
raspberry	malina
rate	mjera, odnos, cijena
rate of planting	norma sjemena za sjetvu
ratio	omjer
raw material	sirovina
ream	razrezati
reap	žeti, požnjati
reaper	stroj za žetvu, žetelac
rear	uzgajati, podići
recombination	rekombinacija
recombinant DNA	"prekrojena" DNA
recovery	oporavak
red wine	crno vino
refine	čistiti, pročistiti, bistriti
refined	rafiniran
refinery	rafinerija
regulation	propis, pravilo
reinforcement	pojačanje
release	ispuštati, osloboditi
remedy	lijek, pomoć
remuneration	nagrada, plaća, honorar

rent	zakup, najam
repair	popraviti
reparation	popravak, popravljanje
repayment	otplata, naplata
replant	presaditi, nanovo posaditi
reproductive	reproduktivan
requirement	potreba, uvjet
residuary	preostao
residue	ostatak, talog
resilient	otporan
resistance	odupiranje, odolijevanje
resistant	otporan
resource	sredstvo, izvor
respiration	disanje, respiracija
respiration rate	intenzitet disanja
restore	obnavljati
restrict	ograničiti, stegnuti
retailer	trgovac na malo
retard	usporiti
retrogression	retrogresija, degradacija
revenue	prihod, dohodak
revert	vratiti se
riboflavine	vitamin B2, riboflavin
rigorous	oštar, strog
rind	kora
rinse	isplahnuti
ripe	zreo, dozreo
ripeness	zrelost
roast	pržiti
rod (n)	štapić
rodent	glodavac
root	korijen, žila
rooted	ukorijenjen
root cap	korjenova kapa
root hair	korjenova dlačica
<i>principal roots</i>	glavno podnožno korijenje
<i>shallow roots</i>	površinsko korijenje
rootstock	podloga
rosé (pink) wine	ružičasto vino, rosé
rot (n, v)	trulež; trunuti
rotting	truljenje
<i>noble rot</i>	plemenita plijesan
rub away/off	izbrisati, skidati
rubber bung	gumeni čep
rule of thumb	u praksi, praksa je pokazala

runoff	otjecanje (vode, oborina)
rural	poljoprivredni, poljodjelski
russeting/russet	crveno-smeđa (boja, obojenje)
S	
saccharin	saharin
saccharine	šećerni, sladorni
saccharose	saharoza
sack	vreća
saliva	slina
Salmanazar	Salmanazar, boca zapremnine 9 L
saltiness	slanost
sample	pokusni uzorak, primjerak
sampling	vađenje uzoraka
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sap flow	kolanje sokova
sapful	sočan
sapota	sapota
saturate	zasititi
saturated compounds	zasićeni spojevi
saturation	zasićenost
saw (n)	pila
saw (v)	piliti, strugati
scab	krastavost voća
scale	ljestvica, tablica
<i>on a small scale</i>	u malom omjeru
scion	plemka, cijep
screw-capped bottles	boce s navojem
scrub	šikara, guštara
seal (n, v)	pečat, brtvilo; zapečatiti
seasonal water course	sezonski vodeni tok
seasoned/flavoured	začinjen
sediment	talog, sediment, nanos
sedimentation	taloženje, naslaga
seed	sjeme, sjemenka
seed bud	sjemeni pup
seed calibrating	kalibracija sjemena
seed capsule	sjemeni tobolac
seed coat	sjemena ljuska
seed control	kontrola sjemena
seed density	gustoća sjetve
seed development	formiranje sjemena
seed fund	sjemenski fond
seed germination	klijavost sjemena

seed preparation	priprema tla za sjetvu
seed preparation machines	strojevi za pripremu sjetvenih površina
seeding	sijanje, sjetva
seedless	besjemen
seedling	presadnica
seedy	pun sjemena
selected seed	selektirano sjeme
self-pollination	samooprašivanje
semi-annual	polugodišnji
semi-dry wine	polusuho vino
semination	sijanje
semi-sweet wine	poluslatko vino
senescence	starenje
sense (n)	osjetilo, čulo
separate	odijeliti, rastaviti
separated fraction	separirana frakcija
separator	razdjeljivač, separator, centrifuga
sequestration	zapljena, odvajanje
settling	taloženje
settle out	taložiti
shard	krhotina (fragment) lončarije
sheathe	obložiti
shelf-life	trajnost
shelter	zaklon, sklonište
shift	prijelaz
shoot (n)	izboj, izdanak
shovel	lopata, motika
shrub	gram, žbun
side effect	popratno (štetno) djelovanje
sight	vid, pogled
silk	svila
silt	mulj
silver leaf disease	olovna bolest
sip	gutljaj
skin	kožica
slant	biti nagnut (kos)
sleet	solika, susnježica
slush	bljuzgavica
smear (n, v)	razmaz, premaz; razmazati, premazati
smell (n)	miris
smooth (adj, v)	gladak; zagladiti
sniff (n)	mirisanje
soar	osjetno porasti
soil	tlo, zemlja
soil auger	svrdlo, bušilica za uzimanje uzoraka tla

solid	kruto tijelo, krutina
solubility	topljivost
solution	otopina, otapanje
solvent	otapalo
sommelier/wine waiter	stručni poslužitelj vina, vinoslužitelj, sommelier
sour	kiseo
sow (v, n)	sijati, zasijati; krmača
sower	sijač, sijačica (stroj)
sowing	sjetva
sown area	sjetvena površina
sparkling wine	pjenušavo vino, pjenušac
spatial	prostorni
spatial diversity	prostorna raznolikost
special wine	specijalno vino
species	vrsta, rod
spherical	okrugao, ovalan
spicy	začinjen
spill	proliti
splice	splesti, krpati, dijeliti
split	raskoliti, raspući
spoilage	kvarenje
spread	širiti, rasprostirati se
sprinkler	prskalica
sprout (v, n)	tjerati izdanke; izbojak, izdanak
spur	reznik
squash	kaša, koncentrat prirodnog soka
squeaky clean	čist kao sunce
stake	kolac, štap
starch	škrob
steep slope	strma padina
steam bath	parna kupelj
stem	stapka, stalak
stem of the wine glass	stalak vinske čaše
still wine	mirno vino
stir	miješati
stock	stabljika, cjepika, podloga kod okuliranja
stone fruits	koštuničavo voće, koštičavo voće
stopper	čep, zapor
glass stopper	stakleni čep
strain	cijediti, kapati
strainer	cjedilo
strawberry	jagoda
straw-coloured	slamnatožuta boja
strive	nastojati
stub	panj, štrljak, klada

substance	tvar
subtle	fin, spretan
succulent	sočan, sukulentan
sufficient	dovoljan
surfactant	surfakant
surplus	ostatak, višak
susceptible	osjetljiv
sustain	(p)održavati, ustrajati
sustainable agriculture	održiva poljoprivreda
swallow (v)	gutati
swell	nabubriti, narasti, povećati se
swirl (v, n)	uzgibati (kruženjem), zavrtložiti; vrtlog
synergy	sinergija
T	
table wine	stolno vino
table wine with controlled origin label	stolno vino s oznakom kontroliranog podrijetla
tamarind	tamarind
tangelo	tangelo (križanac mandarine i pomela/greipfruta)
tank	cisterna, bazen
tankage	spremanje tekućine u cisterne
tannic acid	taninska kiselina
tannin	tanin
tariff	tarifa, cjenik, pristojba
tart	kiseo, oštar
taste (v, n)	kušati; kušanje
taste bud	okusni pupoljak
taxonomy	znanost o sustavu, znanost o klasifikaciji
teetotaler	trezvenjak
tempering	temperiranje
tenant	zakupac, zakupnik
tendril	izdanak loze, vriježa, vitica
terra rossa (red soil)	crvenica
terrestrial	zemaljski, kopneni
test-tube	epruveta, kušalica
test-tube rack	stalak za epruvete
texture	tkivo, struktura, sastav
thaw	kopniti, topiti se, bojan
thick	gust, mutan
thickness	gustoća
thin (v)	prorijediti
thin film	tanki sloj
thinning window	razdoblje za prorjeđivanje plodova
threaded tube	cijev s navojima
threat	prijetnja, opasnost

throat	grlo, grkljan
timber	drvo, drvena građa
tinge (n, v)	nijansa, primjesa; obojiti nijansom boje
tinning	konzerviranje
tongs	kliješta, mašice
tongue	jezik
tool	alat, oruđe
toxin	toksin
tractor attachment	traktorski priključak
training system	uzgojni oblik
trait	značajka, osobina, crta
transparent	proziran
transplant	presaditi
trap	klopka
trellis	sjenica, rešetka
trellis armature	naslon, potporanj
trencher	rovokopač
triangle	trokut
tripod	tronožac
trunk	deblo, stablo
tub	bačva, kaca
tube	cijev
turbid	mutan, muljevit, gust
U	
ullage	kalo, manjak tekućine u bačvi
unadorned	jednostavan
unblooded	koji nije čiste pasmine
unclassified	neklasificiran
uncontaminated	nezaražen
uncultivated	neiskrčen, neobrađen
undemanding	jednostavan, skroman
undernutrition	pothranjenost
underpinning	potporanj, podloga
uneven	neujednačen
unite	sjedinit, spojiti
unload	isprazniti, istovariti
unproductive	neplodan, neunosan
urea	urea, mokraćevina
ureaform	mokraćno gnojivo
unscathed	neozlijeđen, čitav
utilization	korištenje, upotreba
utilize	iskoristiti, upotrijebiti
V	
vacuole	stanična šupljina, vakuola
valve	ventil, odušak

vascular bundle	provodni snop
vat	bačva, badanj
venison	meso divljači
veraison	fenofaza promjene boje, šara, vrijeme šare
very late seeding	kasna sjetva
vessels (n)	laboratorijsko posuđe
viability	održivost, vitalnost
viable	održiv
vigorously	snažno, jako
vigour	jakost, snaga, vitalnost
vine	čokot (vineve loze)
vine/grape stock	trs, panj vineve loze
age of vines	starost trsova (vineve loze)
vinegar	ocat
vinegary smell	octeni tik, octikavost
vine grower	vinogradar
vinegrowing area	vinogradarsko područje
vinegrowing district	vinogorje
vineyard	vinograd, trsje
vinification	prerada grožđa
vintage wine	arhivsko vino
vintner/winemaker	vinar
viticulture	vinogradarstvo
volatile	hlapljiv, nepostojan
volatility	nestalnost, promjenjivost
vulnerable	ranjiv, izložen
W	
wad	čep, zatvarač, gruda
wage	nadnica, zarada
walnut	orah
waste	otpad
toxic waste	otrovni otpad
waterlogging	natopljenost vodom
water melon	lubenica
wave	val
tidal wave	plimni val
wax	vosak
waxy	poput voska, voštan
wedge	klin, kriška, raskoliti klinom
weigh (v)	vagati
welfare	blagostanje, dobrobit
wheat	pšenica
whip grafting	cijepljenje na jezičac, cijepljenje na engleski spoj
white wine	bijelo vino
wholesale	prodaja na veliko

wholesaler	trgovac na veliko
wine	vino
wine cellar	vinski podrum
wine list	vinska karta
wine press	tijesak, preša za vino
wine tasting	kušanje vina
wine vat	vinski betonski spremnik
winery	vinarija, vinarstvo
winged cluster	krilce grozda
wire-gauze	žičana mreža
wither	uvenuti, osušiti se
withstand	oduprijeti se, podnijeti
wool	vuna
wrap	umotati, oviti
xanthene	žuta boja bilja, ksantein
xeransis	sušenje, isušenje
xeric	suh, isušen
Y	
yeast	kvasac, pjenica
yeast culture	kultura kvasca
yield (n)	plod, proizvod, prinos
yield (v)	donijeti plod (prihod)
yolk	žumanjak
young soil	još neobrađeno tlo
Y-trellis	Y uzgojni oblik
Z	
zinc	cink
zoidiphilous	oprašen životinjama
zoology	zoologija
zymosis	vrenje, fermentacija

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