

Карагандинский университет имени академика Е.А. Букетова

**СБОРНИК ЗАДАНИЙ  
ПО БИОЛОГИИ ДЛЯ УЧАЩИХСЯ СТАРШИХ КЛАССОВ  
(на английском языке)**

Караганды 2021



## Contents

<b>Introduction.....</b>	<b>5</b>
<b>Unit 1. Cell biology.....</b>	<b>7</b>
1.1 Cell structure of prokaryotes and eukaryotes: presence and location of the nucleus, cell wall, cell membrane, plastids, mitochondria, ribosomes, Golgi apparatus, endoplasmic reticulum, lysosomes, vacuole.....	7
1.2 A variety of plant tissues: dermal tissue, vascular tissue, and ground tissue systems. A variety of animal tissues: epithelial, connective, muscular, nervous.....	10
<b>Unit 2. Molecular biology.....</b>	<b>13</b>
2.1 Carbohydrates - energy sources. The value and function of glucose, sucrose, glycogen, starch, cellulose, chitin. Properties of lipids and their function. Variety of lipids: fats, oils, phospholipids, wax.....	13
2.2 Proteins, properties and functions.....	17
<b>Unit 3. Variety of living organisms.....</b>	<b>19</b>
3.1 Plants distinctive features: algae, moss-like, fern, gymnosperms and angiosperms.....	19
3.2 Distinctive features of gymnosperms and angiosperms plants.....	21
3.3 Distinctive features of monocotyledonous and dicotyledonous plants.....	23
3.4 Kingdom Fungi. Mold Fungi: mucor, penicillus. Unicellular fungi – yeast. Multicellular Fungi. Hat Mushrooms. Edible and poisonous mushrooms.....	26
<b>Unit 4. Biodiversity of living organisms.....</b>	<b>28</b>
4.1 Type of arthropods. Type chord. Comparative characteristics, according to the external signs.....	28
<b>Unit 5. Nutrition.....</b>	<b>31</b>
5.1 The structure of the human digestive tract. Digestive glands. Functions of the digestive system.....	31
5.2 The structure of the human digestive tract. Digestive glands. Functions of the digestive system (continuation).....	33
5.3 Food Hygiene. Digestive system infectious diseases and their prevention.....	35
5.4 Vitamins and their importance. Water-soluble and fat-soluble vitamins. Daily intake of vitamins.....	37
5.5 Vitamins and their importance. Water-soluble and fat-soluble vitamins. Daily intake of vitamins (continuation).....	39
<b>Unit 6. Transport of substances.....</b>	<b>43</b>
6.1 The internal environment of the body and its importance . Lymph. Lymph circulation and its meaning. Homeostasis. The internal environment of the body: blood, lymph, tissue fluid.....	43
6.2 The composition and function of blood. Blood cells: red blood cells, white blood cells, platelets. Plasma. Blood functions: transport, homeostasis, protective.....	45
6.3 The study of various organisms blood corpuscles. Blood cells comparison by: shape, size, number of cells and the presence of the nucleus.....	48
6.4 Leukocytes types and their functions.....	51
6.5 Types of vaccines and their role in the formation of acquired immunity.....	55
<b>Unit 7. Respiration.....</b>	<b>58</b>
7.1 Types of metabolism. Stages of energy exchange.....	58
<b>Unit 8. Excretion.....</b>	<b>60</b>
8.1 Absorption and reabsorption. Urine formation.....	60
<b>Unit 9. Molecular biochemistry.....</b>	<b>62</b>
9.1 Characteristics of the genetic code: triplet nature, degeneracy, non-overlapping,	62

	universality.....	
	<b>Unit 10. Chemosynthesis.....</b>	<b>65</b>
10.1	Chemosynthesis. The comparison of photosynthesis and chemosynthesis processes.....	<b>65</b>
	<b>References.....</b>	<b>67</b>
	<b>Appendix.....</b>	<b>68</b>

## Введение

Данный сборник заданий предназначен учителям биологии, преподающим предмет на английском языке, для планирования, организации и проведения формативного оценивания учебных достижений учащихся старших классов по предмету «Биология» и речевых навыков на английском языке.

Задания составлены в соответствии с обновленной учебной программой по биологии. Материалы сборника охватывают 23 учебные темы, для каждой из которых определены предметные цели по биологии (Learning objectives), языковые цели (Language objectives), критерии оценивания (Assessment criteria), уровень мыслительных навыков (Level of thinking) и дескрипторы к заданиям (Descriptor).

Отличительной особенностью данного сборника является наличие языковых целей как ожидаемых результатов развития языковых навыков на уроках предметно-языкового обучения. В разработанной системе цели обучения не привязаны к определенному предмету – физике, химии, биологии или информатике – и могут быть использованы для составления критериев оценивания учебных достижений по английскому языку при интегрированном обучении английскому языку и любому из указанных предметов.

Определение языковых целей при обучении биологии на английском языке дает учителю возможность организовать учебную деятельность учащихся на уроке, способствующую развитию речевых навыков, – слушания, говорения, чтения и письма. Кроме того, наличие языковой цели создает условия для оказания учителем языковой поддержки ученикам, а дескрипторы дают возможность организовать само- и взаимооценивание учащимися овладения той или иной речевой конструкцией на уроке биологии. Таким образом, осуществляется развитие академического языка предмета, что, в конечном счете, будет способствовать лучшему усвоению предмета на английском языке.

Предлагаемые языковые цели разработаны в соответствии с международными стандартами – общеевропейской шкалой языковой компетенции (CEFR) и в соответствии с языковой подготовленностью учащихся уровня B1 и B2.

Языковые цели, критерии оценивания и дескрипторы являются основой для предоставления педагогом конструктивной обратной связи по достижению целей урока по биологии и английскому языку.

Использование заданий данного сборника поможет учителю отслеживать процесс продвижения учащихся к целям их учения и корректировать учебный процесс, как для достижения целей урока по биологии, так и для развития навыков речевой деятельности на английском языке.

Выполнение предлагаемых заданий предполагает активное обучение, работу с текстами, таблицами, рисунками, направленную на развитие критического мышления.

В сборнике представлен словарь основных биологических терминов на трех языках (казахский, английский и русский языки), а также образец краткосрочного плана урока по биологии на английском языке. Используемые при подготовке сборника ресурсы (рисунки, тексты, видео- и аудиоматериалы) содержат ссылки на источники.

Для стимулирования ответственности учащихся за свои результаты, создания условий для исправления ими своих ошибок в речевой деятельности, понимания степени затруднений предлагаются листы оценивания.

Сборник заданий разработан на основе оригинальных современных текстов на английском языке, отобранных из научных журналов (Cell, Nature, Science, Scientific American, New Scientist и др.). Тексты и задания рассчитаны на обучающихся среднего и продвинутого уровня (B1) по Общеевропейской классификации степени владения иностранным.

Рекомендательный характер сборника позволит адаптировать, дополнять и вносить изменения в задания с учетом возможностей и потребностей обучающихся.

Данное пособие подготовлено в рамках обновленного содержания среднего образования в Казахстане и предназначено для учителей школ, методистов, школьных координаторов, преподавателей вузов и студентов педагогической специальности по методике преподавания биологии.

## UNIT 1. CELL BIOLOGY

**Theme 1.1:** Cell structure of prokaryotes and eukaryotes: presence and location of the nucleus, cell wall, cell membrane, plastids, mitochondria, ribosomes, Golgi apparatus, endoplasmic reticulum, lysosomes, vacuole.

**Learning objectives:** 8.4.2.2 Compare the structure of prokaryotic and eukaryotic cells

**Language objectives:**

**10. L2** Understand the main and detailed information of the text, differentiating the facts;

**10. S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects

**Lesson language objectives:**

*Students will be able to:*

- identify the difference between prokaryotic and eukaryotic cells after listening to the tape;
- describe the structure of the cell to a partner using comparative form:
  - Both prokaryotic and eukaryotic cells contain.....
  - Eukaryotes has membrane-bound nucleus while Prokaryotes has no membrane-bound nucleus.
- use appropriate scientific terms for prokaryotic and eukaryotic cells;
- use structure **have/has and there is/are** to compare prokaryotic and eukaryotic cells.

**Assessment criteria:**

- compare eukaryotes and prokaryotes cells after listening to the tape;
- identify eukaryotes and prokaryotes structural parts;
- use structures correctly have/has and there is/are to compare prokaryotic and eukaryotic cells.

**Level of thinking:** Knowledge, Application, Analyses.

**Task 1.**

**a) Listen to the tape and recognize the difference between prokaryotic and eukaryotic cells (tapescript for a teacher).**

Prokaryotes are single-celled organisms of the domains Bacteria and Archaea. All prokaryotes have plasma membranes, cytoplasm, ribosomes, a cell wall, DNA which is circular. Prokaryotes lack membrane-bound organelles. Many also have polysaccharide capsules. Prokaryotic cells range in diameter from 0.1–5.0  $\mu\text{m}$ .

Like a prokaryotic cell, a eukaryotic cell has a plasma membrane, cytoplasm, and ribosomes, but a eukaryotic cell is typically larger than a prokaryotic cell, has a true nucleus (meaning its DNA is surrounded by a membrane), and has other membrane-bound organelles that allow for compartmentalization of functions. Eukaryotic cells tend to be 10 to 100 times the size of prokaryotic cells [2].

**Task 1.**

**b) Find if the statements are TRUE or FALSE**

1. Prokaryotes are multi-celled organisms.
2. Eukaryotic cell are typically larger than prokaryotic cells.
3. Eukaryotic cells have a true nucleus bound by a double membrane.
4. Prokaryotic DNA is linear.

**Task 2. Write the function of eukaryotes and prokaryotes structural parts**













<b>№</b>	<b>Organoids</b>	<b>Function</b>
1	Nucleus and nucleolis	
2	Chromosomes	
3	Ribosomes	
4	Mitochondria	
5	Golgi apparatus	
6	Lysosomes	

**Descriptor:**

- listens to the tape attentively;
- recognizes the difference between eukaryotes and prokaryotes cells;
- identifies eukaryotes and prokaryotes structural parts;
- writes the function of eukaryotes and prokaryotes structural parts;
- uses language structures correctly.



**A sheet for self-evaluation [3]**

<b>COMPARATIVE SELF-ASSESSMENT</b>									
<b>Criteria</b>	<b>Self-assessment</b>			<b>Peer-assessment</b>			<b>Teacher assessment</b>		
									
<b>Content+Language</b>									
<b>I can explain the terminology of the subject area</b>									
<b>I can communicate the content clearly in the foreign language</b>									
<b>I can use examples to support my understanding</b>									
<b>Notes</b>									

## UNIT 1. CELL BIOLOGY

**Theme 1.2:** A variety of plant tissues: dermal tissue, vascular tissue, and ground tissue systems. A variety of animal tissues: epithelial, connective, muscular, nervous.

**Learning objectives:** 8.4.2.1 – classify animal and plant cells.

**Language objectives:**

**10. S3** Connect phrases in a simple way in order to describe experiences and events; give reasons and explanations for opinions, paying attention to grammar structures.

**10. W2** Write connected text on topics which are familiar; write topic letters using grammar structures.

**Lesson language objectives:**

*Students will be able to:*

- describe the structure of plant and animal cells to a partner using comparative form
- Both plant cells and animal cells contain.....
- A plant cell contains nucleus and animal cell contains nucleus too.
- Plant cells contain vacuoles while animal cells don't contain any vacuoles.
  
- use present simple tense describing animal and plant cells.

**Assessment criteria:**

- recognize tissue definition and its specific feature;
- identify plant and animal tissues structure, their location and functions;
- talk to a partner about the structure of plant and animal cells in a grammatically correct English;
- use comparative form talking about animal and plant cells;
- use present simple describing animal and plant tissues.

**Level of thinking:** Application, Analyses, Evaluation.

**Task 1. Write the definition of tissue:**

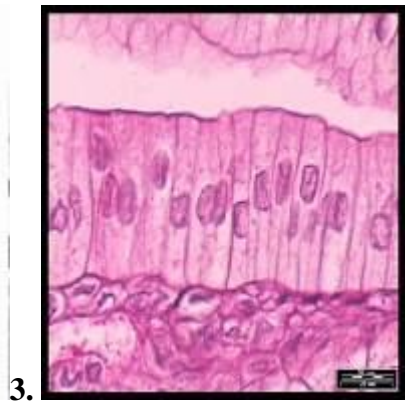
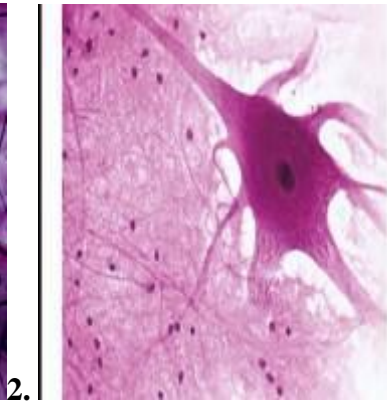
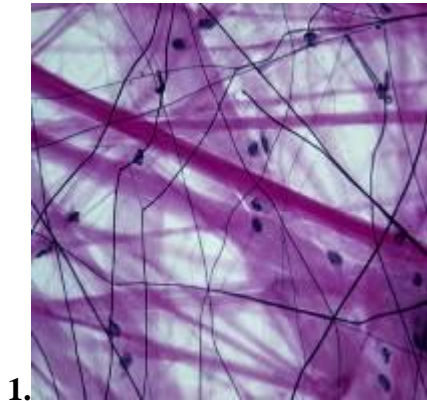
---

---

**Task 2. Match the type of tissues with their functions:**

Tissue type	Tissue function
epithelial	a)protects other tissues from damage
connective	b) perceives irritation
nervous	c)protects body organs
	d)regulates body functions
	e)transports nutrients
	f) synthesizes hormones

**Task 3. Find in the pictures which tissue is connective one:**



**Justify your answer:**

---



---

**Task4. Fill in the table:**

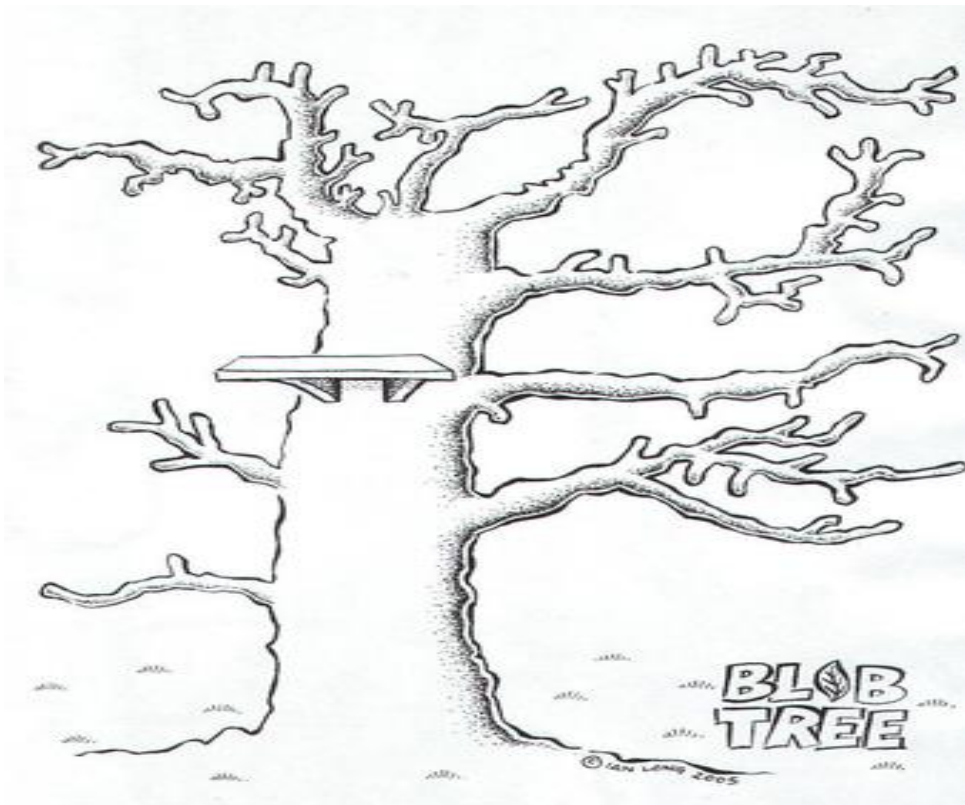
Tissue	Function	Location

**Descriptor:**

- recognizes and writes the definition of tissue;
- classifies animal and plant cells;
- talks to partner about animal and plant tissues comparing their structures;
- uses present simple tense describing animal and plant tissues.

Self-evaluation of emotions and awareness

Blob's tree



## UNIT 2. MOLECULAR BIOLOGY

**Theme 2.1:** Carbohydrates – energy sources. The value and function of glucose, sucrose, glycogen, starch, cellulose, chitin. Properties of lipids and their function. Variety of lipids: fats, oils, phospholipids, wax.

**Learning objectives:** 8.4.1.2 – describe carbohydrates and lipids properties and biological functions

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest.

**10. W4.** Write an essay on the given topic, supporting of or against a particular point of view.

**Lesson language objectives:**

*Students will be able to:*

- describe orally carbohydrates and lipids properties and biological functions using verbs in the Active and Passive Voice;
- describe in writing functions of polysaccharides and lipids;
- use appropriate scientific terms for carbohydrates, lipids, polysaccharides.

**Assessment criteria:**

- identify carbohydrates and lipids properties and biological functions;
- describe carbohydrates and lipids properties and biological functions;
- talk about carbohydrates and lipids properties and functions;
- write without difficulties functions of polysaccharides and lipids.

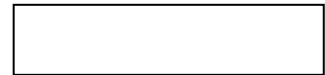
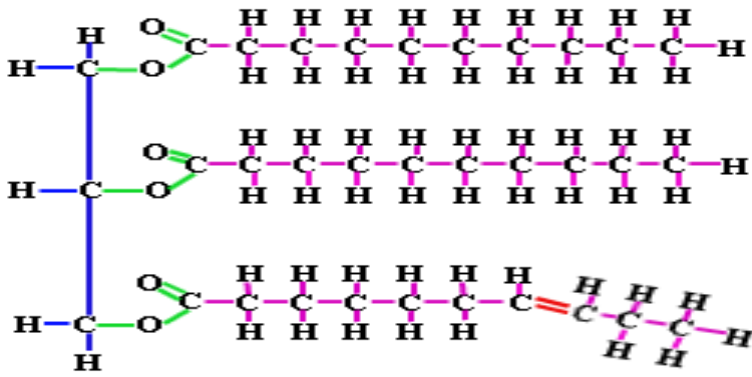
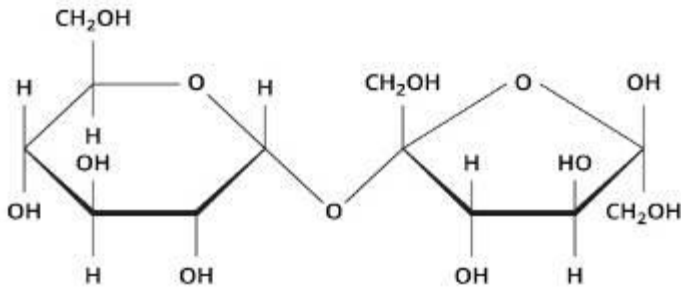
**Level of thinking:** Knowledge, Application, Analysis.

**Task 1.**

a) Look at the picture. Find out what structure they refer to and label them.

**Lipids**

**Carbohydrates**



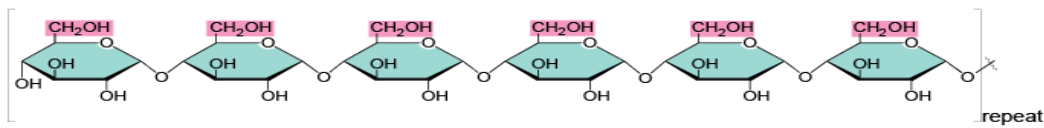
**Task 1.**

b) Discuss lipids and carbohydrates properties and functions

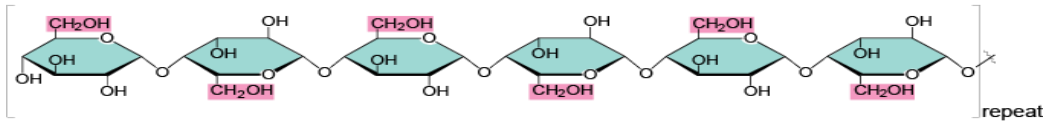
**Task 2.**

a) Look at the picture and discuss the functions of polysaccharides

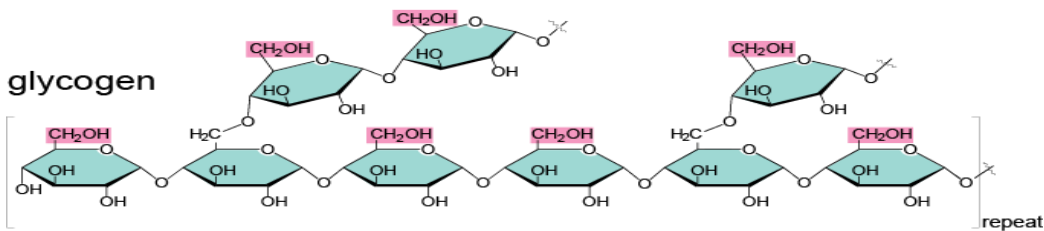
**starch**



**cellulose**



**glycogen**



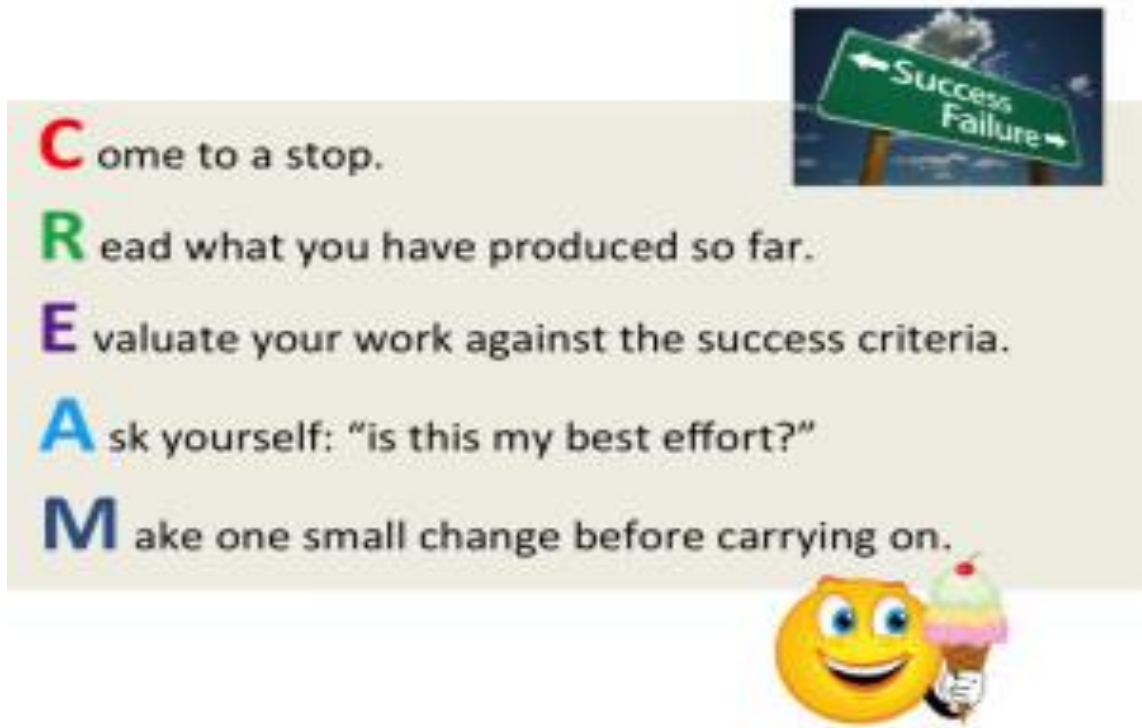
**Task 2.**

**b) Write the functions of polysaccharides.**

---

---

---



**C**ome to a stop.

**R**ead what you have produced so far.

**E**valuate your work against the success criteria.

**A**sk yourself: "is this my best effort?"

**M**ake one small change before carrying on.

**Task 3. Look at the pictures and discuss the functions of lipids in the following plants.**



A.















B.

**Descriptor:**

- identifies and explains lipids and carbohydrates properties and functions;
- talks in small groups describing carbohydrates and lipids properties and biological functions;
- writes about the functions of polysaccharides and lipids.

### A sheet for self-evaluation

<b>COMPARATIVE SELF-ASSESSMENT</b>									
<b>Criteria</b>	<b>Self-assessment</b>			<b>Peer-assessment</b>			<b>Teacher assessment</b>		
<b>Content+Language</b>									
<b>I can explain the terminology of the subject area</b>									
<b>I can communicate the content clearly in the foreign language</b>									
<b>I can use examples to support my understanding</b>									
<b>Notes</b>									



## UNIT 2. MOLECULAR BIOLOGY

**Theme 2.2:** Proteins, properties and functions

**Learning objectives:** 8.4.1.3 – describe protein properties and biological its functions

**Language objectives:**

**10. R5** Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.

**10. S2** Understand the main points of the text on familiar matters regularly encountered in work, school, leisure, etc.

**Lesson language objectives:**

*Students will be able to:*

- read a passage and discuss the history protein discovery;
- define the terms related to protein discovery;
- use the past tense to discuss the origin of protein.

**Assessment criteria:**

- identify and describe protein properties and biological functions;
- read the passage and recognize the main idea of the text;
- use past simple tense when discussing the history of protein discovery.

**Level of thinking:** Knowledge, Analysis, Evaluation

**Task 1.**

**a) Read the text and find out if the statements are True or False.**

In 1728, the Italian scholar Jacopo Beccari announced that he had discovered the presence of the material with all characteristics of “animal substance” in white wheat flour. Proteins were recognized as a distinct class of biological molecules by Antoine Fourcroy in 1789. Members of this class were called albuminoids. Well-known examples at the start of the nineteenth century included albumen from egg whites, blood serum albumen from egg whites, blood serum albumin, fibrin and white gluten.

Dutch chemist Gerhardus Johannes Mulder carried out elemental analyses of common animal and plant proteins in 1837. To everyone’s surprise, all proteins had the same empirical formula with individual sulfur formula.

Berzelius supported the theory of Mudler. He proposed the name “protein” for this substance in a letter dated 10 July 1838 [4].

**Task 1.**

**b) Find out if the statement are True or False. Justify your answer**

1. The Italian scholar Jacopo Beccari discovered protein in animal cells.
2. Albuminoids refer to a distinct class of biological molecules.
3. Egg whites, blood serum albumen from egg whites, blood serum albumin, fibrin and white gluten contain albumen.
4. Dutch chemist Gerhardus Johannes Mulder found out that all proteins had individual formula.
5. It was Berzelius who suggested the name «protein».

**Task 2.**

a) Complete the table writing the functions of proteins

Protein types	Function
Actin	
Myosin	
Hemoglobin	
Insulin	

**Task 2.**

b) Discuss with your partner protein properties and functions

**Task 3. Rank the food, according to the number of protein from the largest number to the smallest one**

1. Tea
2. Water-melon
3. Meat eggs
4. Dairy products
5. Beans
6. Fizzy drinks
7. Coffee
8. Apples
9. Bread
10. Berries

**Descriptor:**

- identifies and describes protein properties and biological functions;
- recognizes the main idea of the text having read it;
- uses past simple tense when discussing the history of protein discovery;
- knows which food contains the largest and smallest number of proteins.

**Self-evaluation journal [3]**

My Learning Journal Content/ Biology	My Learning Journal Language
Lesson nr.:            Topic:	Lesson nr.:            Topic:
What I understand well is: .....	What I understand well is: .....
What still confuses me .....	What still confuses me .....
What I want to know(what interests me) is: .....	What I want to know (what interests me) is: .....

### UNIT 3. VARIETY OF LIVING ORGANISMS

**Theme 3.1:** Plants distinctive features: algae, moss-like, fern, gymnosperms and angiosperms

**Learning objectives:** 8.1.1.1 Describe plants distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**10. S4.** Compare the information from different sources to make it more clear and understandable.

**Lesson language objectives:**

*Students will be able to:*

- explain to a partner plants distinctive features in grammatically correct English using Present Simple Active and Passive Voice;
- use words first, second, third to show sequence in describing plants' distinctive features;
- use language structures X is....while Y is.....
- apply special topic related terminology.

**Assessment criteria:**

- describe the distinctive features of plants exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms;
- classify algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics;
- identify distinctive features of plants explaining to his/her partner in grammatically correct English;
- uses language structures X is....while Y is..... correctly to compare plants features.

**Level of thinking:** Remembering, Application, Analysis.

**Task 1. Divide the organisms given in the box into two groups and name each of them.**

*Chlorella, lily of the valley, field horsetail, common larch, Club moss, kelp, pea seed, Lebanese cedar, home apple, sphagnum*

Group name	Representatives

**Task 2. Establish the correspondence between the features of the structure and the plants for which they are characteristic**

<p>A. Shield Fern</p> <p>B. Larch</p> <p>C. Poplar</p> <p>D. Wheat</p>	<p>1. Parallel leaf venation</p> <p>2. Spores ripen on leaves</p> <p>3. There are two cotyledons in the seed</p> <p>4. Trunk tissues have got resinous channels</p> <p>5. The root system is furry</p> <p>6. There is a rhizome with adventitious roots</p> <p>7. In the seed there is endosperm</p> <p>8. Adult plant is dioecious</p> <p>9. Fertilization requires water</p>
--	--

1	2	3	4	5	6	7	8	9

**Descriptor:**

- describes the distinctive features of plants exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms;
- classifies algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics;
- talks to his/her partner in a grammatically correct English;
- uses topic related words correctly.

**Self-evaluation list**

Criteria	Yes + No -
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

## UNIT 3. VARIETY OF LIVING ORGANISMS

**Theme 3.2:** Distinctive features of gymnosperms and angiosperms plants.

**Learning objectives:** 8.1.1.3 Identify gymnosperms and angiosperms plants according to their distinctive features.

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**10. S4.** Compare the information from different sources to make it more clear and understandable.

**Lesson language objectives:**

*Students will be able to:*

- talk to a partner about differences in plants related to gymnosperms and angiosperms;
- use language structures X is....while Y is.....
- justify their position differentiating plants related to gymnosperms and angiosperms.

**Assessment criteria:**

- recognize specific features of gymnosperms and angiosperms;
- classify plants into gymnosperms and angiosperms, taking into account their characteristics;
- identify distinctive features of plants explaining to his/her partner in a grammatically correct English;
- use language structures X is....while Y is..... correctly to compare plants features.

**Level of thinking:** Application, Analysis.

**Task 1.** Look at the pictures and divide the plants into two groups of gymnosperms and angiosperms.



<b>Gymnosperms</b>	<b>Angiosperms</b>

**Descriptor**

- looks at the pictures and identifies correctly gymnosperms and angiosperms specific features;
- compares gymnosperms and angiosperms using specific phrases;
- justifies their thoughts when speaking about gymnosperms and angiosperms specific features.

**Self-evaluation list**

<b>Criteria</b>	<b>Yes+No-</b>
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

## UNIT 3. VARIETY OF LIVING ORGANISMS

**Theme 3.3:** Distinctive features of monocotyledonous and dicotyledonous plants.

**Learning objectives:** 8.1.1.3 – identify monocotyledon and dicotyledonous plants, according to their distinctive features.

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**10.S4.** Compare the information from different sources to make it more clear and understandable.

**Lesson language objectives:**

*Students will be able to:*

- describe monocotyledon and dicotyledonous plants distinctive features while speaking and writing;
- use Present Simple tense to discuss differences and similarities of monocotyledonous and dicotyledonous plants.

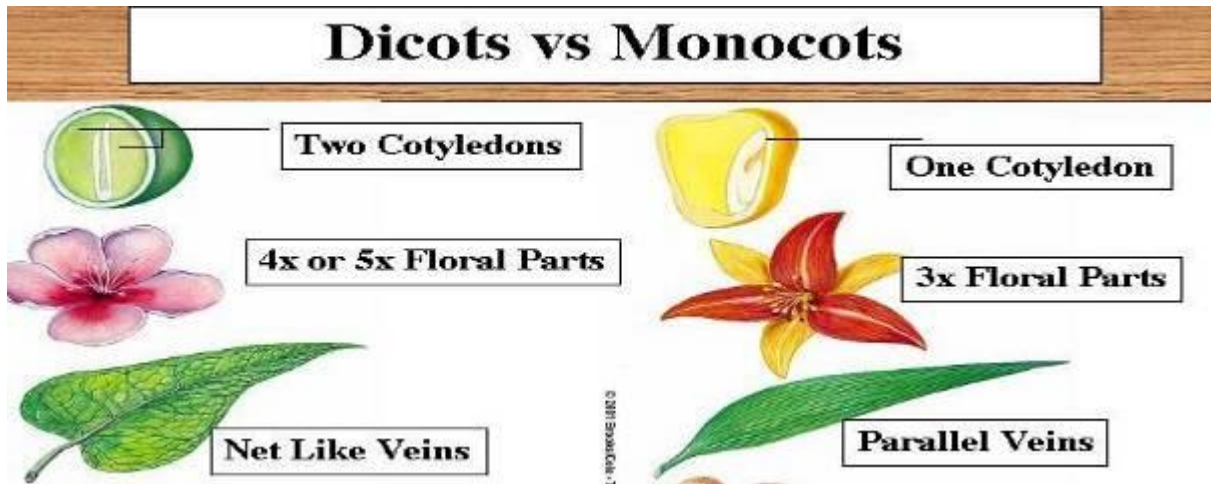
**Assessment criteria:**

- know the main distinctive features of monocotyledonous and dicotyledonous plants without any difficulties;
- describe monocotyledonous and dicotyledonous plants distinctive features while speaking and writing;
- discuss differences and similarities of monocotyledonous and dicotyledonous plants using Present Simple tense correctly.

**Level of thinking:** Knowledge and Application.

**Task 1.**

a) Look at the picture and discuss in groups describing monocotyledonous and dicotyledonous plants distinctive features.



**Task 1.**

b) Write in your paper monocotyledonous and dicotyledonous plants distinctive features.

**Task 2.** Look at the pictures and say if the plants refer to monocotyledonous and dicotyledonous ones.





**Descriptor:**

- identifies the main distinctive features of monocotyledonous and dicotyledonous plants correctly;
- talks to a partner describing monocotyledonous and dicotyledonous plants distinctive features;
- writes in the paper monocotyledonous and dicotyledonous plants distinctive features;
- discusses differences of monocotyledonous and dicotyledonous plants using Present Simple tense correctly.

**Self-evaluation list**

<b>Criteria</b>	<b>Yes+No-</b>
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

### UNIT 3. VARIETY OF LIVING ORGANISMS

**Theme 3.4:** Kingdom Fungi. Mold Fungi: mucor, penicillus. Unicellular fungi – yeast. Multicellular Fungi. Hat Mushrooms. Edible and poisonous mushrooms.

**Learning objectives:** 8.1.1.2 Describe fungi distinctive features

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**10.S4.** Compare the information from different sources to make it more clear and understandable.

**Lesson language objectives:**

*Students will be able to:*

- describe fungi distinctive features while speaking and writing;
- use Present Simple tense to discuss differences and similarities of fungi, animal and plants;
- recognize the difference between edible and poisonous mushrooms.

**Assessment criteria:**

- identify the main distinctive features of fungi without any difficulties;
- describe fungi distinctive features while speaking and writing;
- discuss differences and similarities of fungi, animal and plants using Present Simple tense correctly;
- identify without any support what mushrooms refer to edible and which one to poisonous ones.

**Level of thinking:** Knowledge, Application, Analysis

**Task 1. Match the organism characteristics to the names of organisms:**

Organism characteristics	Name of organisms
A) the cell wall includes chitin B) the cell wall includes cellulose C) Autotrophic Nutrition D) an additional nutrient is starch E) body consists of mycelium	1)Fungi 2)Plants

1	2	3	4	5

**Task 2. Complete the table:**

Similar features of fungi and plants	Fungi distinctive features	Similar features of fungi and animals

**Task 3. Look at the picture and circle the edible mushrooms which can a little boy put into his basket, cook and eat.**



[3]

**Descriptor:**

- identifies the distinctive features of fungi correctly;
- recognizes the features that fungi share in common with plants and animals;
- talks to a partner discussing differences and similarities of fungi, animal and plants;
- differentiates edible and poisonous mushrooms;
- uses Present Simple tense correctly while describing fungi distinctive features.

**Self-evaluation journal [3]**

<p><b>My Learning Journal</b> Content/ Biology</p>	<p><b>My Learning Journal</b> Language</p>
<p><b>Lesson nr.:</b>            <b>Topic:</b></p>	<p><b>Lesson nr.:</b>            <b>Topic:</b></p>
<p><b>What I understand well is:</b> ..... ..... ..... .....</p>	<p><b>What I understand well is:</b> ..... ..... ..... .....</p>
<p><b>What still confuses me</b> ..... ..... .....</p>	<p><b>What still confuses me</b> ..... ..... .....</p>
<p><b>What I want to know(what interests me) is:</b> .....</p>	<p><b>What I want to know(what interests me) is:</b> .....</p>

## UNIT 4. BIODIVERSITY OF LIVING ORGANISMS

**Theme 4.1:** Type of arthropods. Type chord. Comparative characteristics, according to the external signs.

**Learning objectives:** 8.1.1.4 - recognize Phylum Arthropod and Chordate according to their distinctive features.

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**10.W4.** Write an essay on the given topic, supporting of or against a particular point of view.

**Lesson language objectives:**

*Students will be able to:*

- recognize Phylum Arthropod and Chordate distinctive features when speaking;
- describe representatives of Phylum Arthropod and Chordate using phrases:
  - Both Arthropods and Chordates live .....
  - Arthropods eat....while Chordates eat.....
  - Chordates have their skeletons on the inside while Arthropods have their skeletons on the outside.

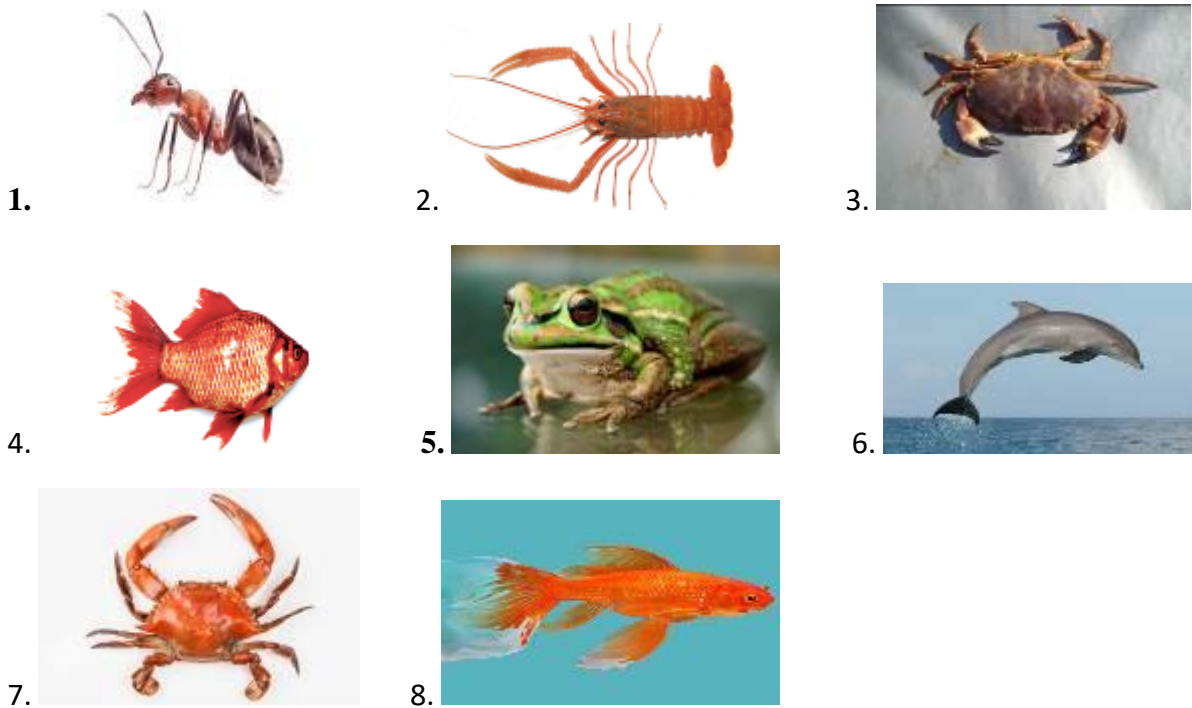
**Assessment criteria:**

- differentiate Phylum Arthropod and Chordate according to their distinctive features;
- use special phrases to talk about representatives of Phylum Arthropod and Chordate;
- write without any difficulties Arthropod and Chordate distinctive features.

**Level of thinking:** Knowledge and Application.

**Task 1.**

**a) Find in the pictures the odd one and justify your answer.**



**Task 1.**

**b) Write Arthropods and Chordates distinctive features.**

---



---

**Task 2. Match Arthropod and Chordate features**

1.They have horda	1.Arthropods
2. The closed circulatory system	2.Chordates
3. There are gill slits	
4. Unclosed circulatory system	

**Descriptor:**

- identifies Phylum Arthropod and Chordate distinctive features and justifies his/her answer;
- speaks about Arthropod and Chordate distinctive features;
- writes Arthropod and Chordate distinctive features;
- uses specific phrases when speaking about Arthropod and Chordate distinctive features.

### Self-evaluation journal

<b>My Learning Journal</b> <b>Content/ Biology</b>	<b>My Learning Journal</b> <b>Language</b>
<b>Lesson nr.:</b> <b>Topic:</b>	<b>Lesson nr.:</b> <b>Topic:</b>
<b>What I understand well is:</b> ..... ..... .....	<b>What I understand well is:</b> ..... ..... .....
<b>What still confuses me</b> ..... ..... .....	<b>What still confuses me</b> ..... ..... .....
<b>What I want to know(what interests me)</b> <b>is:</b> .....	<b>What I want to know(what interests me)</b> <b>is:</b> .....

## UNIT 5. NUTRITION

**Theme 5.1:** The structure of the human digestive tract. Digestive glands. Functions of the digestive system.

**Learning objectives:** 8.1.2.3 Explain the relationship between human digestive system structure and its functions

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**10.W4.** Write an essay on the given topic, supporting of or against a particular point of view.

**Lesson language objectives:**

*Students will be able to:*

- describe human digestive system structure and its functions in small groups;
- use Conditional 1 sentences to describe human digestive system structure and its functions;
- label the pictures of human digestive system organs;
- write the functions human digestive system organs do.

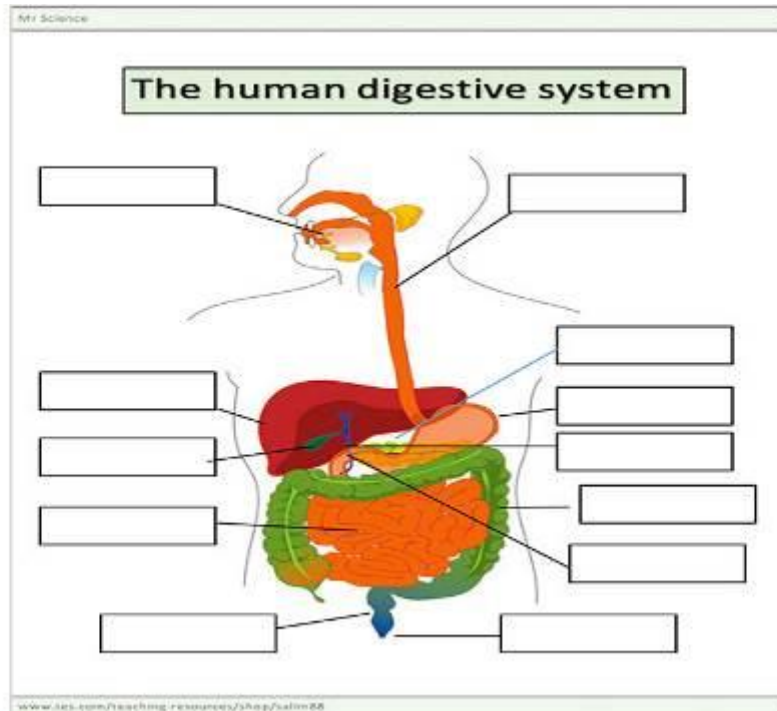
**Assessment criteria:**

- name the organs of human digestive system and describe their locations and functions;
- use Conditional 1 sentences to describe human digestive system structure and its functions correctly;
- label the pictures of human digestive system organs using previous knowledge;
- know the functions human digestive system organs do and write about it.

**Level of thinking:** Knowledge, Remembering, Application.

**Task 1.**

a) Label the pictures of the human digestive system organs and discuss in groups their location and functions.



**Task 1.**

b) Write about the functions human digestive system organs do

**Descriptor:**

- names the organs of the human digestive system and describes their functions;
- discusses in small groups human digestive system organs' location and their functions;
- uses Conditional 1 to describe human digestive system functions;
- labels the pictures of the human digestive system organs;
- writes correctly the functions human digestive system organs do.

**Self-evaluation list**

<b>Criteria</b>	<b>Yes+No-</b>
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	



## UNIT 5. NUTRITION

**Theme 5.2:** The structure of the human digestive tract. Digestive glands. Functions of the digestive system (continuation).

**Learning objectives:** 8.1.2.3 Explain the relationship between human digestive system structure and its functions

**Language objectives:**

**10. R3.** Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints;

**10. S4.** Compare the information from different sources to make the text more clear.

**Lesson language objectives:**

**Students will be able to:**

- match the text extracts with the relevant heading given in the box when reading the text extracts;
- describe human digestive process using correct present tense and conditional verbs.

**Assessment criteria:**

- show the knowledge of the digestive system process sequence;
- use Conditional 1 sentences to describe human digestive process correctly;
- match the text extracts with the relevant heading correctly.

**Level of thinking:** Knowledge, Remembering, Application.

**Task 1. Match the text extracts with the relevant heading [5].**

- A. Absorption of nutrients
- B. Secretion of fluids and digestive enzymes
- C. Ingestion of food
- D. Excretion of wastes
- E. Mixing and movement of food and wastes through the body
- F. Digestion of food into smaller pieces

1.  The first function of the digestive system is ingestion, or the intake of food. The mouth is responsible for this function, as it is the orifice through which all food enters the body. The mouth and stomach are also responsible for the storage of food as it is waiting to be digested.

2.  In the course of a day, the digestive system secretes around 7 liters of fluids. These fluids include saliva, mucus, hydrochloric acid, enzymes, and bile

3.  The digestive system uses 3 main processes to move and mix food:

- *Swallowing.*
- *Peristalsis.*
- *Segmentation.*

4.  Digestion is the process of turning large pieces of food into its component chemicals. Mechanical digestion is the physical breakdown of large pieces of food into smaller pieces. This mode of digestion begins with the chewing of food by the teeth and is continued through the muscular mixing of food by the stomach and intestines. Chemical digestion begins in the mouth with salivary amylase in saliva splitting complex carbohydrates into simple carbohydrates. The enzymes and acid in the stomach continue chemical digestion, but the bulk of chemical digestion takes place in the small intestine thanks to the action of the pancreas.

5.  Once food has been reduced to its building blocks, it is ready for the body to absorb. Absorption begins in the stomach with simple molecules like water and alcohol being ed directly into the bloodstream. Most absorption takes place in the walls of the small intestine, which are densely folded to maximize the surface area in contact with digested food.

6.  The final function of the digestive system is the excretion of waste in a process known as  defecation. Defecation removes indigestible substances from the body so that they do not accumulate inside the gut. The timing of defecation is controlled voluntarily by the conscious part of the brain, but must be accomplished on a regular basis to prevent a backup of indigestible materials.

**Descriptor:**

- reads the text attentively;
- matches the text extracts with the relevant heading;
- uses Conditional 1 describing human digestive process.

**Self-evaluation list**

<b>Criteria</b>	<b>Yes+No-</b>
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

## UNIT 5. NUTRITION

**Theme 5.3:** Food Hygiene. Digestive system infectious diseases and their prevention.

**Learning objectives:** 8.1.2.4 Identify the causes of digestive system diseases and food poisoning

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest;

**10. W2.** Present the material in written form, using new vocabulary and grammar structures.

**Lesson language objectives:**

*Students will be able to:*

- Explain to a partner the causes of digestive system diseases and food poisoning:
  - *one consequence of food poisoning is....*
  - *digestive tract diseases lead to....*
  - *food poisoning leads to.....*
- Write the measures to prevent digestive system diseases.

**Assessment criteria:**

- name infectious diseases of the digestive system and describe preventive measures;
- describe measures to prevent parasitic diseases;
- explain to a partner the causes of digestive tract diseases and food poisoning.

**Task 1. Complete the table and explain the causes of digestive system diseases and food poisoning.**

<b>Disease</b>	<b>Reasons</b>	<b>Symptoms</b>	<b>Precautionary measures</b>
Dysentery			
Diarrhea			
Hepatitis			



**C**ome to a stop.

**R**ead what you have produced so far.

**E**valuate your work against the success criteria.

**A**sk yourself: "is this my best effort?"

**M**ake one small change before carrying on.



**Task 2. Write the measures to prevent digestive system diseases.**

---

---

---

**Descriptor:**

- names infectious diseases of the digestive system;
- finds the reasons of infectious diseases and describes preventive measures;
- identifies and writes the measures to prevent parasitic diseases;
- talks to a partner about digestive system diseases.

**Self-evaluation list**

<b>Criteria</b>	<b>Yes+No-</b>
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

## UNIT 5. NUTRITION

**Theme 5.4:** Vitamins and their importance. Water-soluble and fat-soluble vitamins. Daily intake of vitamins.

**Learning objectives:** 8.1.2.5. Describe the importance of vitamins in the human body;

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest;

**10. S4.** Take an active part in discussion in familiar contexts, accounting for and sustaining my views.

**Lesson language objectives:**

*Students will be able to:*

- describe the importance of vitamins to a partner using comparative form:
  - This substance has got more vitamins while that one contains less vitamins
  - Both....and....contain enough vitamins for human survival
- list and discuss the role of vitamins in the human body.

**Assessment criteria:**

- define the importance of vitamins in the human body;
- identify and describe the role of vitamins in the human body;
- talk to a partner describing the importance of vitamins in the human body;
- use if-sentences talking about the role of vitamins in the human body.

**Level of thinking:** Knowledge, Application, Analysis.





**Task 1.** Complete the table giving the examples of fat-soluble and water-soluble vitamins.





Fat-soluble vitamins	Water-soluble vitamins

**Task 2. Write in the table the importance of vitamins in human's life.**

Vitamin	The importance in human's life
A	
B1	
B2	
C	
D	
B12	
PP	

**Task 3. Look at the pictures and say what vitamins the food in the pictures contains**

1.  2.  3.  4. 

5.  6.  7.  8. 

**Descriptor:**

- names the vitamins human body contains;
- identifies the role of vitamins in the human body;
- discusses the importance of vitamins in the human body;
- uses if-sentences talking about the role of vitamins in the human body.

**Self-evaluation list**

Criteria	Yes + No -
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

## UNIT 5. NUTRITION

**Theme 5.5:** Vitamins and their importance. Water-soluble and fat-soluble vitamins. Daily intake of vitamins (continuation).

**Learning objectives:** 8.1.2.6 – Make a list of foods that high in vitamins

**Language objectives:**

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest;

**10. S4.** Take an active part in discussion in familiar contexts, accounting for and sustaining my views.

**Lesson language objectives:**

*Students should be able to:*

- make a list of foods high in vitamins giving some comments:
  - This food has got more vitamins while that one contains less vitamins
  - Both....and....are high in vitamins
- describe vitamin content of fruit and vegetables using adjectives in the comparative form.

**Assessment criteria:**

- recognize the food that are high in vitamins and make a list of them;
- talk to a partner describing the number of vitamins in the food;
- use adjectives in the comparative form describing the number of vitamins fruit and vegetables have.

**Level of thinking:** High order of thinking.

**Task 1. Complete the table writing missed information.**





<b>Nutrient</b>	<b>Function</b>	<b>Source</b>
	Part of an enzyme needed for energy metabolism; important to nerve function	Found in all nutritious foods in moderate amounts: pork, whole-grain or enriched breads and cereals, legumes, nuts and seeds
Riboflavin (vitamin B2)	Part of an enzyme needed for energy metabolism; important for normal vision and skin health	
	Antioxidant; part of an enzyme needed for protein metabolism; important for immune system health; aids in iron absorption	Found only in fruits and vegetables, especially citrus fruits, vegetables in the cabbage family, cantaloupe, strawberries, peppers, tomatoes, potatoes, lettuce, papayas, mangoes, kiwifruit
	Needed for vision, healthy skin and mucous membranes, bone and tooth growth, immune system health	From animal sources (retinol): fortified milk, cheese, cream, butter, fortified margarine, eggs, liver Beta-carotene (from plant sources): Leafy, dark green vegetables; dark orange fruits (apricots, cantaloupe) and vegetables (carrots, winter squash, sweet potatoes, pumpkin)
Vitamin D	Needed for proper absorption of calcium; stored in bones	
Cobalamin (vitamin B12)	Part of an enzyme needed for making new cells; important to nerve function	Meat, poultry, fish, seafood, eggs, milk and milk products; not found in plant foods

**Task 2.**

**Compare the number of vitamins in fruit and vegetables using adjectives in the comparative form.**

**Vitamin content of fruit and vegetables**



Fruit	Vitamin	Content in fruit (mg)
 <p data-bbox="311 499 422 533">Apricots</p>	Vitamin A Vitamin B1 Vitamin B2 Vitamin B6 Vitamin C Folate (folic acid)0,2	0,2 0,06 0,05 0,06 5000 0,004
 <p data-bbox="320 786 411 819">Apples</p>	Vitamin A Vitamin B1 Vitamin B2 Vitamin B6 Vitamin C Folate (folic acid)	0,005 0,02 0,01 0,05 5000 0,003
 <p data-bbox="311 1081 422 1115">Bananas</p>	Vitamin A Vitamin B1 Vitamin B2 Vitamin B6 Vitamin C Folate (folic acid)	0,008 0,04 0,03 0,36 10.000 0,016
 <p data-bbox="311 1308 422 1341">Cherries</p>	Vitamin A Vitamin B1 Vitamin B2 Vitamin B6 Vitamin C Folate (folic acid)	0,012 0,02 0,02 0,04 10.000 0,004

**Task 2.**

**b) Write the information about vitamin content of fruit and vegetables.**

**Task 2.**

**c) Make a list of foods that are high in vitamins and discuss it.**

**Descriptor:**

























- -recognizes the foods high in vitamins;
- compares the number of vitamins in fruit and vegetables using adjectives in the comparative form;
- makes a list of foods that are high in vitamins;
- talks to a partner describing the foods high in vitamins.

# STUDENT SELF EVALUATION



Name:

Date:

I listen when the teacher (or speaker) is talking.	  
I follow directions the first time they are given.	  
I am polite and respectful to students and adults.	  
I ask for help when I don't understand.	  
I raise my hand to answer questions in class.	  
I take my time and do my best work.	  
My work is always neat and I use my best handwriting.	  
I finish my work on time.	  

A teachable  
TEACHER

(Источник [6])

## UNIT 6. TRANSPORT OF SUBSTANCES

**Theme 6.1:** The internal environment of the body and its importance . Lymph. Lymph circulation and its meaning. Homeostasis. The internal environment of the body: blood, lymph, tissue fluid.

**Learning objectives:** 8.1.3.5 - describe lymphatic system and relationship between blood, tissue fluid and lymph.

**Language objectives:**

**10.S4** Compare the information from different sources to make the text more clear;

**10.R5.** Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.

**Lesson language objectives:**

*Students will be able to:*

- use appropriate scientific terms for describing lymphatic system and relationship between blood, tissue fluid and lymph;
- read a passage identify and discuss the relationship between blood, tissue fluid and lymph;
- use verbs in the present simple tense describing lymphatic system and relationship between blood, tissue fluid and lymph.

**Assessment criteria:**

- identify relationship between blood, tissue fluid and lymph when reading the passage;
- talk to a partner describing relationship between blood, tissue fluid and lymph;
- describe lymphatic system and relationship between blood, tissue fluid and lymph in grammatically correct English using verbs in the Present Simple tense.

**Level of thinking:** Knowledge, Application, Evaluation.

**Task 1. Find the correct answers.**

*The peculiarities of the human lymphatic system structure and functioning is in the fact that.....*

- A) it is a network of tissues and organs that help rid the body of toxins, waste and other unwanted materials;
- B) it absorbs and transports fatty acids and fats to the digestive system;
- C) it protects the body from pathogens;
- D) it absorbs lipids from the intestine;
- E) it is represented by the same vessels.

**Task 2.**

**a) Read the passage and identify the relationship between blood, tissue fluid and lymph.**

Blood is red fluid which flows through arteries, veins & capillaries. These all are vessels of circulatory system which transport nutrients contained within blood to various body parts. Blood contains highest amount of oxygen as it contains red blood cells.

All the constituents of the blood which manage to escape from walls of blood capillaries, form tissue fluid also known as interstitial fluid. This escaped stuff surrounds all the body tissues and bathe them. Red blood cells & plasma proteins such as albumin, fibrinogen, immunoglobulin being larger in size can't escape and hence are not present in tissue fluid.

However, it contains proteins secreted by body cells. It contains less glucose, proteins, O<sub>2</sub> & more CO<sub>2</sub> as compared to blood.

When tissue fluid gets enclosed in lymph capillaries then it is called lymph. So its composition is not that different from tissue fluid. It just contain a little bit lower amount of proteins, glucose and O<sub>2</sub>. It contains greater amount of fats than both others. When lymph gets filtered in lymph nodes via lymph cells then this fluid is transferred back to the blood [7].

**Task 2.**

**b) Discuss in groups how lymphatic system works.**

**Task 3. Read and complete the sentences.**

- Blood contains → red blood cells.
- Tissue fluid contains → O<sub>2</sub>,
- Lymph contains → CO<sub>2</sub>

**Descriptor:**

- reads the passage and identifies relationship between blood, tissue fluid and lymph correctly;
- talks to a partner describing relationship between blood, tissue fluid and lymph;
- describes lymphatic system and relationship between blood, tissue fluid and lymph in grammatically correct English using verbs in the Present Simple tense.

**Self-evaluation list**

<b>Criteria</b>	<b>Yes + No -</b>
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

## UNIT 6. TRANSPORT OF SUBSTANCES

**Theme 6.2:** The composition and function of blood. Blood cells: red blood cells, white blood cells, platelets. Plasma. Blood functions: transport, homeostasis, protective.

**Learning objectives:** 8.1.3.1 - describe the blood composition and function

**Language objectives:**

**10. L2** Understand the main and detailed information of the text, differentiating the facts;

**10. S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects.

**Lesson language objectives:**

*Students will be able to:*

- use appropriate scientific terms for describing blood composition and function;
- watch the video and give some comments on it using verbs in the present simple tense;
- explain to a partner the function of blood.

**Assessment criteria:**

- watch the video and fill the gaps in the sentences correctly;
- recognize what the blood consists of and describe blood function;
- make Mind map to show blood composition and give some comments using verbs in the present simple tense;
- talk to partner in grammatically correct English using verbs in the Present Simple tense.

**Level of thinking:** Knowledge, Application, Evaluation.

**Task 1.** Watch the video and fill the gaps in the sentences using the words from the box.

**Link to the video:** <https://www.youtube.com/watch?v=Lsz2oEWbNmQ>

<i>hemoglobin</i>	<i>germs</i>	<i>plasma</i>	<i>tiny</i>	<i>marrow</i>	<i>temperature</i>
<i>seven</i>	<i>leukocytes</i>	<i>oxygen</i>	<i>exhale</i>	<i>bone</i>	<i>plasma</i>

Our blood helps us keep alive. The blood makes up around ....percent of the body weight. It means that we have between one and one and a half gallons of blood in it. Blood has got many important functions. Firstly, it transports..... to each sale, removes waste materials like carbon dioxide, regulates body....., fights disease. And finally it transports nutrients such as sugar, fats, protein, amino acids and hormones. If you were to place blood in a centrifuge and spin it around it will separate out 44 % red blood cell, 1 % white blood cells and platelets and 55% will be..... Red blood cells called erythrocytes contain protein called..... that carries oxygen. Red blood cells also remove carbon dioxide from the body, where it transport oxygen to the lungs to..... Red blood cells are made inside the bones in the bone..... They typically live for around 120 days. White blood cells also called .....are important part of immune system. These cells fight infections by attacking bacteria viruses and..... White blood cells originate in the .....marrow but circulate throughout the body. There are five major types of

white blood cells. ....is the liquid portion of the blood. It is 95% water but contains some very important ingredients such as glucose, electrolytes, hormones and proteins. Finally, platelets or .....blood cells that help the body to form clots to stop bleeding [8.]

**Task 2. The questions for discussion:**

1. How much water is in plasma?
2. What are ions, proteins and other molecules important for?
3. What is the size of erythrocytes?
4. How long do the red blood cells live?
5. What is the size of Platelets?
6. What is the size of white blood cells in comparison with the red ones?

**Task 3.**

**a) Match the blood types with their functions:**

1. leukocytes	a) transports oxygen
2. thrombocytes	b) defends the body against infection and disease
3. erythrocytes	c) prevents bleeding

**Task 3.**

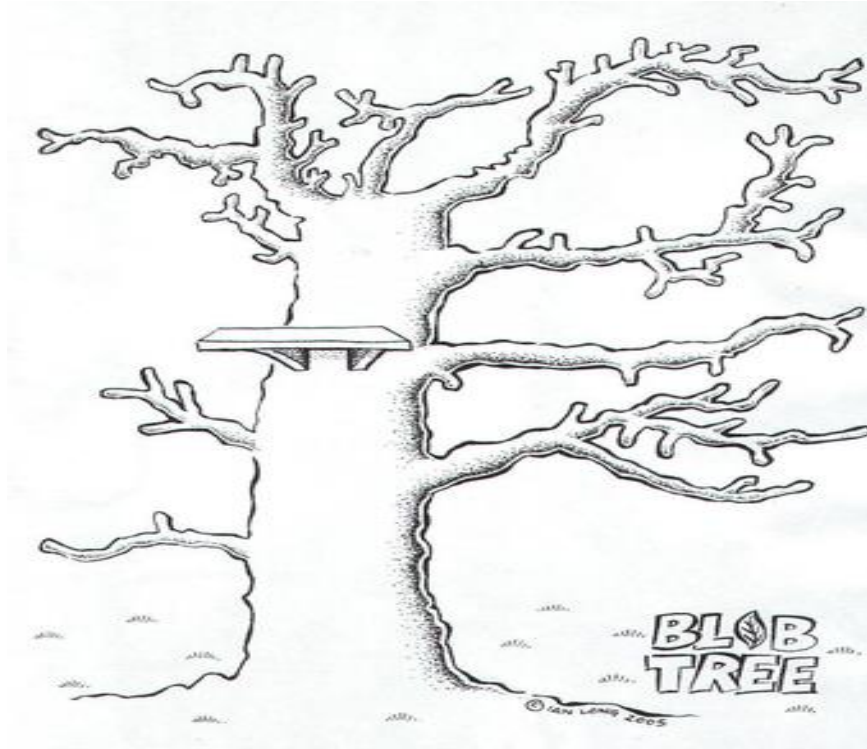
**b) Discuss in pairs the other functions of blood.**

**Descriptor:**

- watches the video and fill the blanks in the sentences;
- identifies the blood composition and makes Mind map;
- discusses the blood functions using the verbs in the present simple tense;
- discusses the blood components using appropriate scientific terminology.

**Self-evaluation of emotions and awareness**

**Blob's tree**



## UNIT 6. TRANSPORT OF SUBSTANCES

**Theme 6.3:** The study of various organisms blood corpuscles. Blood cells comparison by: shape, size, number of cells and the presence of the nucleus.

**Learning objectives:** 8.1.3.2 - to investigate the peculiarities of different organisms' blood elements structure according to the ready Blood Microslides.

**Language objectives:**

**10. S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects;

**10. S3** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**Lesson language objectives:**

*Students should be able to:*

- identify the peculiarities of human's and frog's blood cells and justify his/her position;
- describe human's and frog's blood cells using a comparative form;
- explain to a partner the difference between human's and frog's blood cells.

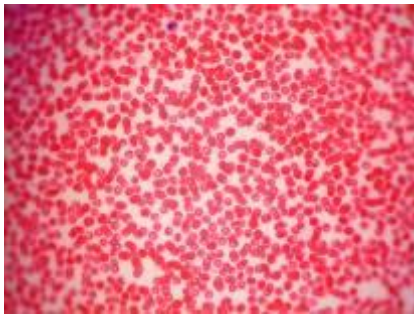
**Assessment criteria:**

- differentiate human's and frog's Blood Microslides;
- investigate the peculiarities of human's and frog's blood cells according to the given ready Blood Microslides;
- describe human's and frog's blood cells using a comparative form;
- talk to a partner explaining the difference between human's and frog's blood cells.

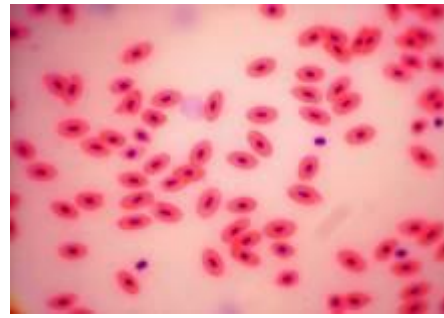
**Level of thinking: Knowledge, Application, Analysis.**



**Task 1. Look at the pictures and find out which picture refers to human's blood cells and which one to frog's blood cells. Justify your choice.**



1.



2.

**Task 2.**

**a) Complete the table comparing frog's and human's erythrocytes composition.**

Features	Frog's erythrocytes	Human's erythrocytes
Colour		
Size		
Nucleus		
Relative size		
Relative number		










**Task 2.**

**b) Discuss whose blood is able to transport more oxygen and why. Explain your answer.**

**Descriptor:**

- -compares human's and frog's blood cells according to the suggested blood Microslides;
- -differentiates human's and frog's blood cells and justifies his/her answer;
- -talks to a partner explaining the difference in human's and frog's blood cells;
- describes human's and frog's blood cells using a comparative form.

**COMPARATIVE SELF-ASSESSMENT CLIL**

Criteria Content+Language	Self-assessment 😊😐😞			Peer-assessment 😊😐😞			Teacher assessment 😊😐😞		
I can explain the terminology of the subject area									
I can communicate the content clearly in the foreign language									
I can use examples to support my understanding									
Notes									

## UNIT 6. TRANSPORT OF SUBSTANCES

**Theme 6.4:** Leukocytes types and their functions

**Learning objectives:** 8.1.3.3 characterize leukocytes different types of functions.

**Language objectives:**

**10.S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects;

**10. S3.** Present clear, detailed descriptions on a wide range of subjects related to field of interest

**Lesson language objectives:**

*Students will be able to:*

- characterize leukocytes different type functions using verbs in the Active and Passive Voice;
- label the pictures using the words related to the types of leukocytes;
- talk to a partner describing leukocytes different types of functions;
- use active verbs to name functions of leukocytes.

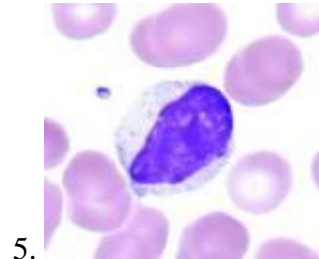
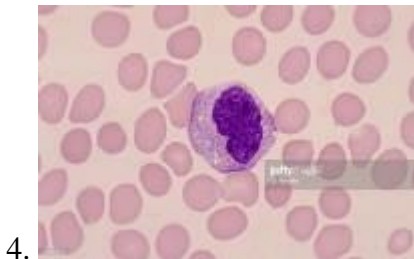
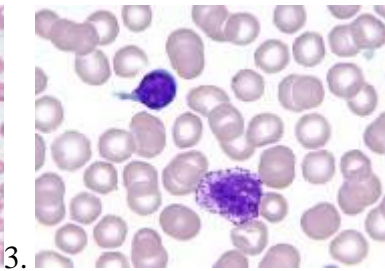
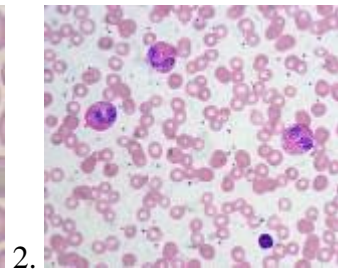
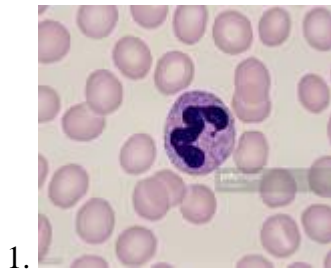
**Assessment criteria:**

- describe leukocytes different type functions;
- use verbs in the Active and Passive Voice without any errors;
- talk to a partner using a comparative form when describe leukocytes different types functions.

**Level of thinking: Knowledge, Application, Analysis.**

**Task 1 Label the pictures using the words related to the types of leukocytes**

*lymphocytes*    *basophils*    *monocytes*    *eosinophils*    *neutrophils*



**Task 2. Match the types of leukocytes with the number containing in human's organism.**

- |                |                   |
|----------------|-------------------|
| 1. neutrophils | A) 20% - 45%)     |
| 2. eosinophils | B) (less than 1%) |
| 3. basophils   | C) (2% - 10%)     |
| 4. monocytes   | D) (1% - 6%)      |
| 5. lymphocytes | E) (40% - 75%)(   |

**Task 3.**

**a) Complete the table writing missing information.**

Type of leukocytes	Function
	<ol style="list-style-type: none"> <li>1. Kills parasites and have a role in allergic reactions.</li> <li>2. Releases toxins from their granules to kill pathogens.</li> </ol>
<b>neutrophils</b>	
<b>lymphocytes</b>	
	<ol style="list-style-type: none"> <li>1. Functions in allergic reactions.</li> <li>2. Secretes anticoagulants and antibodies that have function against hypersensitivity reactions in the bloodstream.</li> <li>3. Contains histamine, which dilates the vessels to bring more immune cells to the area of injury.</li> <li>4. Secretes heparin which is an anticoagulant that promotes mobility of other WBCs by preventing clotting.</li> </ol>
	<ol style="list-style-type: none"> <li>1. Enters the tissue, where they become larger and turn into macrophages.</li> <li>2. Destroys old, damaged and dead cells in the body.</li> </ol>

**Task 3.**

**b) Discuss leukocytes different types of functions using comparative forms.**

**Descriptor:**

- identifies different types of leukocytes and describes their peculiarities;
- labels the pictures using the words related to the types of leukocytes;
- uses active verbs to name leukocytes different type functions;
- talks to a partner using a comparative form when describe leukocytes different types functions.

COMPARATIVE SELF-ASSESSMENT CLIL									
Criteria Content+Language	Self-assessment			Peer-assessment			Teacher assessment		
	😊😐😞			😊😐😞			😊😐😞		
I can explain the terminology of the subject area									
I can communicate the content clearly in the foreign language									
I can use examples to support my understanding									
Notes									

## UNIT 6. TRANSPORT OF SUBSTANCES

**Theme 6.5:** Types of vaccines and their role in the formation of acquired immunity.

**Learning objectives:** 8.1.3.6 - evaluate the role of vaccination in disease prevention.

**Language objectives:**

**10. S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects;

**10. R5.** Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.

**Lesson language objectives:**

*Students will be able to:*

- explain in English to a partner the role of vaccination
- Vaccination prevents the risk of .....
- Vaccines reduce diseases
- Vaccines protect children from diseases
  
- read the passage and identify how the scientist discovered vaccine;
- use the past tense to discuss what made the scientist to discover vaccine ;
- use Conditional II to predict what would happen if people stopped vaccination.

**Assessment criteria:**

- define the importance of vaccination for disease prevention;
- evaluate the role of vaccination in disease prevention;
- read the passage and get the information about discovery of vaccination;
- talk to a partner making predictions what would happen if people stopped vaccination;
- recognize the types of vaccines without any support.

**Level of thinking: Knowledge, Application, Analysis.**

**Task 1.**

**a) Read the passage and say what made the scientist to discover vaccine.**

A ‘vaccine’ is a biological preparation that improves immunity to a particular disease. Vaccine can be prophylactic or the apeutic. An English physician, Edward Jenner (1749-1823) observed that people who suffered cowpox (a mild disease) did not acquire smallpox, (a more severe disease). Jenner decided to test his observations about cowpox and smallpox. He took some pus with a sterile needle from the cowpox rashes of an infected girl and injected it into scratches made in the skin of an uninfected boy, who soon got cowpox. After he recovered, Jenner injected the boy’s arm with pus from the spots of a person suffering from smallpox. Luckily, the body did not get smallpox and Jenner’s experiment was successful. Thus, Jenner made the first vaccine against smallpox using the microbes of cowpox, a similar but less severe disease. The modern term ‘vaccination’ comes from the Latin words vacca which means cow and vaccinia meaning cowpox. The second generation of vaccines was introduced in 1880s by Louis Pasteur who developed vaccines for chicken pox, cholera and anthrax [9].

**Task 1.**

**b) Discuss with your partner the importance of vaccination.**

**Task 2. Make a prediction what would happen if people stopped vaccination.**

**Discuss with a partner the consequences of vaccine rejection. Useful phrases to use:**

- *-cause repeated epidemics;*
- *-responsible for the control of many infectious diseases;*
- *-immune system become vulnerable;*
- *-lead to organism damage, seizures;*
- *-people die from dangerous diseases such as measles, mumps and meningitis.*

**Task 3. Write in the table the types of vaccines and the examples**

Type of vaccine	Examples
	Mumps, measles, yellow fever, polio
Inactivated or "killed"	
subunit	
	H. Influenza. Type b

**Descriptor:**

- defines and evaluates the importance of vaccination for disease prevention;
- reads the passage and gets the information about discovery of vaccination;
- talks to a partner making predictions what would happen if people stopped vaccination;
- recognizes the types on vaccines.



### Self-evaluation journal

<p><b>My Learning Journal</b></p> <p><b>Content/ Biology</b></p>	<p><b>My Learning Journal</b></p> <p><b>Language</b></p>
<p><b>Lesson nr.:            Topic:</b></p>	<p><b>Lesson nr.:            Topic:</b></p>
<p><b>What I understand well is:</b></p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p><b>What I understand well is:</b></p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>
<p><b>What still confuses me</b></p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p>	<p><b>.....What still confuses me</b></p> <p>.....</p> <p>.....</p> <p>.....</p>
<p><b>What I want to know(what interests me) is:</b></p> <p>.....</p> <p>.....</p> <p>.....</p>	<p><b>What I want to know(what interests me) is:</b></p> <p>.....</p> <p>.....</p> <p>.....</p>

## UNIT 7. RESPIRATION

**Theme 7.1:** Types of metabolism. Stages of energy exchange

**Learning objectives** 10.1.4.3 Name the types of metabolism

**Language objectives:**

**10.S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects;

**10.W2.** Present the material in written form, using new vocabulary and grammar structures.

**Lesson language objectives:**

*A student will be able to:*

- name correctly the types of metabolism;
- describe the types of metabolism using comparative form:
  - Anabolism provides all the materials a cell requires for maintenance, growth and repair, while catabolism breaks down larger molecules into smaller ones.
  - Anabolism is any process that "builds up" while catabolism is the opposite—«breaking down».
- write out the differences of anabolism and catabolism;
- -use verbs in the Active and Passive Voice while describing the types of metabolism.

**Assessment criteria:**

- name correctly the types of metabolism;
- identify the difference between the types of metabolism and its functions;
- describe the types of metabolism using verbs in the Active and Passive Voice with few errors.

**Level of thinking: Knowledge, Application.**

**Task 1.**

**a) Find out if the statements are True or False. Justify your opinion.**

1. Anabolism is destructive process.
2. Catabolism is endergonic.
3. Anabolism is exergonic.
4. Catabolism involves oxidation reactions.
5. Gluconeogenesis is the example of anabolism

**Task 1.**

**b) Write out the differences of anabolism and catabolism.**

**Task 2. Match the types of metabolism to their functions.**

Type of metabolism	Function
1. Anabolism 2. Catabolism	A) breaks down protein into simpler amino acids
	B) builds larger molecules from smaller ones
	C) builds muscle cells out of them proteins
	D) sends out energy
	E) produces energy

**Descriptor:**

- recognizes the types of metabolism without any difficulties;
- identifies differences between anabolism and catabolism;
- describes the types of metabolism using comparative form;
- uses Active and Passive Voice describing the types of metabolism.

**Self-evaluation list**

Criteria	Yes + No -
<i>I have managed to cope with the tasks without any difficulties</i>	
<i>I have managed to cope with the tasks with some support</i>	
<i>I have some difficulties when doing the tasks</i>	

## UNIT 8. EXCRETION

**Theme 8.1:** Absorption and reabsorption. Urine formation.

**Learning objectives 10.1.4.5** Explain the mechanism of urine filtration and formation

**Language objectives:**

**10. L2** Understand the main and detailed information of the text, differentiating the facts;

**10. S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects.

**Lesson language objectives:**

*A student will be able to:*

- identify the mechanism of urine filtration and formation and discuss with their peers;
- describe the mechanism of urine filtration and formation using linking words *while, unlike, firstly, finally, before;*
- watch the video and fill in the gaps using subject related vocabulary;
- talk to a partner describing the process of urine formation.

**Assessment criteria:**

- identify correctly and explain the mechanism of urine filtration and formation;
- use linking words *while, unlike, firstly, finally, before* while describing the mechanism of urine filtration and formation;
- complete the sentences after watching the video.

**Level of thinking:** Knowledge, Application.

**Task 1.**

**a) Watch the video and fill in the gaps using the words from the box.**

link to the video: <https://www.youtube.com/watch?v=oCQ-5iwTQvM>

<i>hydrogen</i>	<i>pass</i>	<i>failure</i>	<i>30</i>	<i>hormone</i>	<i>95%</i>	<i>capsule</i>
<i>tubules</i>	<i>plasma</i>	<i>proximal</i>	<i>0.6</i>	<i>nephron</i>	<i>creatinine</i>	<i>water</i>
			<i>histamine</i>			

Urine is formed by the three processes in the (1)....., the functional part of the kidney. Urine is formed by the filtration, reabsorption and secretion. Glomerulus filters (2).....and certain substances from the plasma of the blood. This results in the increase of blood pressure which forces the plasma like fluid from the blood into the Bowman's (3).....and then into (4).....The fluid or filtrate include many positive and negative ions of many elements. The filtrate does not have many proteins or red cells which are too large to (5)..... through capillary membrane. Tubular reabsorption substances are transported out of the (6).....and back into the blood of the peritubular capillaries .

Reabsorption takes place in the (7).....tubules of Henle and distal tubules. The major part of reabsorption occurs in proximal tubular. The process of urine formation is regulated by the (8).....Vasopressin and Aldosterone.

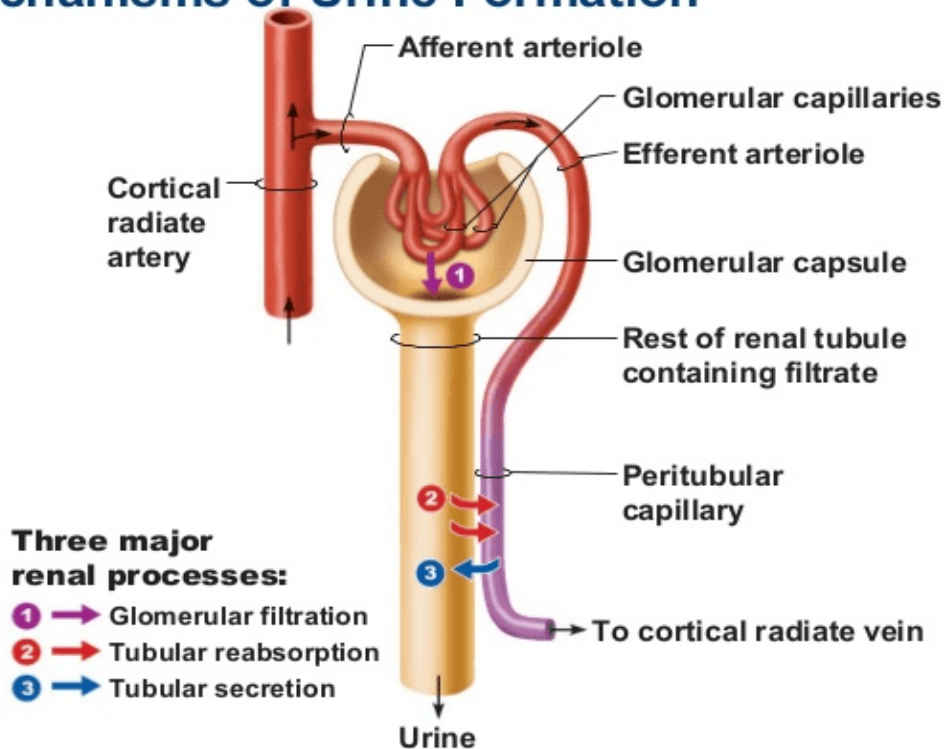
In tubular secretion substances move from (9).....in the peritubular capillaries back in the filtrate in the renal tubules. The proximal tubules secrete (10) .....and (11).....Distal tubules and collecting duct secrete potassium into the filtrate. All the tubules secrete (12).....ions to regulate Ph of the body fluids. Urine is about (13)..... water with a balanced urea uric acids, Amino acids and electrolytes. The daily production is about (14).....to 2.5 liters per day. The production below (15).....millimeters per hour indicates possible kidney [10].

**Task 1.**

b) Talk to a partner about the process of urine formation.

**Task 2.** Look at the picture and describe it using linking words while, unlike, firstly, finally, before:

### Mechanisms of Urine Formation



**Descriptor:**

- identifies and explains the mechanism of urine filtration and formation with some support;
- watches the video and fills the gaps in the suggested sentences;
- describes the picture and uses linking words correctly.

## UNIT 9 MOLECULAR BIOCHEMISTRY

**Theme 9.1:** Characteristics of the genetic code: triplet nature, degeneracy, non-overlapping, universality.

**Learning objectives:** 11.4.1.5 Explain the characteristics of the genetic code.

**Language objectives:**

**10. L3** Understand the meaning of the words in the context of professional sphere;

**10. R5.** Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.

**10.S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects.

**Lesson language objectives:**

*Students will be able to:*

- watch the video and explain its characteristics using verbs in the Present simple;
- discuss with a partner the characteristics of the genetic code using Present Simple, Active and Passive Voice.
- read the passages and recognize what type of genetic code the passage refers;
- apply special topic related terminology when describing the characteristics of the genetic code.

**Assessment criteria:**

- explain the characteristics of the genetic code using special terminology;
- watch the video and elicit the information about genetic code correctly;
- use Present Simple Active and Passive Voice discussing the characteristics of the genetic code;
- read the suggested passages and recognize what type of genetic code the passage refers.

**Level of thinking:** Knowledge, Application, Evaluation.

**Task 1.**

**a) Watch the video and recognize if the statements are True or False. If it is False justify your answer**

**Link to the video** <https://www.youtube.com/watch?v=a48GfC0ygpq>

1. DNA is responsible for the genetic information
2. DNA regulates the nature of carbohydrates
3. Changes in amino acids in proteins are caused by the changes in nucleic acids.
4. DNA contains 3 types of nucleotides.
5. All amino acids are specific.
6. In a triplet code three letters specify three amino acids.
7. The genetic code is triplet.
8. Each amino acid is coded by many codons.
9. A non-overlapping code means that the same letter is used for two different codons.
10. The same sequences of 3 bases encode the same amino acids in all living organisms [11].

**Task 1.**

**b) Look at the characteristic of the genetic code and discuss what doesn't refer to its characteristics:**

1. The genetic code is made of triplets of nucleotides called codons.
2. The genetic code is non-skipping.
3. The genetic code is specific for any organism.
4. The genetic code is non-overlapping
5. The genetic code is written in cyclic form.
6. The genetic code is ambiguous.
7. The genetic code is universal.
8. The genetic code is degenerate.
9. The genetic code changes the nature of proteins.
10. The genetic code is under influence of RNA.

**Task 1.**

**c) Discuss in small groups the characteristics of the genetic code underline its peculiarities.**

**Task 2. Read the passages and match the headings to the passages.**

*Non-overlapping    Universality    Degeneracy    Triplet*

1\_\_\_\_\_ This type of code could make a genetic code for 64 different combinations (4 X 4 X 4) genetic code and provide plenty of information in the DNA molecule to specify the placement of all 20 amino acids. These three letter codes of nucleotides (AUG, AAA, etc.) are called codons.

2\_\_\_\_\_ This type of code is coded by more than one base triplet. For example, the three amino acids arginine, alanine and leucine each have six synonymous codons.

3\_\_\_\_\_ This type of code means that the same letter is not used for two different codons. In other words, no single base can take part in the formation of more than one codon.

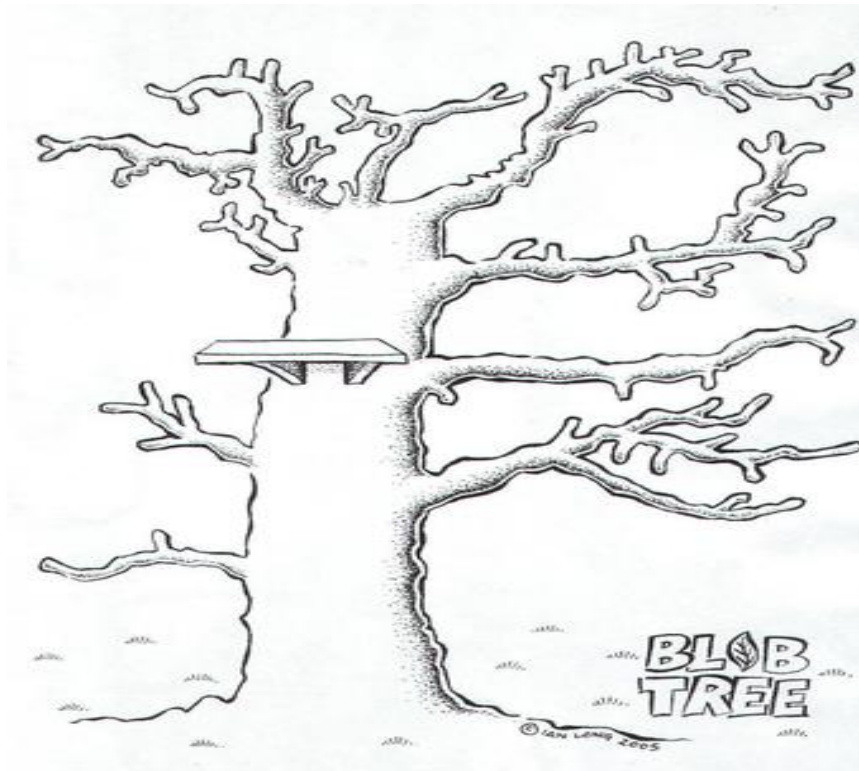
4\_\_\_\_\_ Although the code is based on work conducted on the bacterium Escherichia coli but it is valid for other organisms. This genetic code means that the same sequences of 3 bases encode the same amino acids in all life forms from simple microorganisms to complex, multicelled organisms such as human beings.

**Descriptor:**

- watches the video and recognizes the characteristics of the genetic code without any errors;
- discusses in small groups the characteristics of the genetic code using verbs in the Present simple Active and Passive Voice;
- reads the passages and match the headings to the passages correctly.

**Self-evaluation of emotions and awareness**

**Blob's tree**





## UNIT 10. CHEMOSYNTHESIS

**Theme 10.1:** Chemosynthesis. The comparison of photosynthesis and chemosynthesis processes

**Learning objectives:** 11.1.2.6 Compare the peculiarities of photosynthesis and chemosynthesis processes

**Language objectives:**

**10. S2** Enter unprepared into conversation on topics that are familiar, of personal interest or any subjects;

**10. R5.** Read articles and reports concerned with contemporary problems in which the writers adopt particular attitudes or viewpoints.

**Lesson language objectives:**

*Students will be able to:*

- -discuss with a partner and compare how much photosynthesis and chemosynthesis processes similar and different in grammatically correct English using *while, when, as for, in addition*;
- -describe photosynthesis and chemosynthesis processes differences and similarities using the comparative form:
  - photosynthesis and chemosynthesis are both processes by which organisms produce food;
  - photosynthesis is powered by sunlight while chemosynthesis runs on chemical energy
- apply special topic related terminology comparing differences and similarities of photosynthesis and chemosynthesis processes;
- read the passage and fill Venn diagram.

**Assessment criteria:**

- compare the peculiarities of photosynthesis and chemosynthesis processes using
- *while, when, as for, in addition* in grammatically correct English;
- describe without any difficulties photosynthesis and chemosynthesis processes differences and similarities using the comparative form;
- make Venn diagram and after reading the text and make a presentation of it;
- -discuss with your partner photosynthesis and chemosynthesis processes differences and similarities using special topic related vocabulary.

**Level of thinking:** Knowledge, Application, Evaluation.

**Task1.**

**a) Read the passage and fill Venn diagram.**

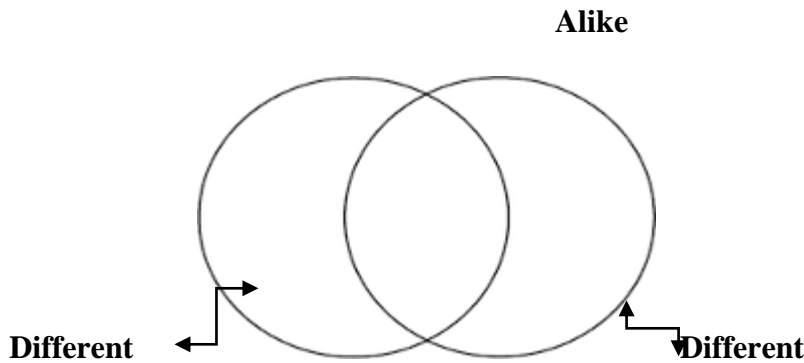
Photosynthesis is the process by which plants use the sun's energy to make sugar (glucose) for food. Plants absorb energy from sunlight, take in carbon dioxide from the air through their leaves, take up water through their roots, and produce glucose and oxygen. Photosynthesis takes place on land and in shallow water where sunlight can reach seaweeds.

Chemosynthesis is the process by which food (glucose) is made by bacteria using chemicals as the energy source, rather than sunlight. Chemosynthesis occurs around

hydrothermal vents and methane seeps in the deep sea where sunlight is absent. During chemosynthesis, bacteria living on the sea floor or within animals use energy stored in the chemical bonds of hydrogen sulfide and methane to make glucose from water and carbon dioxide (dissolved in sea water). Pure sulfur and sulfur compounds are produced as by-products.

**Task 1.**

**b) Fill Venn diagram using the information from the text:**



**Task 1**

**c) Discuss with a partner the results of Venn diagram and make a presentation in front of the class.**

**Descriptor:**

- reads the passage individually;
- compares the peculiarities of photosynthesis and chemosynthesis processes;
- makes Venn diagram in a group and makes a presentation of the diagram using linking words *while, when, as for, in addition* in grammatically correct English;
- describes without any difficulties photosynthesis and chemosynthesis processes differences and similarities using the comparative form;
- uses special topic related vocabulary while comparing the peculiarities of the photosynthesis and chemosynthesis processes.

**Self-evaluation sheet**

COMPARATIVE SELF-ASSESSMENT CLIL									
Criteria	Self-assessment			Peer-assessment			Teacher assessment		
Content+Language	😊😐😞			😊😐😞			😊😐😞		
I can explain the terminology of the subject area									
I can communicate the content clearly in the foreign language									
I can use examples to support my understanding									
Notes	✍️	✍️	✍️	✍️	✍️	✍️	✍️	✍️	✍️

## References

1. Государственная программа развития образования и науки Республики Казахстан на 2016-2019 годы // Эділет. Информационно-правовая система нормативных правовых актов Республики Казахстан [ЭР]. Код доступа <http://adilet.zan.kz/rus/docs/U1600000205>
2. <https://www.khanacademy.org/...cells/...prokaryotes.../prokar>
3. Pokrivčáková, S. et al. (2015). CLIL in Foreign Language Education: e-textbook for foreign language teachers. Nitra: Constantine the Philosopher University. 282 p.
4. <https://www.slideshare.net/.../history-of-protein-discovery>
5. <https://www.sciencelearn.org.nz/.../1829-the-human-digestiv..>
6. Students' Self Evaluation form for Parent-Teacher Conference Forms - A Teachable Teacher - <https://www.pinterest.ru/pin>.
7. <https://www.britannica.com/...cardiovascular-system/The-blo..>
8. <https://www.youtube.com/watch?v=Lsz2oEWbNmQ>
9. <https://www.who.int/topics/vaccines/en/>
10. <https://www.youtube.com/watch?v=oCQ-5iwTQvM>
11. <https://www.youtube.com/watch?v=a48GfC0yggg>

## DICTIONARY


English	Kazakh	Russian
Absorb	Сіңіру, жұту	Абсорбировать, поглощать
Acquired	Сатып алынған	Приобретенный
Afferent	Орталықтандырылған	Приносящий; центростремительный
Angiosperms	Жабықтұқымды	Покрытосемянные растения
Algae	Балдырдар	Водоросли
Arthropod	Артропод (Бунақ аяқтылардың өкілі)	Артропод (представитель членистоногих)
Cedar	Балқарағай	Кедр
Cell	Торша	Клетка
Carbohydrate	Көмірсу	Углевод
Chordate	Хордалылар	Происхождение хордовых
Connective	Қосатын	Связующий
Damage	Зақым	Повреждение
Degeneracy	Азғындау; кері даму	Вырождение; дегенерация
Dicotyledonous	Екі жақты	Двудольный
Digestive	Ас қорыту	Пищеварительный
DNA	Деоксирибонуклеин қышқылы (ДНК)	Дезоксирибонуклеиновая кислота (ДНК)
Double	қосарланған	Двойной
Edible	Жеуге жарамды	Съедобный
Efferent	Төзімді	Выносящий
Endergonic	Эндоргондық	Эндергонический
Excretion	Бөліп шығару	Экскреция, выделение
Exergonic	Экзергоникалық	Экзергонический
Exhale	Дем шығару	Выдыхать
External	Сыртқы	Внешний
Eukaryotes	Эукариоттар	Эукариоты
Fat	Май	Жир
Fern	қырыққұлақ	Папоротник
Fluid	Сұйықтық	Жидкость
Fungi	Саңырауқұлақтар	Грибы
Gland	Безі	Железа
Gymnosperms	Жалаң тұқымдылар	Голосеменные
Horsetail	Жылқы құйрығы	Лошадиный хвост
Ingestion	Тамақтану	Прием пищи
Inhale	Демді ішке тарту	Вдыхать
Intake	Қабылдау	Потребление
Internal	Ішкі	Внутренний
Interstitial	Аралық	Промежуточный
Intestine	Ішек	Кишка
Kelp	Ламинария	Ламинария
Kidney	Бүйрек	Почка
Larch	Балқарағай	Лиственница

Liver	Бауыр	Печень
Node	Түйін	Узел
Nucleus	Ядро	Ядро
Nutrition	Тамақтану	Питание
Marrow	Сүйек кемігі	Костный мозг
Membrane-bound	Мембраналық байланысты	Мембраны
Mold	Зең	Плесень
Monocotyledon	Бір тұқымдық өсімдік	Односемядольное растение
Moss-like	Мүк тәрізді	Мох
Mucor	Зең	Плесень
Multi-celled	Көп ұялы	Множклеточный
Non-overlapping	Жабылмаған	Неперекрывающийся
Nutrient	Қоректі	Питательный
Renal	Бүйрек	Почечный
Tissue	Мата	Ткань
Pancreas	Ұйқы безі	Поджелудочная железа
Perceive	Қабылдайды	Воспринимать
Poisonous	Улы	Ядовитый
Poplar	Терек	Тополь
Preventive	Ескерту	Профилактический
Prokaryotes	Прокариоттар	Прокариоты
Protein	Ақуыз	Белок
Proximal	Жақын	Ближкий
Sale	Сату	Продажа
Salivary	Сілекейлі	Слюнный
Single-celled	Бір ұялы	Одноклеточный
Soluble	Еритін	Растворимый
Starch	Крахмал	Крахмал
Stomach	Асқазан	Желудок
Tubules	Құбырлар	Трубы
Urine	Несеп	Урина
Wastes	Қалдықтар	Отходы
Wax	Балауыз	Воск
Yeast	Ашытқы	Дрожжи
Arthropod and Chordate	Бунақ аяқтылар және хордалылар	Членистоногие и хордовые

**КРАТКОСРОЧНЫЙ ПЛАН УРОКА ПО ТЕМЕ  
«VARIETY OF LIVING ORGANISMS»**

<b>Theme of the lesson:</b> Variety of living organisms		<b>School:</b>	
<b>Class: 8</b>		<b>Number of present:</b>	<b>Absent:</b>
<b>Learning objective(s) that this lesson is contributing to:</b>	8.1.1.1 Describe plants distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms		
<b>Lesson objectives:</b>	<b>All learners will be able to:</b>		
	<ul style="list-style-type: none"> <li>recognize distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms with some help</li> </ul>		
	<b>Most learners will be able to:</b>		
	<ul style="list-style-type: none"> <li>identify distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms without any help</li> </ul>		
	<b>Some learners will be able to:</b>		
	<ul style="list-style-type: none"> <li>classify and analyze distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms without any help</li> </ul>		
<b>Assessment criteria</b>	<ul style="list-style-type: none"> <li>recognize and describe distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms with some help</li> <li>classify algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics</li> <li>use simple short sentences in the Present Simple tense for communicate during, pair, group and whole class exchanges in grammatically correct English</li> </ul>		
<b>Language objectives</b>	<ul style="list-style-type: none"> <li>describe plants distinctive features after reading the text</li> <li>use simple short sentences in the Present Simple tense for describing distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms with some help</li> <li>write out variety of living organisms related words(algae, mosses, ferns, gymnosperms and angiosperms)</li> </ul> <p><b>Key words and phrases:</b>            In my opinion the main distinctive feature of the plant is....            If we take into consideration common plant features.....            If we compare gymnosperms and angiosperms we can say.....            Common features, special features</p>		
<b>Values</b>	Tolerance, mutual-respect, ability to work in group and cooperate		
<b>Cross-curricular links</b>	Chemistry		
<b>PLAN</b>			
<b>Planned timing</b>	<b>Planned activities (replace the notes below with your planned activities)</b>		<b>Resource s</b>
<b>Start 5 min</b>	<ul style="list-style-type: none"> <li>Greeting.</li> <li>Brainstorming:</li> </ul> <p><b>Strategy "Back to screen". Guess the theme of the lesson getting some clues from the classmates.</b>            One of the students sits back to screen and his/her classmates give some clues in order to help him/her the images on the screen. This way he/she guesses the theme of the lesson</p>		

<p><b>Middle</b> 35 min</p>	<p><b>Group division. “Hot chocolate river strategy”</b></p> <p><b>Task 1. (G). Watch video and discuss plants classification. Strategy “Think Share Pair”</b></p> <ul style="list-style-type: none"> <li>• discuss in groups plants classification</li> <li>• write out new vocabulary from the video</li> </ul> <p><b>Differentiation by support</b> (students get support from their peers and a teacher)</p> <p><b>Assessment provided by the teacher</b></p> <p><b>Task 2. (W) Read the texts. Active method “Jigsaw reading”</b></p> <p>Students in groups read different text extracts. Having read the text extracts students swap the information with other groups, then in groups prepare the information about plants they got from each other.</p> <p><b>Differentiation by grouping</b> (less advanced students get some help from more advanced ones)</p> <p><b>Peer assessment</b></p> <p><b>Task 3. Speaking and writing (FA)</b></p> <p style="text-align: center;"><b>Formative assessment task</b></p> <p><b>Theme:</b> Variety of living organisms</p> <p><b>Learning objectives:</b> 8.1.1.1 Describe plants distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms</p> <p><b>Assessment criteria:</b></p> <ul style="list-style-type: none"> <li>-describe the distinctive features of plants exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms</li> <li>-classify algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics</li> </ul> <p><b>Level of thinking:</b> application, analyses</p> <p><b>Task 1:</b> Divide the organisms given in the box into two groups and name each of them.</p> <p>Chlorella, lily of the valley, field horsetail, common larch, Clu kelp, pea seed, Lebanese cedar, home apple, sphagnum</p> <table border="1" data-bbox="437 1765 1262 1883"> <thead> <tr> <th data-bbox="437 1765 1139 1809">Group name</th> <th data-bbox="1139 1765 1262 1809">Represe</th> </tr> </thead> <tbody> <tr> <td data-bbox="437 1809 1139 1883"></td> <td data-bbox="1139 1809 1262 1883"></td> </tr> </tbody> </table> <p><b>Task 2: Establish the correspondence between the features of the structure and the plants for which they are characteristic</b></p>	Group name	Represe			<p><a href="https://www.youtube.com/watch?v=bYNiqAAuMnc">https://www.youtube.com/watch?v=bYNiqAAuMnc</a></p> <p>Text extracts from <a href="http://ncert.nic.in/ncerts/l/kebo103.pdf">ncert.nic.in/ncerts/l/kebo103.pdf</a></p> <p>Paper with tasks</p>
Group name	Represe					

	<p>A. Shield Fern</p> <p>B. Larch</p> <p>C. Poplar</p> <p>D. Wheat</p>	<p>1. Parallel leaf venation</p> <p>2. Spores ripen on leaves</p> <p>3. There are two cotyledons in the seed</p> <p>4. Trunk tissues have got resinous chan</p> <p>5. The root system is furry</p> <p>6. There is a rhizome with adventitious</p> <p>7. In the seed there is endosperm</p> <p>8. Adult plant is dioecious</p> <p>9. Fertilization requires water</p>															
	<table border="1"> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	1	2	3	4	5	6	7									
1	2	3	4	5	6	7											
	<p><b>Descriptor:</b></p> <ul style="list-style-type: none"> <li>– describes the distinctive features of plants exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms;</li> <li>– classifies algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics</li> </ul> <p><b>Task 4. Speaking Active method “Mingling” (P) Ask and answer the questions: Strategy “Interview”</b></p> <ul style="list-style-type: none"> <li>• ask and answer the questions</li> <li>• say about the plant representative from the flash card</li> </ul> <p><b>Differentiation by outcome</b></p> <p><b>Peer assessment</b></p>		Flash cards														
End	<p>Self-assessment I Understand</p> 		Stickers														
<b>Additional information</b>																	
<p><b>Differentiation - how do you plan to give more support? How do you plan to challenge the more able learners?</b></p>	<p><b>Assessment - how are you planning to check learners' learning?</b></p>	<p><b>Cross – curricular links health and safety check</b></p> <p><b>ICT links</b></p> <p><b>Values links</b></p>															
<p><b>Task 3. (W) Read the texts: "The Dombra,</b></p>	<p><b>Formative assessment</b></p>																



<p><b>The Tin whistle''.</b> <b>Answer the questions:</b></p>	<p>Peer assessment</p> <p>Teacher provided assessment</p> <p>Self-assessment.</p>	
<p><b><u>Reflection</u></b></p> <p><b>Were the lesson objectives / learning objectives realistic?</b></p> <p><b>What did the learners learn today?</b></p> <p><b>What was the learning atmosphere like?</b></p> <p><b>Did my planned differentiation work well?</b></p> <p><b>Did I stick to timings? What changes did I make from my plan and why?</b></p>	<p><b>Use the space below to reflect on your lesson. Answer the most relevant questions from the books on the left about your lesson.</b></p>	
<p><b>Summary evaluation</b></p> <p><b>What two things went really well (consider both teaching and learning)?</b></p> <p>1.</p> <p>2.</p> <p><b>What two things would have improved the lessons (consider both teachings and learning)?</b></p> <p><b>What have learned from his lesson about this lesson about the class or individuals that will inform my next lesson?</b></p>		
<p><b>Theme of the lesson:</b> Variety of living organisms</p>	<p><b>School:</b></p>	
<p><b>Class:</b> 8</p>	<p><b>Number of present:</b></p>	<p><b>Absent:</b></p>
<p><b>Learning objective(s) that this lesson is contributing to:</b></p>	<p>8.1.1.1 Describe plants distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms</p>	
<p><b>Lesson objectives:</b></p>	<p><b>All learners will be able to:</b></p> <ul style="list-style-type: none"> <li>recognize distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms with some help</li> </ul> <p><b>Most learners will be able to:</b></p> <ul style="list-style-type: none"> <li>identify distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms without any help</li> </ul>	

	<p><b>Some learners will be able to:</b></p> <ul style="list-style-type: none"> <li>• classify and analyze distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms without any help</li> </ul>
<b>Assessment criteria</b>	<ul style="list-style-type: none"> <li>• recognize and describe distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms with some help</li> <li>• classify algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics</li> <li>• use simple short sentences in the Present Simple tense for communicate during, pair, group and whole class exchanges in grammatically correct English</li> </ul>
<b>Language objectives</b>	<ul style="list-style-type: none"> <li>• describe plants distinctive features after reading the text</li> <li>• use simple short sentences in the Present Simple tense for describing distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms with some help</li> <li>• write out variety of living organisms related words(algae, mosses, ferns, gymnosperms and angiosperms)</li> </ul> <p><b>Key words and phrases:</b>  In my opinion the main distinctive feature of the plant is....  If we take into consideration common plant features.....  If we compare gymnosperms and angiosperms we can say.....  Common features, special features</p>
<b>Values</b>	Tolerance, mutual-respect, ability to work in group and cooperate
<b>Cross-curricular links</b>	Chemistry

### PLAN

<b>Planned timing</b>	<b>Planned activities (replace the notes below with your planned activities)</b>	<b>Resources</b>
<b>Start 6 min</b>	<ul style="list-style-type: none"> <li>• Greeting.</li> <li>• Brainstorming:</li> </ul> <p><b>Strategy "Back to screen". Guess the theme of the lesson getting some clues from the classmates.</b>  One of the students sits back to screen and his/her classmates give some clues in order to help him/her the images on the screen. This way he/she guesses the theme of the lesson  <b>Group division. "Hot chocolate river strategy"</b></p>	<b>PPP</b>
<b>Middle 35 min</b>	<p><b>Task 1. (G). Watch video and discuss plants classification. Strategy "Think Share Pair"</b></p> <ul style="list-style-type: none"> <li>• discuss in groups plants classification</li> <li>• write out new vocabulary from the video</li> </ul> <p><b>Differentiation by support</b> (students get support from their peers and a teacher)  <b>Assessment provided by the teacher</b></p> <p><b>Task 2. (W) Read the texts. Active method "Jigsaw reading"</b>  Students in groups read different text extracts. Having read the text extracts students swap the information with other groups, then in groups prepare the information about plants they got from each other.  <b>Differentiation by grouping</b> (less advanced students get some</p>	<p><a href="https://www.youtube.com/watch?v=bYNiqAAuMnc">https://www.youtube.com/watch?v=bYNiqAAuMnc</a></p> <p>Text extracts from <a href="https://ncert.nic.in/ncerts/l/kebo103.pdf">ncert.nic.in/ncerts/l/kebo103.pdf</a></p>

help from more advanced ones)

**Peer assessment**

**Task 3. Speaking and writing (FA)**

**Formative assessment task**

**Theme:** Variety of living organisms

**Learning objectives:** 8.1.1.1 Describe plants distinctive features exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms

**Assessment criteria:**

-describe the distinctive features of plants exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms

-classify algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics

**Level of thinking:** application, analyses

**Task 1:** Divide the organisms given in the box into two groups and name each of them.

Chlorella, lily of the valley, field horsetail, common larch, Club moss, kelp, pea seed, Lebanese cedar, home apple, sphagnum


Group name	Representative

**Task 2: Establish the correspondence between the features of the structure and the plants for which they are characteristic**

A. Shield Fern	1. Parallel leaf venation
B. Larch	2. Spores ripen on leaves
C. Poplar	3. There are two cotyledons
D. Wheat	4. Trunk tissues have got rays
	5. The root system is furry
	6. There is a rhizome with a
	7. In the seed there is endosperm
	8. Adult plant is dioecious
	9. Fertilization requires water

1	2	3	4	5	6	7	8

Paper with tasks

	<p><b>Descriptor:</b></p> <ul style="list-style-type: none"> <li>– describes the distinctive features of plants exemplified in the case of algae, mosses, ferns, gymnosperms and angiosperms;</li> <li>– classifies algae, mosses, ferns, gymnosperms and angiosperms, taking into account their characteristics</li> </ul> <p><b>Task 4. Speaking Active method “Mingling” (P) Ask and answer the questions: Strategy “Interview”</b></p> <ul style="list-style-type: none"> <li>• ask and answer the questions</li> <li>• say about the plant representative from the flash card</li> </ul> <p><b>Differentiation by outcome</b>  <b>Peer assessment</b></p>	Flash cards
End	<p>Self-assessment I Understand</p> 	Stickers
<b>Additional information</b>		
<b>Differentiation - how do you plan to give more support? How do you plan to challenge the more able learners?</b>	<b>Assessment - how are you planning to check learners' learning?</b>	<b>Cross – curricular links health and safety check</b> <b>ICT links</b> <b>Values links</b>
<b>Task 3. (W) Read the texts: "The Dombra, The Tin whistle".</b> <b>Answer the questions:</b>	<b>Formative assessment</b> Peer assessment  Teacher provided assessment  Self-assessment.	

<p><b><u>Reflection</u></b></p> <p><b>Were the lesson objectives / learning objectives realistic?</b></p> <p><b>What did the learners learn today?</b></p> <p><b>What was the learning atmosphere like?</b></p> <p><b>Did my planned differentiation work well?</b></p> <p><b>Did I stick to timings? What changes did I make from my plan and why?</b></p>	<p><b>Use the space below to reflect on your lesson. Answer the most relevant questions from the books on the left about your lesson.</b></p>
<p><b>Summary evaluation</b></p> <p><b>What two things went really well (consider both teaching and learning)?</b></p> <p>1. 2.</p> <p><b>What two things would have improved the lessons (consider both teachings and learning)?</b></p> <p><b>What have learned from his lesson about this lesson about the class or individuals that will inform my next lesson?</b></p>	