(iv) Write five regular and irregular verbs with their forms in your notebook.

Regular verbs

Present	Past	Past Participle	-ing Form	-s/es Form
fill	filled	filled	filling	fills
love	loved	loved	loving	loves
like	liked	liked	liking	likes
solve	solved	solved	solving	solves
struggle	struggled	struggled	struggling	struggles

Irregular verbs

Present	Past	Past-Participle	-ing Form	-s/es Form
bend	bent	bent	bending	bends
blow	blew	blown	blowing	blows
come	came	come	coming	comes
dig	dug	dug	digging	digs
fall	fell	fallen	falling	falls

Adverbs of Time

(vi) Identify and underline the adverbs in the following sentences.

- The next session of the webinar has been postponed.
- The electricity bill was paid on a monthly basis.
- My cousins are invited tonight to dinner.
- He did not sleep last night.

Abbreviations

(viii) Match the following abbreviations with their full forms.

Abbreviation	**Full Form**
Dr.	Doctor
St.	Street
Co.	Company
Govt.	Government
Ph. D	Doctor of Philosophy
Sr.	Senior

4) Writing

A. Guided Writing

Look at the pictures below and write a short story in your notebook. Also write its elements.

Once, on a bright sunny day, Hassan want to the park. He started walking on the track. Then he saw a bird on the ground. He noticed that bird was unable to fly. He picked up the bird and went back home. When he reached home, he put the bird in a cage and gave it water and some grains to eat. He noticed that the bird was sad. He opened the window and saw different kinds of birds were sitting on the branches of the tree. Some of them were chirping and some were flying. He understood the reason for the bird being sad. He immediately brought the cage and opened the door. The bird flew away. He was happy to release the poor bird.

Setting: A park.

Characters: Hassan and a bird.

Conflict: Hassan wants to care for the bird but the bird wants to be free.

(B) Creative Writing

Write an expository paragraph in your notebook explaining how to cook fish.

My father and I went to the beach last Sunday for fishing. We cast our fishing line and starting waiting for the fish to get caught. After half an hour, we got a big fish. It was almost afternoon and we were hungry. We decided to cook the fish. We gathered some wood and straws to make a fire. Then, my father made a grill with the help of some stones and wood. We had salt and pepper with us. My father marinated the fish with the help of lemon, salt and pepper. He then put it on the grill and let it cook for 5 minutes on one side and then turned it over. It took almost 20 minutes for the fish to cook. Then we ate it. The taste of wood made it even tastier. We enjoyed having fish on the beach.

Unit 12

A Day at the Beach

Intonation Patterns

(ii) Read the given sentences and circle the correct intonation.

- We won in the last minute! Rising / (Falling)
- How old are you? Rising / (Falling)
- Nice to meet you. Rising / (Falling)
- My brother wants to change his bicycle. (Rising) / Falling

A. Comprehension Time

i. Answer these questions.

- They cross-checked sand toys, picnic mats, beach umbrellas, picnic baskets with lunch and snacks, camp chairs, hats, cameras, first aid box, sunglasses and water bottles.
- They held all the things together and started heading towards the beach.
- It was a smooth, sandy beach. The blue seawater looked marvelous, flocks of birds were flying here and there catching fish. Cruise ships were passing by the lighthouse.
- The family had baked chicken, club sandwiches, French fries, Russian salad and mint margarita.
- Because, a huge wave destroyed their sandcastles.

Cases of Pronouns

(ii) Read the sentences given below. Underline the pronouns and state whether the pronoun used in each sentence is subjective, objective or possessive.

Sentences	Subjective	Objective	Possessive
Can the teacher take us to the science lab?		us	
Bilal ate his cake but mine is still on the plate.			mine
Please tell me the directions to the restaurant.		me	
You did a great job building the home.	you		
Did Alizeh tell you that her car broke down yesterday?			her
Make sure she gets her purse back.	she		
They are all ready to go to the museum.	they		
It is one of the most reliable newspapers in the market.	it		
My brother loves baseball. He plays it every day.	he		

(iii) Complete the following sentences by using an appropriate case of the pronouns given in the brackets.

- Do <u>you</u> have an extra pen? (him/her/you)
- The project selected for the exhibition is <u>mine</u>. (mine/my/I)
- Dr. Faisal shared My Plate Plan with all of <u>us</u>. (ours/us/it)
- <u>We</u> are budgeting a trip for next month. (We/Them/Theirs)
- Did they invite <u>them</u> to their wedding reception? (I/them/it)
- These medicals reports are <u>yours</u>. (you/yours/he)
- <u>She</u> did an amazing job! (Me/Her/She)

B. Time to Think

Search the internet and read about the different beaches of Pakistan. List down their names in your notebook. Where would you like to go? Why?

Karachi

- Clifton Beach
- French Beach
- Hawke's Beach
- Sandspit Beach
- Turtle Beach
- Devil's Point
- Manora Beach

Balochistan

- Gaddani
- Gwadar Beach
- Jiwani Bay
- Ormara
- Kund Malir
- Sonmiani Beach
- Dar
- Astola Islands

I want to visit Gwadar Beach. It is situated on the southwestern coast of Balochistan. It's a beautiful, neat and clean beach. I want to see the sunset on this beautiful beach.

3) Aspects of Language

A. Vocabulary

(iii) Arrange the given words in alphabetical order.

picnic – camp – sea – lunch – beach

1. beach
2. camp
3. lunch
4. picnic
5. sea

(B) Grammar

Noun-pronoun Agreement

(ii) Write five sentences of your own using noun-pronoun agreement in your notebook.

- Nadia came to Lahore with her family.
- Everyone on the aeroplane sat at their assigned seats.
- Huma did not come to school today. I hope she is fine.
- She ran to her car for her notebook.
- Everyone needs to open their book.

(iv) Make three sentences of your own using each tense given on the previous page in your notebook.

Simple Present Tense: I go to school regularly.

Present Continuous Tense: They are cooking chicken today.

Simple Past Tense: They went to Sandspit Beach.

vi) Write sentences of your own using the given joining words in your notebook.

and: Huma and Ayesha are going to watch a movie today.

but: I am not well but still going to school.

or: Should I eat my medicine now or in the evening?

because: I like this place because it is calm and peaceful.

so: We have to be there on time so get ready.

Question Words

(vii) Complete the sentences using the correct question words.

- When will you go to the beach?
- Where are the camp chairs?
- How does the Russian salad taste like?
- Which book is there on the table?
- Who gave you this beautiful watch?

(viii) Write four questions of your own using question words.

1. How old are you?
2. Where do you live?
3. When are you going home?
4. Why did you get late for school?

Apostrophe

x. Make contractions of the following words.

Words	Contractions
do not	don't
she has	she's
you are	you're

4) Writing

A. Guided Writing

Think of a fable of your own. Fill the following boxes to organise your ideas. Then write your fable in your notebook.

Characters

boy

crocodile

Title

"A boy and a crocodile".

Settings

Jungle

many years ago

Conflict

The crocodile was in pain because of the thorn.

Plot

The crocodile wanted to eat the boy but the boy helped him.

Resolution

The boy helped the crocodile.

Many years ago, there lived a little boy near the jungle. He went to jungle to collect wood every day. On the way to the jungle there was a lake. There lived a crocodile. The crocodile wanted to eat the boy but every time the boy survived his attack. One day the boy was crossing the lake and he saw the crocodile was sitting on the bank. The boy was astonished and asked him, "Hey croc! What is wrong with you today?" The crocodile told him that he was in pain because a thorn got into his foot and he could not even walk. The boy was very kind. He decided to help the crocodile. He went near him and took the thorn out of his foot. The crocodile was relieved. He said thanks to the boy and apologized for his behaviour.

B. Creative Writing

Write a paragraph on your own on the topic 'A Family Day Out' in your notebook.

A Family Day Out

I often go for outings with my friends but an outing with my family is more fun. Last weekend I planned to go out with my family on a picnic. There is a beautiful picnic spot on the outskirts of our city. My mother suggested to go there. We packed our stuff. Mother cooked food. We took a bat and a ball and ludo with us. On Sunday, we got up early and left for the picnic.

We reached there quite early. So, we decided to take some pictures. There was a beautiful garden with different kinds of flowers. There was also a zoo there. Father spread the sheet on the ground and we helped our mother to place the things. We took out chairs and food and arranged it on the sheet. It was a beautiful day. A cool breeze was blowing. We sat together and my father told us stories. We saw the animals in the zoo and took pictures with them. There were some handicrafts shops also. My mother bought some handcrafts. Then we ate lunch and had tea.

In the evening we came back home. It was fun filled day. I enjoyed a lot with my family.

Unit 13

Road Safety Rules

(A) Comprehension Time

i. Answer these questions.

- Because Zoha got a new scooty on her remarkable result.
- Aleeza is an intelligent and obedient girl who is passionate about her career, whereas Zoha is a sweet innocent girl with amazing drawing skills.
- She advises her to buy a helmet for her safety.
- When the light is yellow you are supposed to slow down and get ready to stop. When the light turns red you should stop and wait for the light to turn green. The green light tells you to "go".
- Traffic signs are put on the sides of the roads to make us aware of the rules. They help drivers and other road users with safety precautions.

Picture Description

(ii) Look at the given pictures carefully and describe them in 5 to 6 sentences.

1. Grandpa gave me some seeds of a plant.
2. I planted the seeds in a little pot and watered them.
3. Then I kept the pot next to my window so that it can have sunlight.

   I took very good care of it and waited for it to grow.

4. After a few days, a little plant grew out of it.

   Within a few days, it grew bigger and turned into a full-grown plant.

Map

(iii) Look at the map and use the key to write 'true' or 'false' for each statement.

- The railway track runs east to west. True
- Mountains cover the northern section of the map. False
- All towns can be accessed by the major highway. True

(B) Time to Think

Read about traffic and road safety signals on the internet and make a list of any 10 rules that you must follow in your notebook.

1. We must always walk on the left side of the road.
2. We must pay attention to the traffic signal.
3. The red light means we have to stop.
4. We must move when the signal is green.
5. We should keep our vehicles maintained and get them insured.
6. We should never run while crossing the road.
7. It is dangerous to get out of a moving vehicle.
8. We must pay attention to road signs.
9. Never ride a bike without a helmet.
10. Always obey the speed limit.

Singular and Plural

(iii) Write the plural forms of the given singular nouns and state weather a noun is regular or irregular. The first one is done for you.

Noun	**Plural**	**Noun form**
tooth	teeth	irregular
wife	wives	irregular
hero	heroes	regular
city	cities	regular
sheep	sheep	irregular
wish	wishes	regular
child	children	irregular

Spelling

(iv) Rearrange the given words and learn their spelling.

nela	lane
gnsial	signal
abrin	brain
ehlevic	vehicle
cootys	scooty
asef	safe

(B) Grammar

(ii) Make two sentences of your own using 'this', 'that', 'these' and 'those' each in your notebook.

This	This is my house.
	This place is dirty.
That	That girl is my sister.
	That is my school.
These	These statements are incorrect.
	These girls are very brave.
Those	Those are my clothes.
	Those children are very smart.

(iv) Underline the verbs that show the past continuous tense.

- The spectators <u>were clapping</u> for the winning ream.
- Mr. Riaz <u>was waiting</u> for his colleagues outside the coffee shop.
- The girls <u>were eating</u> the scrumptious potato quiche.
- The gardener <u>was watering</u> the plant.
- They <u>were going</u> to spend the whole weekend watching movies.

Question Words

v. Choose the correct question words to complete the sentences.

- **(What\Where)** Where is your name written?
- **(Why\How)** How long will you take to submit my application?
- (**When\Whose)** Whose salary slip is it?
- **(Why\What)** What are we supposed to do in this question?
- **(Who\How)** Who created this masterpiece?
- **(Whose\Why)** Why isn't the website loading?
- **(Where\Who)** Please let me know where the street number 10 is located.

Hyphen

(vii) Identify and underline the hyphenated compounds words in the following sentences.

- The mid-term exams were held last month.
- Looking after a baby is a full-time job.
- The information in the brochure was not up-to-date.
- My mother-in-law cooks amazingly delicious food.
- Two-thirds of the Earth is covered with water.

4) Writing

A. Guided Writing

(iii) Zoha has written a letter to her brother requesting him to take precautions during illness. She has written half a letter and is confused how to complete it. Help her complete the letter.

36-B-ABC

Karachi

November 14, 2020

Dear Faisal,

Assalaam-u-Alaikum! How are you, my strong brother? Hey! Congratulations on getting a new job. May Allah (SWT) bless you with success in every new chapter of your life. Ameen. As you know that weather has changed and you should take complete precautions during your illness. Keep yourself warm by wearing woolen clothes and cover your head with a cap when you go outside. In this severe weather you should keep your body hydrated by drinking a lot of fluids. Take hot soup and joshanda for your throat. It will soothe you and give you energy. Eat fruits and vegetables to boost your immunity. Please write me back and inform me about your health. See you soon. Inshallah.

Your loving sister,

Zoha

(B) Creative Writing

Write a letter to your friend about the importance of traffic rules in your notebook.

36-B-ABC

Karachi

November 15, 2020

Dear Naila,

Assalaam-u- Alaikum! How are you, my dearest friend? Congratulations on getting a new bicycle! I am really happy that you got the same bicycle you wanted for yourself. Now you can easily go where ever you want.

But please, before you go out on the road, try to learn some important traffic rules. As you know, these rules are made for our safety. First of all, get yourself a helmet and never ride your bicycle without it. Then, learn some basic road safety rules. You should ride it on your side. By following the signal lights, we can avoid accidents. I know you are a responsible girl and always follow the rules. Whenever standing on a signal, leave the zebra crossing open for pedestrians. By following these simple rules, we can save lives. These rules are for our safety and well-being. Hope to see you soon!

Your friend,

Nadia

Chapter 14

Wise

1) Oral Communication

What do these non-verbal cues tell you? Identify and write them in the given boxes.

1. Quiet 2. Well done 3. Superb

4. Let me think

A. Comprehension Time

i. Answer these questions.

- The seas, sky, sun, moon, flowers, flakes of snow and fireflies.
- We should thank Allah (SWT) by taking care of all the things he has blessed us with.
- Yes, because the poem is all about the beautiful creations of Allah (SWT). He created the things for humans. So, we should be thankful for each and every beautiful thing whether it is big or small made by Allah (SWT).

Map Reading

(ii) **The sailors are trying to reach Treasure Island. Read the map of the island carefully and answer the questions.**

- Which direction is the sailor's ship coming from?
  The sailor's ship is coming from the east.
- What is between Lava Rock and Monkey Business Island?
  Buzzard Beach and Treasure Island are between them.
- Where is Lava Rock?
  Lava Rock is in the west.
- On which island are monkeys?
  Monkeys are on Monkey Business Island.

B. Time to Think

Search the internet and read different poems on creations of Allah (SWT) with correct pronunciation. Write down your favourite one in your notebook. Also write why you like the poem.

"Poem"

I have learnt from Allah's creation

This really beautiful sensation

From creation of his world and hour

To the tongues taste of sweet and sour

He created us from dust and water

To the fresh forest fountains

He created trees and seas

And we use all these for our needs

From the creation of animals and the flowers

To the loud thunder and lightning power

He created the sun and the moon

So, our days and nights cannot gloom

- I like this poem because of the selection of the words and vocabulary used to describe Allah's (SWT) creations.

3) Aspects of Language

A. Vocabulary

(ii) Write the past and past participles of the given verbs.

present	**past**	**past participles**
play	played	played
talk	talked	talked
accept	accepted	accepted
believe	believed	believed

4) Grammar

Question Words

(ii) Now make three questions of your own using the question words given above in your notebook.

When When are you coming back home?

How many How many books do you have?

How much How much money did you borrow?

(iv) Write four questions of your own using 'do' and 'does' in your notebook.

Do Do you like to swim?

Do you want to go there?

Does Does she like chocolate?

Does he go to the library?

(vi) Below are some sentences which are all jumbled up. Rewrite them in correct order using connectors.

First, put some diced mangoes in a blender. Then, add some sugar and milk. Next, blend it well. Finally, add ice cubes and serve it with toppings.

Simple Future Tense

(viii) Change the following sentences into the simple future tense and rewrite them in your notebook.

- The carpenter will build the cupboards.
- The train will leave the station.
- My grandma will knit a sweater.
- The fisherman will catch the fish from the riverside.
- Faizan will buy meat from the butcher for BBQ.

Type of sentences

(xii) Read the given sentences and write their correct types in the blanks.

- Bring me a spoon. **Command**
- I am really going to miss this time! **Exclamatory**
- Turn right to that road. **Instructional**
- You did a great job**! Exclamatory**
- Cook this egg for a few minutes**. Instructional**
- Show me your book**. Command**

(xiii) Write three instructional sentences, commands and exclamatory sentences each in your notebook.

Instructional sentences

(1) Add milk and sugar and blend it.
(2) Save the document and put it in a folder.
(3) First press the power button and then set it.

Commands

(1) Don't touch the buttons.
(2) Bring some water for me.

(3) Wash the clothes.

Exclamatory Sentences

(1) Wow! It's beautiful.
(2) What lovely weather!
(3) Bravo! You did it.

(4) Writing

(ii) Now write the central idea of the second stanza in your notebook.

In this stanza, the poet has put light on the wisdom and planning of Allah (SWT). The way the moon revolves around the earth. The sun rises and sets at a perfect time every day. The way the solar system works. It's all very well planned and balanced. There is only one who could make things with this perfection and that is Allah (SWT).

(iii) List four pairs of rhyming words and use them to write a simple poem on nature.

tree	sky	fuss	star
free	cry	us	far

Allah made tree

It's for free

Don't make a fuss

He made us

Look at the sky

Do not cry

Don't create a fuss

He made us

Allah made star

Do not go far

Don’t make a fuss

He made us.

(B) Creative Writing

Write a paragraph on ’Blessings of Allah (SWT)’ in your notebook.

Allah (SWT) has blessed us with uncountable things. Starting from the sky, the earth, the sun, the moon and the whole solar system. If we pay attention and think about these things, we realize that each and everything has a purpose. That purpose is to serve us. The sun gives us light and energy. The moon makes the night luminous. Apart from that, it plays a remarkable role in making our home planet more livable. The trees give us food, shelter, wood, clean air and many more. The animals around us play a vital role in our lives. From food to travelling, they do a lot for us. The wind keeps us alive. The food which grows from the ground. The water and gases like oxygen are very important for us. We can’t live without them.

Then our body. If we look at the human body, it’s just perfect. Everything is balanced and in harmony. There are thousands of blessings that are difficult to put in a short essay but if we think, we’ll find that each and everything we have been blessed with is serving us. From tiny things to the bigger things. We should thank Allah (SWT) with every breath and to show gratitude we should respect and take care of our blessings.

Review 4

1) Oral Communication

i. Write four words with three-syllables or four-syllables each.

Three-syllable words	Four-syllable words
fantastic	satisfaction
athletic	separation
establish	situation
basketball	stability

ii. Read the given sentences and circle the correct intonation.

Open the door! Rising / (Falling)

Why are you late for the meeting? Rising / (Falling)

We should drink eight glasses of water every day. (Rising) / Falling

Put your jacket in the cupboard. Rising / (Falling)

iii. Share how you would express your joy on securing first position in the class.

First of all, I will thank Allah (SWT). Then, I will tell my parents and thank them for being there with me in every difficulty. I will thank my teachers for giving me enough knowledge to secure this position. Finally, I will give a treat to my friends and family.

iv. Share how you would seek attention of your parents when you want to buy something.

I will try to convince them about the thing I want. I will tell them every positive use of the thing and how it is going to benefit me. I will also promise them to study hard and be a good kid if they buy me what I want.

2) Reading and Critical Thinking

i. Define the given elements of a story.

Characters: A person, animal or anything personified. There can be one main character or many.

Plot: The plot consists of the events that happen in the story.

Solution: The resolution is at the end of the story. It comes after the conflict is solved.

ii. Look at the calendar and answer the following questions.

- **How many Wednesdays are there in the month of June? 5**
- **How many Sundays are there in the month of June? 4**
- **What is your date of birth? 25th July**

3) Aspects of Language

i. Change the number of the given nouns.

Singular	Plural	Singular	Plural
house	houses	story	stories
dish	dishes	fish	fish
knife	knives	tomato	tomatoes
boy	boys	mouse	mice

ii. Write the past and past participles of the given verbs.

Base form	Past	Past participle
earn	earned	earned
destroy	destroyed	destroyed
count	counted	counted
plan	planned	planned

iii. Write two sentences of your own using the present continuous tense and simple past tense.

Present Continuous Tense

She is writing a story.

They are playing football.

Simple Past Tense

He did not go to school yesterday.

She cleaned the house.

iv. Make questions using the given question words.

When: When do you get up?

How many: How many boys are there in the school?

How much: How much did you pay for this?

v. Circle the adverbs of time in the given sentences.

- We are having lunch now.
- They will meet later.
- You should have a bath daily.
- I am going to visit the Lahore Museum tomorrow.

vi. Make contractions of the following words.

Words	Contraction
has not	hasn't
she will	she'll
I have	I've

4) Writing

Write an expository paragraph of your own on how you help your parents at home.

Whenever, I am home, I try to help my parents. I help my mother daily with the chores. I help her serving the food. I put the plates and other utensils on the dining table. Once everybody is done with the food, I clean the table and wash the dishes. I sometimes help her hang the clothes outside. I press the clothes of my siblings and father. I water the plants. I help her with cooking. On weekends, I help my father clean his car. I go with him to the market and help him in grocery shopping. I help him with the plants. Sometimes when my father is really tired, I make him tea and take care of him. I love helping my parents. It gives me immense pleasure.

ii) Write a fable of your own using the elements of a fable in your notebook.

Many years ago, there lived a little boy near the jungle. He went to the jungle to collect wood every day. On the way to the jungle there was a lake. A crocodile lived there. The crocodile wanted to eat the boy but every time the boy survived his attack. One day, the boy was crossing the lake and he saw the crocodile was sitting on the bank. The boy was astonished and asked him, “Hey croc, what is wrong with you today?” The crocodile told him that he was in pain because a thorn got into his foot and he could not even walk. The boy was very kind. He decided to help the crocodile. He went near him and took the thorn out of his foot. The crocodile was relieved. He said thanks to the boy and apologized for his behaviour.

AFAQ SUN SERIES

Based on Single National Curriculum 2020

Science 4
Keybook



Term 1 Periodic Unit 1

Unit 1A: Characteristics and Life Processes of Living Organisms (Animals)

A. Choose the correct option.

1. Which of the following is **not** an invertebrate?
   a. Snail b. Fish
   c. Jelly fish d. Oyster
   The correct answer is b.
2. The_____separates vertebrates from invertebrates.
   a. Skeleton b. Heart
   c. Backbone d. Brain
   The correct answer is c.
3. The_____control(s) all the systems of the body.
   a. Lungs b. Heart
   c. Brain d. Stomach
   The correct answer is c.
4. Which of these organs work like filter?
   a. Heart b. Lungs
   c. Kidneys d. Brain
   The correct answer is c.
5. Cardiac muscles are found in_____.
   a. Blood vessels b. Ureter
   c. Heart d. Elementary canal
   The correct answer is c.

B. Write "True" or "False".

1. Animals are divided into two major groups.
   True
2. All vertebrates have an exoskeleton.
   False
3. Invertebrates cover 97% of all animal species.
   True
4. The main function of kidneys is the digestion of food.
   False
5. Skeletal muscles are voluntary in actions.
   True

C. Answer the following questions briefly.

1. Compare the two major groups of animals. Also give examples.
   The major groups of animals are vertebrates and invertebrates. Vertebrates have backbone while invertebrates do not have backbone. Horses, cows, cats, birds, frogs and snakes are examples of vertebrates. Insects, starfish, octopuses and worms are examples of invertebrates.
2. How is the skeleton of a cockroach different from that of an oyster?
   The exoskeleton of a cockroach is made of chitin, while that of an oyster is made of calcium carbonate.
3. Write the name of one voluntary muscle and one involuntary muscle. Leg muscle is voluntary while the heart muscle is involuntary.
4. Describe how bones and muscles work together.
   Skeletal muscles are attached to bones by tendons. When we move muscles, bones move with them.
5. Predict what would happen if a person does not have teeth.
   If a person does not have teeth, they would not be able to chew solid food.

D. Answer the following questions in detail.

1. Differentiate between vertebrates and invertebrates.
   Differences between vertebrates and invertebrates

Vertebrates	Invertebrates
The animals which have a vertebral column or backbone in their skeleton are known as vertebrates.	The animals which do not have a vertebral column or backbone in their skeleton are known as invertebrates.
Vertebrates have an internal skeletal system that helps them in movement and provides support.	Invertebrates have exoskeleton compose of chitin or calcium carbonate system which provides enough support to their bodies.
Vertebrates are usually bigger in size.	Invertebrates are usually smaller in size.
The body structure of vertebrates is more complex and organized. They have special organs to carry out different functions.	They do not have complex structures.
Examples: Horses, birds, frogs, snakes and human, etc.	**Examples:** Insects, starfish, octopuses and worms, etc.

2. Describe the structure and function of any four human organs.

Structure and function of organs

The four major organs in an animal's body are as follows:

Heart

It is a pumping organ. It circulates blood throughout the body, carrying nutrients and oxygen with it. It is located under the rib cage, between the lungs slightly towards the left. It is the most important part.

Lungs

They help us in breathing. When we breathe, we take in oxygen from the air around us. This air reaches our lungs. The exchange of oxygen between blood and air takes place in lungs. The blood then distributes this oxygen to all parts of the body.

Kidneys

The main role of kidneys is to excrete all waste material from the body. They work like filters. They clean blood, and waste materials come out of the body in the form of urine.

Stomach

The stomach digests the food we eat. It breaks the food into small particles by excreting various juices that helps in the digestion of food. Our body gets energy to work from this digested food.

Note: Answer may vary as per students' choice.

3. Explain diversity of life. Suggest at least two ways to protect it.

Diversity in life

All animals are different and unique in their own ways. A camel is a tall animal like a giraffe, but both live in different habitats and environments and both have different features to survive in their habitat. Camels can survive in a desert but giraffes cannot. Similarly all other animals, small, big, tall or heavy, have their own characteristics and features. These differences make our world diverse. This diversity of life is called biodiversity.

Ways to protect diversity

Unfortunately, some human activities are directly or indirectly affecting the diversity of life. We should adopt the following ways to protect this diversity.

1. Ban hunting of endangered animals.
2. Stop polluting the natural habitats of animals.

Note: Answer may vary as per students' choice.

Unit 1B: Characteristics and Life Processes of Living Organisms (Plants)

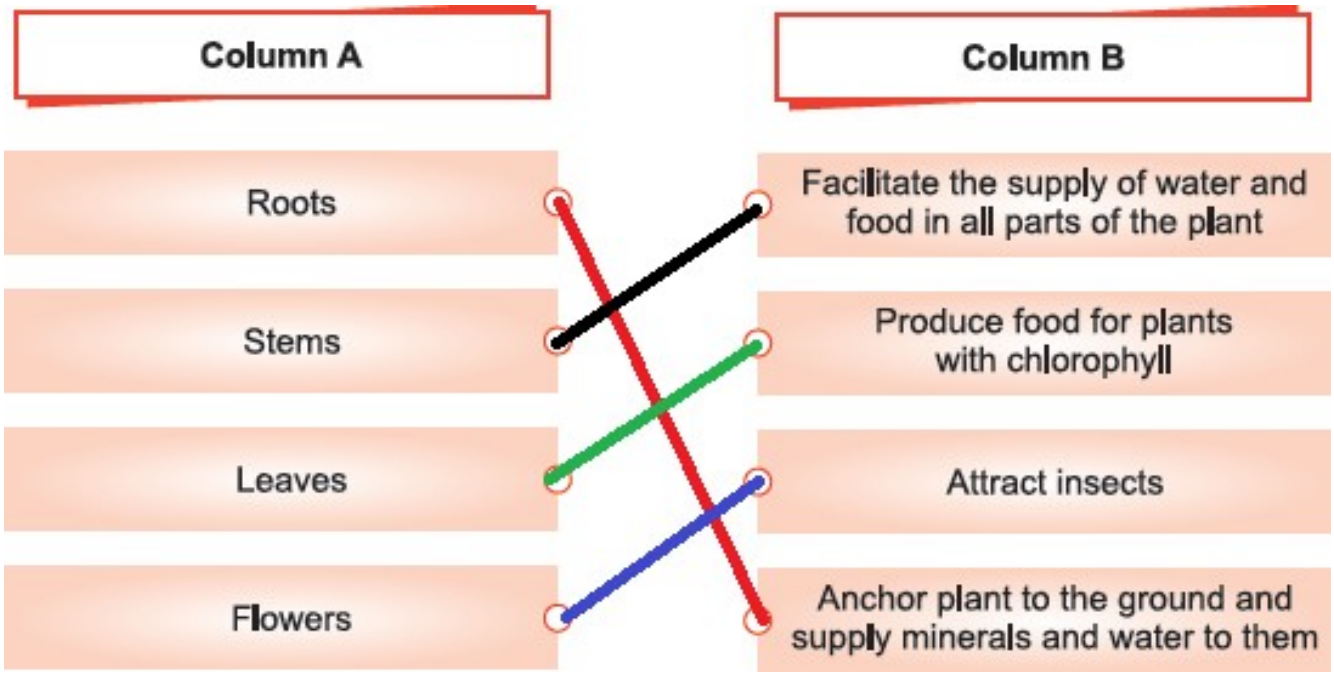
A. Choose the correct option.

1. Which of the following plants produce spores?
   a. Moss b. Conifer
   c. Wheat d. Sunflower
   The correct answer is a.
2. Flowering plants have_____for reproduction.
   a. Spores b. Leaves
   c. Seeds d. Roots
   The correct answer is c.
3. Plants are anchored in soil with_____.
   a. Roots b. Stem
   c. Flowers d. Leaves
   The correct answer is a.
4. Plants make food with the help of_____present in leaves.
   a. Nectar b. Carbon dioxide
   c. Chlorophyll d. Oxygen
   The correct answer is c.
5. Flowers usually develop into a_____.
   a. Seed b. Leaves
   c. Stem d. Fruit
   The correct answer is d.

B. Write "True" or "False".

1. Plants are grouped as flowering and non-flowering plants.
   True
2. Mosses grow in moist and shady places.
   True
3. The stem is the only underground part of a plant.
   False
4. Conifers have needle-like leaves.
   True
5. The function of leaves is to prepare food only.
   False

C. Match the parts of a plant in column A with their functions in column B.



D. Answer the following questions briefly.

1. Classify the non-flowering plants with examples.
   Non-flowering plants are of two types: spore-bearing and seed-bearing. Spore-bearing non-flowering plants are mosses and ferns while seed-bearing non-flowering plants are conifers.
2. Which plants produce spores?
   Non-flowering plants such as mosses and ferns produce spores.
3. Compare how the stems of big trees are different from small plants. Big trees have thick, very hard brown stems, while small plants have soft greenstems.
4. Find out the purpose of chlorophyll in plants.
   Chlorophyll is a green pigment that helps in food preparation. Plants cannot make food in the absence of chlorophyll.
5. Other than preparing food, explore what other functions leaves perform.
   Other than food preparation, leaves remove excess water from a plant and exchange gases through stomata.

E. Answer the following questions in detail.

1. Differentiate between flowering and non-flowering plants.

Differences between flowering and non-flowering plants

Flowering plants	Non-flowering plants
The plants which have flowers are called flowering plants.	The plants which do not produce flowers are called non-flowering plants.
They have seeds inside them.	They have naked seeds or spores.
They reproduce from flowers.	They reproduce from seeds or spores.
Examples: Sunflower, rose and mustard plants, etc.	Examples: Mosses, ferns and conifers, etc.

2. Describe the structures and functions of roots and stems.

Structure and function of roots and stems

The structure and function of roots and stem are given below:

Roots

Roots are an important underground part of a plant. Roots are the first part that grows out when a new plant develops from a seed. They have two main functions: to collect water and minerals from the soil, and supply it to all parts of a plant. These help in the growth and nourishment of plants. Their other function is to anchor the plant in the ground. Without roots, a plant cannot support itself.

Stems

Another important part of a plant is the stem. It supports the plants above the ground. In big trees, it is thick, very hard and brown in colour. It is called the bark. In small plants, it is soft and green in colour. The stem bears leaves and flowers of the plant. It also helps in the distribution of minerals and water from roots to leaves and flowers, and supplies the food prepared by the leaves to all parts of the plant. It grows upward, to have the maximum amount of sunlight so that plants can prepare their food.

3. Find out what would happen if:

a) All plants wither b) A plant is moved to a different habitat

All plants wither

If all plants wither, then all living organisms will also die. Plants provide food

to all living organisms. If there is no plant, there will be no food for living organisms.

A plant is moved to a different habitat

If a plant is moved to a different habitat then it is not able to grow properly in new habitat. A plant needs suitable conditions for germination and growth. If those conditions are not available, a plant will not be able to grow. For example mosses grow in moist and shady places so they cannot grow in dry places.

Term 1 Periodic Unit 2

Unit 2: Ecosystems

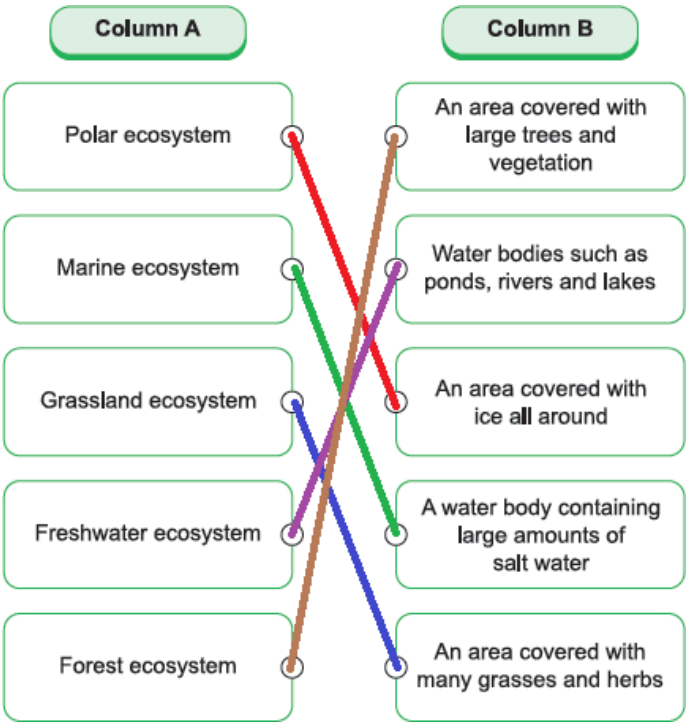
A. Choose the correct option.

1. Which of the following is a biotic component of an ecosystem?
   a. Soil
   b. Water
   c. Bacteria
   d. Air
   The correct answer is c.
2. A/An_____is the interaction between living and non-living factors.
   a. Environment
   b. Ecosystem
   c. Habitat
   d. Population
   The correct answer is b.
3. Bacteria, fungi and earthworms are_____.
   a. Producers
   b. Decomposers
   c. Carnivores
   d. Predators
   The correct answer is b.
4. All of the following are examples of the predator-prey relationship except _____.
   a. A cat and a mouse
   b. A grasshopper and a grass
   c. An owl and a mouse
   d. A tiger and a deer
   The correct answer is b.
5. A food chain always starts with plants because they_____.
   a. Are green
   b. Are eaten by animals
   c. Can prepare their own food
   d. Are eaten by humans
   The correct answer is c.

B. Write “True” or “False”.

1. An ecosystem refers to a place where organisms live.
   False
2. Deserts are important for the global carbon cycle.
   False
3. Polar bears have a thick layer of fur to survive in cold regions.
   True
4. A food chain always starts with a producer.
   True
5. Only biotic components of an environment are responsible for maintaining a balance in an ecosystem.
   False

C. Match the ecosystems in column A with their descriptions in column B.



D. Answer the following questions briefly.

1. Differentiate between an environment and an ecosystem.
   The difference between an environment and an ecosystem:

Environment	Ecosystem
The surroundings where an organism lives is known as an environment.	A community where living organisms interact with the physical environment is known as an ecosystem.
Take your classroom for example. It has a specific environment for studying and it includes your teacher, classmates, books, tables, chairs, writing boards, etc.	Swamps, forests, grasslands, oceans, etc. are examples of different ecosystems.

2. Explore the difference between freshwater and marine ecosystems?
   The difference between freshwater and marine ecosystems:

Freshwater ecosystem	Marine ecosystem
The freshwater ecosystem has fresh water with low salt content.	The marine ecosystem has high salt content.
Water bodies such as ponds, rivers, streams and lakes make up freshwater ecosystems.	Water bodies like oceans and seas make up the marine ecosystem.

3. Find out and write where Polar Regions are located on Earth.
   The North Pole is at the top of the Earth in the Arctic. The South Pole is at the bottom of the Earth in the Antarctica.
4. Why are plants called producers?
   Plants are called producers because they prepare their own food and provide food for all other organisms.
5. Justify herbivores are primary consumers with examples.
   Herbivores eat plants directly so they are primary consumers. A grasshopper feeds on leaves so it is an herbivore as well as a primary consumer.

E. Answer the following questions in detail.

1. Why is it necessary to maintain a balance in an ecosystem?
   Maintaining a balance in an ecosystem
   In any ecosystem, there is more than one type of living organisms. For example, in a forest ecosystem, not only plant species are found but also various animals ranging from giant elephants to small earthworms in the soil. Each living organism plays its role in maintaining a balance in an ecosystem. It is a very delicate balance and the slightest disturbance can destroy the whole ecosystem. A healthy ecosystem depends on a healthy environment and a delicate balance among all its members and the environment. If anything disturbs the balance, the entire ecosystem and all of its members will be affected.

2. Define consumers and their types.
   Consumers
   All animals are consumers because they cannot make their own food like plants. Different animals eat different types of food. Some eat plants while others only eat meat. There are some animals that eat both.

Types of consumers

We can group them according to the food they eat. The groups are:

a) Herbivores
b) Carnivores
c) Omnivores

a) Herbivores

The group of animals that only eats plants is called herbivores, such as goats, giraffes, sheep, rabbits, etc.

b) Carnivores

The other group of animals that only eats other animals is called carnivores. Lions, cats, frogs, sharks, etc. are carnivores.

c) Omnivores

The group of animals that eats plants as well as animals is called omnivores. Bears, gorillas, eagles, humans, etc. are omnivores.

All consumers depend on plants or other animals for their food. On the basis of their dependency, consumers are divided into three types:

a. Primary consumers
b. Secondary consumers
c. Tertiary consumers

a. Primary consumers

Those consumers which get their food directly from plants are primary consumers. For example elephants, sheep, cows, grasshoppers, etc.

b. Secondary consumers

Animals from this category eat primary consumers. For example, a frog eats a grasshopper, a seal eats a fish, a lion eats a deer, etc.

c. Tertiary consumers

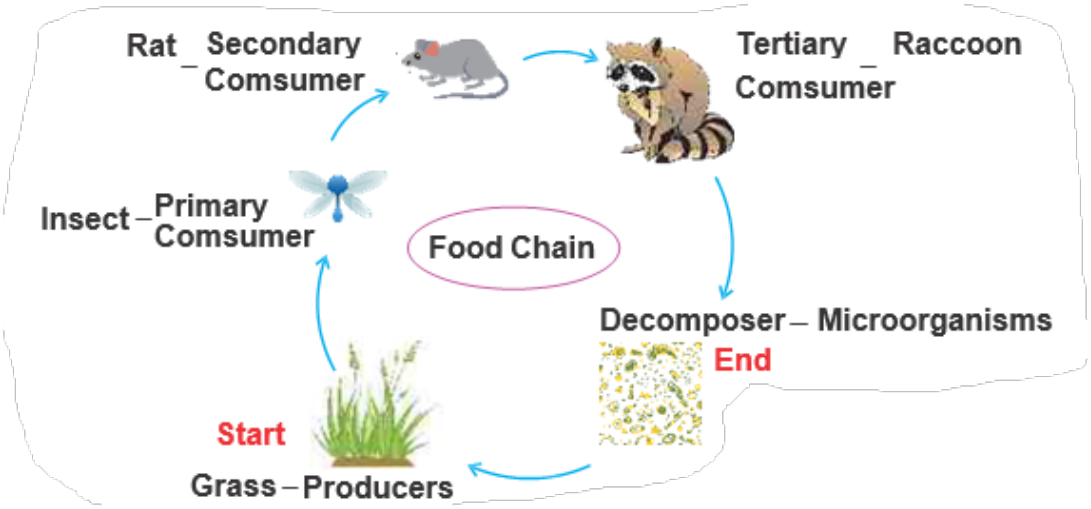
Tertiary consumers get their energy by eating secondary consumers. For example, a shark eats a seal, a snake eats a frog, etc.

3. Describe the interaction among living things for food.

Interaction among living things

All organisms are connected with each other for food. Energy in the form of food is transferred from one group to another. The connection of organisms for the transfer of energy is shown with the help of a food chain.

A food chain always begins with producers and it ends with a decomposer. Have a look at the following food chain.



In the food chain above, plants are at the first level, decomposers at the last level and all consumers are in between. So, energy is being transferred from one level to the other.

Unit 3: Human Health

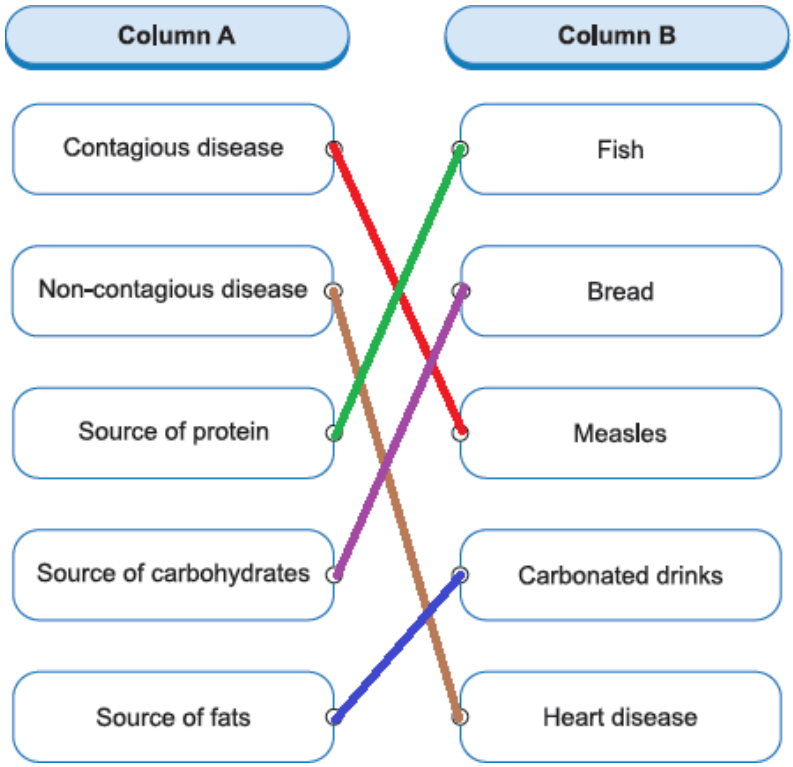
A. Choose the correct option.

1. Which of these is a contagious disease?
   a. Cancer
   b. High blood pressure
   c. Chicken pox
   d. Diabetes
   The correct answer is c.
2. Which of the following practices can transfer germs into your body?
   a. Wearing a mask
   b. Washing hands
   c. Drinking clean water
   d. Eating from a street vendor
   The correct answer is d.
3. All of the following are healthy activities except:
   a. Eating junk food
   b. Taking a bath regularly
   c. Exercising daily
   d. Playing outdoor games
   The correct answer is a.
4. A rich source of carbohydrates is _____.
   a. Butter
   b. Rice
   c. Sweets
   d. Milk
   The correct answer is b.
5. Proteins are important for our body because they _____.
   a. Make our bones strong
   b. Improve our digestive system
   c. Make our muscles strong
   d. Provide us with instant energy
   The correct answer is c.

B. Write "True" or "False".

1. There are three components of a balanced diet.
   False
2. Four hours of daily sleep is enough for good health.
   False
3. Germs cannot transfer from food to our body.
   False
4. Fats should be taken in large proportions.
   False
5. Personal belonging can be shared with a person suffering from a heart disease.
   True

C. Match column A with column B.



D. Answer the following questions briefly.

1. Define illness.
   An unhealthy condition of the body or mind is called illness.
2. List the differences between contagious and non-contagious diseases with examples.
   Differences between contagious and non-contagious diseases:

Contagious diseases	Non-contagious diseases
Diseases that can transfer from one person to another are called contagious diseases or communicable diseases.	Diseases that can transfer from one person to another are called non-contagious diseases or non-communicable diseases.
Examples: Hepatitis, influenza, corona etc.	**Examples:** Cancer, diabetes etc.

3. Why is it advised to wash hands frequently?

Washing hands removes germs. That is why it is advised to wash them frequently.

4. What are factors that promote good health?
   The following factors promote good health:
   - having a balanced diet
   - drinking clean water
   - exercising regularly
   - getting enough sleep
5. What are symptoms of fever?
   The symptoms of fever are:
   - high body temperature
   - muscle ache
   - sweating
   - shivering
   - headache

E. Answer the following questions in detail.

1. Define a balanced diet. Name its components. Also explain the different food groups.

Balance diet

Consuming different varieties of food in the right proportions is known as balanced diet.

A balanced diet helps in providing nutrients according to the needs and demands of the body. It also makes our body strong enough to fight against germs.

Components of a balanced diet

A balanced diet may contain fruits, vegetables, grains, milk and meat.

Food groups

Based on these sources, we divide food into different groups. Each food group contains nutrients to fulfill our daily needs. These nutrients are:

a) Carbohydrates
b) Proteins
c) Vitamins and minerals
d) Fats

a) Carbohydrates

Grains such as rice, bread, cereals, etc. are a rich source of carbohydrates.