

SCIENCE (CLASS-1)

CHAPTER-1 – A GREEN WORLD

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (a)

B. Fill in the blanks :

1. trees 2. trunk 3. climbers 4. creepers 5. seed

HOT QUESTIONS

C. Lotus

D. Ashoka tree

Let us Try

E. In the given word search, find the names of eight plants.

V	U	T	S	R	M	I	N	T
P	I	N	E	Q	M	N	O	P
E	W	X	B	R	I	J	K	L
A	Y	N	E	E	M	P	Z	X
R	E	D	A	G	H	A	D	Y
A	B	C	N	T	U	L	S	I
B	A	N	Y	A	N	M	C	Z
R	O	S	E	A	Z	B	Y	X

F. Do it yourself.

G. Do it yourself.

A Life Skill

H. Plants are our best friends. They give us many things and take care of us. Do you take care of them ? Tick (✓) the ones you do.

1. ✗ 2. ✗ 3. ✓ 4. ✗

CHAPTER-2 – FOOD FROM PLANTS

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (b) 4. (c)

B. Fill in the blanks :

1. plants 2. cereals 3. pulses 4. green

C. Do it yourself.

HOT QUESTIONS

D. We all come from plants. Write our names :

Let us Try

- E. Do it yourself.
F. Write O for one seed, M for many seeds and N for no seeds.

M O N
N M O

A Life Skill

- G. Tick (✓) the statement you feel incorrect.
1. ✓ 2. ✓ 3. ✓ 4. ✗ 5. ✗

ACTIVITY TIME-I

- A. In the word search, find six food items which we get from plants.

M	I	N	T	R	M	R	I	C	E
A	I	N	E	Q	M	N	O	P	P
N	W	X	B	R	I	J	K	L	R
G	Y	P	O	T	A	T	O	X	J
O	E	E	A	G	H	A	D	Y	B
A	B	A	N	T	U	L	S	I	T
R	U	B	B	E	R	M	C	Z	A

- B. Do it yourself.
C. We all come from plants. Write our names.
1. sugar 2. pumpkin 3. green chilli
D. Fill in the missing letters to get the names of these seeds.
1. PEPPER 2. CORN 3. MANGO 4. RICE

CHAPTER-3 – THE ANIMALS WORLD

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (c) 3. (b) 4. (a)
B. Fill in the blanks :
1. big 2. small 3. two, one 4. land 5. octopus

HOT QUESTIONS

- C. It is our national bird. It loves to dance in rain. It eats seeds and worms. Name it.
PEACOCK

Let us Try

- D. Do it yourself.
E. Do it yourself.

A Life Skill

- F. We should be kind to animals. Write yes or No for each picture.
1. Yes 2. No 3. Yes

CHAPTER-4 – FOOD AND SHELTER FOR ANIMALS

Let us Answer

A. Tick (✓) the correct answer.

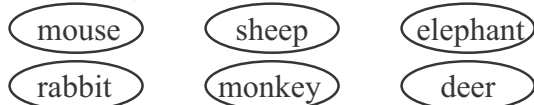
1. (b) 2. (c) 3. (b) 4. (a)

B. Fill in the blanks :

1. food 2. bear 3. frog

HOT QUESTIONS

C. In this list, draw a red circle around the animals that eat plants fruits or nuts.



Let us Try

D. Tell the animals their correct homes.

NEST POND DEN
HOLE WEB BURROW

E. Do it yourself.

F. Do it yourself.

A Life Skill



CHAPTER-5 – MY BODY

Let us Answer

A. Tick (✓) the correct answer.

1. (a) 2. (c) 3. (b) 4. (c) 5. (b)

B. Fill in the blanks :

1. nose 2. hands 3. eyes 4. ears 5. skin 6. tongue

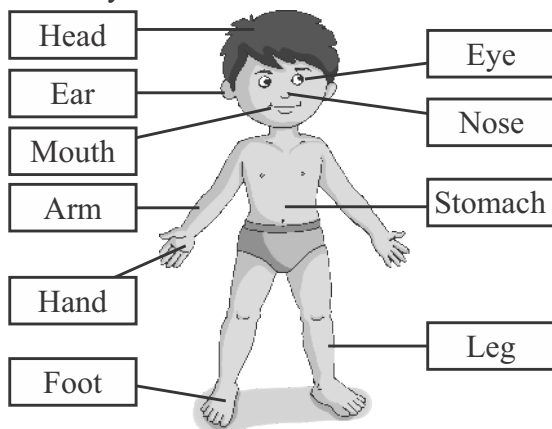
C. Do it yourself.

HOT QUESTIONS

D. 1. SKIN 2. EYES, EARS, HANDS

Let us Try

E. Label the body parts of this boy.



F. Do it yourself.

A Life Skill – Do it yourself.

ACTIVITY TIME–II – Do it yourself.

CHAPTER-6 – OUR NEEDS

Let us Answer

A. Tick (✓) the correct answer.

1. (a) 2. (b) 3. (a) 4. (c)

B. Fill in the blanks :

1. food 2. milk 3. clothes 4. house 5. neat, clean

C. Answer the following questions :

1. We need food to stay alive.
2. The clothes protect us from heat, cold, wind, rain etc.
3. Our house protects us from heat, cold, rain, wind, thieves and wild animals.
4. We rest and sleep in a bed room.

HOT QUESTIONS

D. Name the three meals we eat in a day.

Breakfast Lunch Dinner

Let us Try

E. Do it yourself.

F. Do it yourself.

A Life Skill

G. Tick (✓) what you do.

1. ✓ 2. ✓ 3. ✓ 4. ✗

H. Plants are our best friends. They give us many things and take care of us. Do you take care of them ? Tick (✓) the ones you do.

1. ✓ 2. ✓ 3. ✓ 4. ✗

CHAPTER-7 – KEEPING FIT

Let us Answer

A. Tick (✓) the correct answer.

1. (a) 2. (b) 3. (b)

B. Fill in the blanks :

1. exercises 2. straight 3. strong 4. eight

C. Answer the following questions.

1. We must exercise everyday because it keep us healthy and strong.
2. When we play all day long, we get tired and we need rest.

HOT QUESTIONS

D. Match the pictures.

1. (d) 2. (c) 3. (a) 4. (b)

E. Do yourself.

Let us Try – Do yourself.

A Life Skill – Do yourself.

CHAPTER-8 – SAFETY FIRST

Let us Answer

A. Circle the correct words.

1. should 2. left 3. clear 4. safe 5. do not

B. Match the following.

1. (c) 2. (d) 3. (a) 4. (b)

C. Answer the following questions :

1. Safety means to stay away from harm.
2. We should cross the road at the zebra crossing.
3. We should stand in a queue while waiting for a bus.

HOT QUESTIONS

D. What does this sign stand for ?

DANGER

Let us Try

E. Find out what the following road signs means.

Zebra Crossing No Parking No Horn School Ahead

F. Do it yourself.

A Life Skill – Do it yourself.

CHAPTER-9 – GOOD HABITS

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (a)

B. Fill in the blanks :

1. Do not 2. Do 3. Do 4. Do 5. Do

C. Write the correct words from the box.

1. neatly 2. healthy 3. nail clippers

D. Answer the following questions.

1. When we play or work, some parts of our body become dirty.

2. If we keep ourselves dirty, we may fall ill.
3. We must trim our nails because they may have dirt in them. This dirt may enter our body, and make us ill.
4. We must brush our teeth to keep them safe from decaying.
5. We must take a bath every day to keep our body neat and clean.

HOT QUESTIONS

E. Do it yourself.

Let us Try

- F. Do it yourself.
 G. Do it yourself.
 H. Do it yourself.

ACTIVITY-III

A. This is Reema's house. Can you help her to fill in the missing letters and write the names of the rooms ?

DINING ROOM

BED ROOM

DRAWING ROOM

BATH ROOM

KITCHEN

- B. Do yourself.
 C. Do yourself.

CHAPTER-10 – WE NEED AIR

Let us Answer

A. Tick (✓) the correct answer.

1. (a) 2. (c) 3. (b) 4. (b)

B. Fill in the blanks :

1. air 2. bigger 3. moving 4. storm

C. Answer the following questions :

1. As we blow air into a balloon, it becomes bigger in size, because it fills up the space inside the balloon.
2. Four uses of air are as follow :
 - (i) All living things need air to breathe.
 - (ii) Moving air can dry clothes.
 - (iii) Fire needs air to burn.
 - (iv) Air helps us in flying kits.

HOT QUESTIONS

D. A blown up balloon is heavier than a balloon without air. Why ?

A blown up balloon is heavier than a balloon without air because air present inside the balloon has also weight. It increases its weight.

E. Do it yourself.

Let us Try – Do it yourself.

CHAPTER-11 – WE NEED WATER

Let us Answer

A. Do it yourself.

B. Write 'T' for true statements and 'F' for false statements.

1. True 2. False 3. True 4. False 5. True

C. Answer the following questions :

1. Four uses of water are as follows :

- (i) We need water to drink.
- (ii) We need water to take a bath.
- (iii) We need water to cook food.
- (iv) We need water to put out a fire.

2. The two ways of purifying water are as follows :

- (i) We can boil water to make it pure.
- (ii) We can use a water purifier to make the water clean.

3. We should drink only pure water because unclean or impure water causes several fatal diseases inside our body.

4. When we drink dirty water, we fall ill.

HOT QUESTIONS

D. Do it yourself.

Let us Try – Do it yourself.

A Life Skill – Do it yourself.

CHAPTER-12 – WEATHER

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (b) 4. (c)

B. Fill in the blanks :

1. weather 2. hot 3. woollen 4. paper boats 5. raincoat

C. Answer the following questions :

1. The sun shines brightly. The weather becomes very hot.

2. On a cold day, weather becomes very cold. People wear woollen clothes to keep themselves warm.
3. Strong winds blow on a windy day. Leaves fall from trees.
4. It rains a lot on a rainy day. Everything around us gets wet.

Let us Try – Do it yourself.

CHAPTER-13 – UP IN THE SKY

Let us Answer

A. Tick (✓) the correct answer.

1. b 2. c 3. a

B. Fill in the blanks :

1. sun 2. east 3. west 4. round 5. crescent

C. Answer the following questions :

1. The sun gives us light and heat.
2. When the sun sets, it changes day into night.
3. The stars look tiny because they are very far from us.

HOT QUESTIONS

- D. 1. The moon changes its shape everyday.
2. We see millions of stars at night in the sky.

Let us Try – Do it yourself.

CHAPTER-14 – GOING TO THE MOON

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (b)

B. Fill in the blanks :

1. space 2. spacesuit 3. Rakesh Sharma

C. Answer the following questions :

1. Kalpana Chawla was the first Indian woman to go in space.
2. We can travel to the moon by a spaceship.

Let us Try – Do it yourself.

SCIENCE (CLASS-2)

CHAPTER-1 – PLANTS AROUND US

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (b) 3. (b) 4. (b)

B. Fill in the blanks :

1. trunk 2. bark 3. shrubs 4. herbs 5. branches

C. Answer the following questions.

1. Trees are home to animals, birds and many insects.
2. The names of three herbs are coriander, spinach and mint.
3. Climbers are plants with weak stems. They need support to stand and grow straight. Names of two climbers are money plant and pea plant.
4. Creepers are plants with very weak stem. They creep along the ground. Names of two creepers are pumpkin and bottlegourd.

HOT QUESTIONS

D. cherry

Let us Try

E. Do it yourself.

F. Do it yourself.

G. Identify the tree and fill in the blanks.

1. mango 2. mango 3. strong

A Life Skill

Do it yourself.

CHAPTER-2 – PLANTS GIVE US

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (a) 3. (c) 4. (b) 5. (b)

B. Fill in the blanks :

1. plants 2. cloth 3. wood 4. bamboo 5. plants

C. Answer the following questions.

1. The names of two fruits are mango and apple.
The names of three vegetables are carrot, tomato and cabbage.
2. Cotton and jute are useful to us because they give us fibres to make cloth, sack, ropes. etc.
3. We get gum and rubber from the juice of trees.
4. Names of some plant parts used as medicines are the leaves of tulsi, the leaves of neem and Aloe vera, etc.
5. The names of Five things made from wood are table, chair, door, bed, windows, etc.

HOT QUESTIONS

D. we are flowers.

E. We can use the fallen leaves and dead plants for making compost instead of burning them.

Let us Try

F. Do it yourself.

G. Which plant part are they ? Write R for root, S for stem and L for leaf.

S R L R

H. Do it yourself.

A Life Skill

Do it yourself.

CHAPTER-3 – ANIMALS GIVE US...

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (b) 3. (c) 4. (a) 5. (c)

B. Fill in the blanks :

1. pets 2. leather 3. beehives 4. silkworm 5. domestic

C. Answer the following questions :

1. Animals which we keep at our homes are called Pet animals. The names of two pet animals are dog and cat.
2. Animals which rear at our farms are known as farm animals. Cow, buffalo, goat, bull, sheep, etc. are farm animals.
3. Animals which give us food are cow, buffalo, goat, hen, duck, etc.
4. Animals such as horses, camels, bulls and elephants are used as the means of transport.

HOT QUESTIONS

D. Aman grandparents can have cows, buffaloes, hens and duck on their farm.

E. Do it yourself.

F. Do it yourself.

CHAPTER-4 – ANIMALS IN THE JUNGLE

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (b) 3. (c) 4. (b) 5. (a)

B. Fill in the blanks :

1. jungle 2. dens 3. nests 4. flesh 5. dead

C. Write P for plant-eating animals and F for the flesh-eating animals.

Do it yourself.

D. Answer the following questions :

1. The wild animals live in the jungle.

2. Some animals which rest on or under the trees deer, gorilla and monkeys.
3. Birds make nests to lay eggs and keep their babies safe.
4. Hyenas help to keep the forest clean because they eat the flesh of dead animals.

HOT QUESTIONS

E. I am a wolf.

Let us Try

E. From the wordsearch find the names of ten wild animals and write them in the bubbles.

- | | |
|--------------|------------|
| 1. Crocodile | 2. Lion |
| 3. Wolf | 4. Deer |
| 5. Zebra | 6. Hyena |
| 7. Snake | 8. Giraffe |
| 9. Tiger | 10. Jackal |

ACTIVITY TIME-I

A. In the given wordsearch, some things which we get from plants are given. Circle them and write their names in the correct columns.

Fruits : Apple, Pear, Mango **Vegetables :** Carrot, Potato, Pea **Nuts :** Coconut, Peanut, Walnut **Foodgrains :** Corn, Wheat, Rice

B. Do it yourself.

CHAPTER-5 – BONES AND MUSCLES

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (b) 4. (c)

B. Write the following as true or false :

1. false 2. true 3. true 4. false 5. true

C. Answer the following questions :

1. The bones and muscles are useful to us because they help us to stretch, bend, sit, stand, write, walk, run and play.
2. We should eat healthy food, drink milk and do exercise daily to keep our bones and muscles strong.
3. A posture is the position in which we hold our body when we sit, stand or move.

HOT QUESTIONS

D. What will happen if.

- (a) We will unable to stand erect, walk and run properly. Our bones will not protect our delicate inner organs, like heart, lungs, brain, etc.
- (b) Exercise makes our bones and muscles strong. If we do not do exercise our bones and muscles will remain weak and they will not work properly.
- (c) Milk makes our bones and muscles strong. If we do not drink milk then our muscles and bones will remain weak. We will not healthy and fit to live a happy life.

Let us Try

E. Unscramble the names of these bony pouts of your body and write in the box :

- | | | |
|----------|----------|---------|
| 1. Elbow | 2. Chin | 3. Nose |
| 4. Skull | 5. Wrist | |

- F. Do it yourself.
G. Identify the given sports :
Swimming Running
Lawn Tennis Basketball

A Life Skill

Do it yourself.

CHAPTER-6 – THINK FOOD FIRST

Let us Answer

- A. Tick (✓) the correct answer.
1. (c) 2. (b) 3. (c) 4. (c)
- B. Fill in the blanks :
1. Food 2. energy 3. muscles, bones 4. protective 5. uncovered
- C. Match the columns to complete the sentences :
1. We must visit the dentist regularly.
2. We should eat meals at a fixed hours everyday.
3. We should not eat junk food.
4. We must drink plenty of water.
- D. Answer the following questions.
1. Some foods give us energy. They are called energy-giving foods. Rice, wheat, potato, sugar are examples of some such foods.
2. The foods which protect us from diseases are called protective foods. Examples of such foods are fruits and vegetables.
3. Two healthy eating habits are as follows :
(i) We must wash our hands before and after every meal.
(ii) We should never eat uncovered or stale food.
4. The two ways to keep our teeth healthy are as follows :
(i) We must brush our teeth twice a day.
(ii) We must visit the dentist every six months.
- E. Do it yourself.
F. Do it yourself.
G. Do it yourself.

CHAPTER-7 – HOUSING AND CLOTHING

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (b) 3. (b) 4. (c) 5. (a)
- B. Write the following as true or false :
1. true 2. true 3. false 4. false 5. true
- C. Answer the following questions :
1. We need a house to live in. It protects us from heat, cold, rain and wild animals.
2. Names of two types of temporary houses are huts and caravan.
3. Most jawans and scouts live in tents in their camps.

4. Houses in mountains have sloping roofs because such roofs allow snow and rainwater to slide off easily.

Hot Questions ?

Do it yourself.

CHAPTER-8 – BE SAFE

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (c) 3. (b)
- B. Fill in the blanks :
1. hurt 2. footpath 3. zebra-crossing 4. careful 5. meals
- C. Write the following as true or false :
1. true 2. true 3. false 4. true
- D. Answer the following questions :
1. Two safety rules to be followed in the bus are :
- (i) To get into the bus, always stand in a queue.
- (ii) Do not put any of your body part out of a moving bus.
2. Two safety rules to be followed in the swimming pool are :
- (i) Always be careful while swimming.
- (ii) Do not go into deep water.
3. Two safety rules to be followed at home are given here :
- (i) Do not play with sharp objects like scissors, blades, knives, etc.
- (ii) Always keep your toys, books and other thing on their proper places. Never leave them on a floor.
4. We should follow these safety rules during festivals :
- (i) On Diwali, say a big 'No' to crackers.
- (ii) Always play Holi with safe herbal colours.
5. If we get hurt, we will inform an adult. He will help us to control the situation.

Let us Try

- E. Do it yourself.
- F. Do it yourself.

ACTIVITY TIME-II

- A. These are the symbols of some sports. Complete their names.
1. Hockey 2. Swimming 3. Cycling 4. Weightlifting 5. Basketball
- B. Do it yourself.
- C. Write the phone numbers of the given services :
- Police – 100 Ambulance – 102 Fire brigade – 101

CHAPTER-9 – AIR EVERYWHERE

Let us Answer

- A. Tick (✓) the correct answer.
1. (c) 2. (b) 3. (c) 4. (b)
- B. Fill in the blanks :
1. feel 2. smoke 3. fresh, clean 4. wind
- C. Write 'T' for true and 'F' for false statements.
1. F 2. T 3. F 4. T 5. T
- D. Answer the following questions :
1. We dry wet clothes in the sun because the heat of the sun change the water present in the clothes into water vapour and it makes the clothes dry soon.
2. Air contains smoke, dust, germs and water vapour.
3. When Smoke mixes with the air, it makes air impure.
4. Moving air is called wind. Wind helps us in many ways, such as it carries seeds of plants to new places. It helps us to run wind mills.
5. Very strong winds are called storm. A storm can cause damage to crops, houses, trees and animals.
6. A weathercock is used to know the direction of the wind. The beak of the cock shows the direction in which the wind blows.

HOT QUESTIONS

- E. 1. We should not cover our face while sleeping because it blocks the incoming of fresh air.
2. The wet clothes take a long time to dry in the rainy season because air contains much water vapour in this season. It shows the process evaporation.

Let us Try

Do it yourself.

CHAPTER-10 – WATER FOR ALL

Let us Answer

- A. Tick (✓) the correct answer.
1. (c) 2. (b) 3. (c) 4. (c) 5. (c)
- B. Fill in the blanks :
1. filter 2. rain 3. precious 4. saving 5. form
- C. Write 'T' for true and 'F' for false statements.
1. F 2. T 3. T 4. T 5. F
- D. Answer the following questions.
1. The various sources of water are rivers, lakes, ponds, well, rain, etc.
2. Following are the two ways by which water can be made safe for drinking :
(i) We can boil water to make it safe for drinking.
(ii) We can use a water filter to get a clean water.

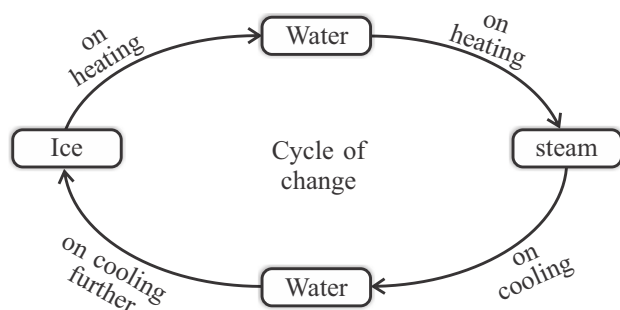
- Some rain water goes deep into the ground. This is called the ground water. We dig well to get this water.
- We can store rain water in buckets, drums, tanks and jugs.
- The water on the land changes into water vapour through the process of evaporation. Water vapour rises up in the air, cools and form tiny droplets of water. These droplets join together to form clouds.

HOT QUESTIONS

- E.
- The 71 percent part of our earth's surface is covered with water and when we see the earth from the space it looks blue. Therefore the earth is called the blue planet.
 - We often see water droplets on the leaves in the morning during winter season. Actually these are water vapour present in the air. When the water vapour come in contact of cool surface of leaves these are condensed and changed into tiny droplets.

Let us Try

- F. Write the correct words in the boxes. Choose from the box.



- G. From the wordsearch, find five sources of water and mark them with different colour.

A	S	E	A	H	I	J	K	L	M	P
B	E	F	G	Q	R	P	O	N	Z	O
C	D	R	R	A	I	N	Z	X	Y	N
S	T	U	U	W	V	X	Y	F	X	D
K	C	M	N	O	E	D	E	X	Y	G
V	U	T	S	P	R	C	B	A	Z	H
L	A	K	E	Q	W	X	Y	Z	A	I
J	I	H	G	R	F	E	D	C	B	J

- H. Do it yourself.

A Life Skill

Do it yourself.

CHAPTER-11 – SUN, LIGHT AND SHADOW

Let us Answer

- A. Tick (✓) the correct answer.
- (b)
 - (c)
 - (b)
 - (b)
- B. Fill in the blanks :
- sun
 - fruits
 - shadow
 - clothes

C. Match the following.

1. (e) 2. (d) 3. (c) 4. (b) 5. (a)

D. Answer the following questions :

- The three ways by which the sun helps us are as follows :
 - The plants make their food in the sunlight.
 - We work and play in the light of the sun.
 - The heat of the sun helps us in drying the clothes.
- The sun's rays don't reach us properly on a cloudy day. So we don't feel the heat.
- A shadow is formed when light cannot pass through an object.
- Our shadow is long in the morning and evening.
- Our shadow is short in the afternoon when the sun shines overhead.

HOT QUESTIONS

E. We should wear dark-coloured clothes on cold days because they absorb heat and keep us warm from inside.

Let us Try

Do it yourself.

ACTIVITY TIME-III

A. Do it yourself.

B. From the wordsearch, circle the names of sources of water.

L	A	K	E	A	B	C	S	R
J	I	H	G	F	D	E	E	I
K	L	M	N	Z	Y	X	A	V
S	P	R	I	N	G	V	W	E
Q	P	O	R	S	T	U	A	R
O	C	E	A	N	X	Y	Z	C
I	J	K	L	M	N	O	B	P
H	P	O	N	D	G	F	E	D

C. Do it yourself.

CHAPTER-12 – GOING TO THE MOON

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (a) 3. (b) 4. (c)

B. Write T for true and F for false statements :

1. F 2. T 3. T 4. F 5. F

C. Fill in the blanks :

1. everyday 2. earth 3. rocket 4. footprints 5. air, water

D. Answer the following questions :

- The names of the astronauts who went on the moon in 1969 are Neil Armstrong, Edwin Aldrin and Michael Collins.
- The astronauts brought some soil from the moon.

3. No one can live on the moon because there is no water and air present on the moon.
4. Kalpana Chawla was the first Indian woman to go on the moon.

HOT QUESTIONS

- E. 1. Sand clocks were used by the people to measure time before watches were invented. Some people used the position of the sun to measure time.
2. The footprints will remain forever on the moon because there is no air present on the moon.

Let us Try

- F. Do it yourself.
- G. Do it yourself.
- H. Name the following people :

Kalpana Chawla	Rakesh Sharma	Sunita Williams
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CHAPTER-13 – ROCKS AND MINERALS

Let us Answer

- A. Tick (✓) the correct answer.
 1. (c) 2. (b) 3. (c) 4. (a) 5. (c)
- B. Write the following as true or false.
 1. true 2. false 3. false 4. true 5. false
- C. Fill in the blanks :
 1. rocks 2. chalk 3. minerals 4. talc 5. graphite
- D. Match the following.
 1. (c) 2. (e) 3. (d) 4. (a) 5. (b)
- E. Answer the following questions :
 1. Rocks are found under the soil, on river bed and on sea beds.
 2. Hard rocks are used to make statues and buildings.
 3. Two uses of coal are as follows :
 (i) It is burnt as a fuel for cooking and to run steam engines.
 (ii) Many industrial units need coal for manufacturing the goods.

HOT QUESTIONS

- F. The houses do not get washed away during rains because here sand is used with cement for preparing concrete a strong building material which gives strength to the house to face rains.

Let us Try

- G. Can you match the gemstones with their names ?
 1. (c) 2. (a) 3. (b)
- H. Do it yourself.
- I. Do it yourself.
- J. Look at the picture and fill in the blanks :
 coal mine
 miners

SCIENCE (CLASS-3)

CHAPTER-1 – FOOD AND FEEDING HABITS OF ANIMALS

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (c) 3. (b) 4. (c)

B. Fill in the blanks :

1. herbivores 2. carnivores 3. plant, animal 4. mouth 5. swallow 6. Gnaw

C. Identify the animals given in the pictures and answer the questions.

(a) (i) Cow

(ii) It eats grass or green plants.

(iii) Herbivore or herbivorous animal

(b) (i) Lion

(ii) It eats flesh of other animals.

(iii) It is found in a forest.

(c) (i) Rat

(ii) gnaw grains.

(iii) It is a rodent and lives in a hole.

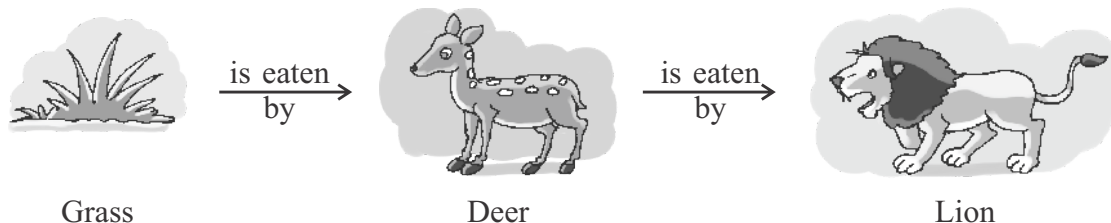
(d) (i) Snake

(ii) No, it does not have teeth to chew.

(iii) It swallow its prey.

D. Answer the following questions :

1. The food is the basic necessity of all the animals living on the earth because they cannot stay alive without food.
2. Animals that eat plants and plant products are called Herbivores. Cow, buffalo, deer and horse are herbivorous animals.
3. Animals that eat both plants and flesh of other animals are called Omnivor. Bear, cat and dog are omnivorous animals.
4. Animals depend either directly or indirectly on the plants for their food. This is like a chain and is called a food chain.



5. Some animals like cows, goats, horses, buffaloes first swallow the food without chewing it. After sometime, they bring it back into their mouths and chew it with their grinding teeth. This is called chewing the cud.

- (ii) Do not run in corridors or while climbing stairs.
 - (iii) Do not push others.
 - (iv) Do not throw objects at anyone as you might hurt someone.
2. Four safety measures to be taken at home are as follows :
 - (i) Do not touch anything on the gas stove.
 - (ii) Do not touch electric wires and sockets.
 - (iii) Do not play with sharp objects like knives, blades, etc.
 - (iv) Always keep your toys and bags in their respective place.
 3. Four safety measures to be taken on the road are as follows :
 - (i) Always use zebra-crossing while crossing the road.
 - (ii) Always walk on the footpath.
 - (iii) Never play or run on the road.
 - (iv) Never take your hand or head out of a moving bus.
 4. First-aid is the immediate help given to an injured person before the arrival of an adult or a doctor.
 5. A good house has the following features :
 - (i) The rooms of the house should be airy and well lit.
 - (ii) Besides doors and windows, a good house should also have open areas like balconies and verandahs.
 - (iii) It should have a proper drainage system.
 - (iv) It should have a lawn.
 - (v) It should have all the rooms which we need in our routine life.
 6. Five ways to take care of a house are as follows :
 - (i) Always keep the house neat and clean.
 - (ii) Keep the drains from the kitchen and bathroom covered.
Uncovered drains become a breeding place for the mosquitoes.
 - (iii) Keep the toilets and bathrooms clean.
 - (iv) All household wastes should be thrown into covered dustbins.

HOT QUESTIONS

- E. 1. After an injury, the wound should be cleaned with an antiseptic lotion and should not be left uncovered because an unclean and uncovered wound can get infected easily.
2. Dustbin containing household wastes should be covered because an uncovered dustbin is the source of bad smell and flies which may cause communicable diseases.

Let us Try

- F. Do it yourself.
- G. Do it yourself.

A Life Skill

- H. Tick (✓) which you feel is correct :

1. ✗ 2. ✓ 3. ✗ 4. ✓ 5. ✓

CHAPTER-3 – PRECIOUS SOIL

Let us Answer

- A. Tick (✓) the correct answer.
1. (c) 2. (a) 3. (c) 4. (b) 5. (c)
- B. Unscramble the words to write the correct answer to the given clue :
1. ROCKS 2. MINERALS 3. CROPS 4. MANURE
- C. Answer the following questions :

1. The soil is formed through breaking of rocks into tiny pieces in a long period of time, we can say that thousands of years. Sun, rain and wind are the main factors that play a vital role in breaking rocks and making soil.

2. On the basis of the following activity, we can say that soil contains stones, sand, clay and humus :

Take a handful of garden soil, put in a glass jar, which is empty. Now, fill the jar with water and cover it with a lid and shake well. Let the mixture stand for 15-20 minutes and then look at the jar carefully.

We observe that the stones settle down at the bottom. Above the stones, grains of sand can be seen. The clay settles down above the sand. The water above the top layer is not very clear.

At the top, parts of dead plants and insects float. This is called humus. This proves that the soil contains stones, sand, clay and humus.



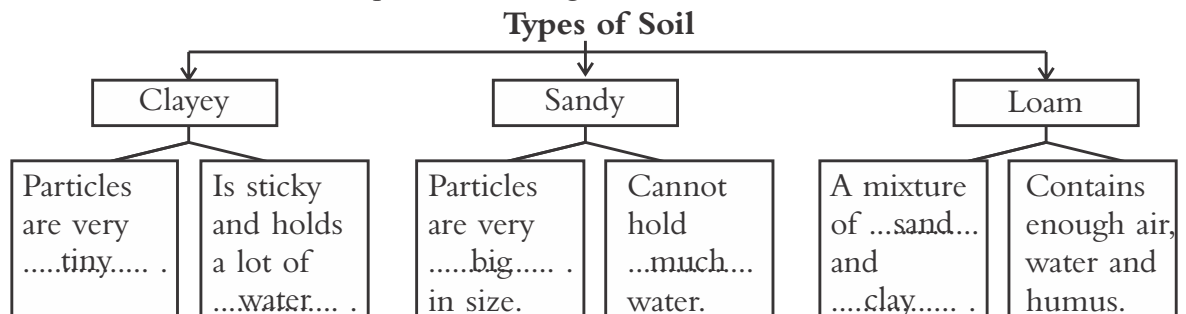
Soil contains humus, clay, sand and stones.

HOT QUESTIONS

1. Jar C, because loam is the best soil to grow plants.
2. He would use the clayey soil because it is used to make pots.

Let us Try

- E. Do it yourself.
F. Do it yourself.
G. What kind of soil does each picture indicate ?
Sand Loam Clay
H. Fill in the boxes with the help of the words given.



A Life Skill – Do it yourself.

ACTIVITY TIME–I

- A. Read the clues and unscramble the letters to get the names of these animals.
1. BUTTERFLY
 2. MOSQUITO
 3. DONKEY
 4. BUFFALO
 5. RABBIT
- B. (a) The Two ways in which he should take care of the animals are as follows :
- (i) He should provide them a neat and clean shelter.
 - (ii) He should provide them clean water to drink and healthy food to eat.
- (b) He should take his cows to a veterinary doctor to cure their illness.
- C. Residents of which house have less chances of suffering from diseases due to mosquitoes and flies ? Why ?
- Residents of House-II have less chances of suffering from disease due to mosquitoes and flies because this house has doors and windows with wire-net.
- D. The soil is home to many small animals. Do this activity to find out tiny creatures.
Do it yourself.

CHAPTER-4 – LIVING AND NON-LIVING

Let us Answer

- A. Tick (✓) the correct answer.
1. (c)
 2. (b)
 3. (a)
 4. (b)
 4. (c)
- B. Fill in the blanks :
1. life, life
 2. move
 3. touch-me-not
 4. breathe
 5. live, grow
 6. tree
- C. Unscramble the words given in the bubbles and write them in the correct places :
- Man-made things–car, bus, chair, road
- D. Answer the following questions :
1. The things which are made by human beings are called man-made things. Some man-made things are roads, bridge, chair, table, bus, car, etc.
 2. Living things need food to live and grow.
 3. All living things feel the change around them. For example during the summers we feel hot while winters we feel cold. If accidentally, we happen to touch something hot, we immediately remove our hand. In this way, we can say that living things can feel.
 4. Reproduction means a process by which living things produce more of their own kind. Human beings and animals like cows and cats give birth to babies. Birds lay eggs and baby birds come out of the eggs. Most plants reproduce with the help of seeds.

5. The five differences between living and non-living things are as follows :

	Living Things	Non-living Things
1.	They can move on their own from one place to another.	They cannot move on their own.
2.	All living things need air to breathe.	They do not breathe.
3.	They need food to live and grow.	They do not need food to eat.
4.	All the living things grow.	Non-living things do not grow.
5.	They feel the change around them.	They cannot feel.

HOT QUESTIONS

- E. The three major differences between the table and the tree are as follows.

	Table	Tree
1.	It does not need food to stay alive.	It needs food to stay alive.
2.	The table is a non-living thing.	The tree is a living thing.
3.	The table cannot grow.	The tree can grow.

Let us Try – Do it yourself.

CHAPTER-5 – ANIMALS AND PLANTS

Let us Answer

- A. Tick (✓) the correct answer.

1. (c) 2. (b) 3. (a) 4. (b) 5. (c)

- B. Do it yourself.

- C. Fill in the blanks.

1. sense organs 2. cannot 3. mushrooms 4. stomata

- D. Answer the following questions :

- Animals move from one place to another in search of food and shelter.
- Plants prepare their own food through a process called photosynthesis.
- The following are three different ways by which the living things breathe :
 - Some living things like cats, dog, horses, elephants have lungs to breathe.
 - Fishes have gills to breathe. They breathe through their gills.
 - Insects like cockroaches, flies, butterflies have air holes on their bodies which help them to breathe.
- The two ways by which the animals reproduce are giving birth to young ones and laying eggs from which babies come out few days later.
- There is a balance in nature if there are just enough plants, just enough plants eating animals and just enough, flesh-eating animals in the world. To maintain the balance in nature is our responsibility.

HOT QUESTIONS

- E. Deforestation will one day lead to the extinction of animals left on the earth. This statement is absolutely true because forests are natural habitats of wild animals. They provide food and shelter to increase the members of their particular species. If these are cut down, they lose all these facilities and disappear from the earth forever.

Let us Try

- F. Certain plants eat animals. Can you guess which plants is given in the picture ? Try to name it and write two lines on it :

The name of this plant is-Pitcher plants.

1. It is an insectivorous plants 2. It can eat and digest insects.
- G. Do it yourself.

A Life Skill – Do it yourself.

CHAPTER-6 – PARTS OF A PLANT

Let us Answer

- A. Tick (✓) the correct answer.

1. (b) 2. (a) 3. (b) 4. (c) 5. (c)

- B. Match the statement with the correct picture.

Do it yourself.

- C. Answer the following questions :

1. The two main type of roots are-tap root and fibrous root.
2. The two functions of root are as follows :
 - (i) It fix the plants to the soil.
 - (ii) It takes water and minerals from the soil for the growth of plant.

Two functions of stem :

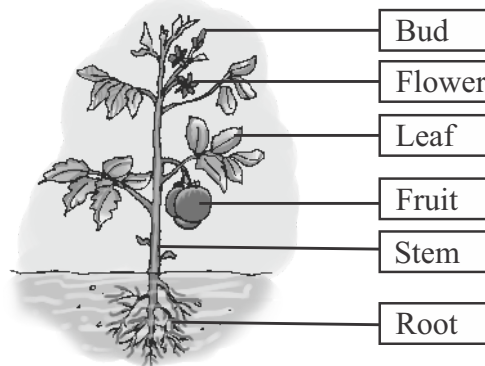
- (i) It holds the plant upright and bear branches, leaves, flowers and fruits.
 - (ii) It carries the water and minerals taken in by the roots to the other parts of the plant.
3. The flat and broad part of a leaf is called the lamina or leaf blade. Green leaves make food for the plant in presence of air, water and sunlight. Some plants store extra food in their leaves.
 4. The process by which a baby plant grows from a seed is called germination.
 5. The leaves are called the food factory of a plant because they synthesise food for the plants through a process called photosynthesis.

HOT QUESTIONS

- D. The leaves of the green plants appear green in colour because of a green pigment called chlorophyll present in them.
- E. The green plants release oxygen and we take it in to breathe.

Let us Try

F. Label the various parts of plants :



ACTIVITY TIME–II – Do it yourself.

CHAPTER-7 – BIRDS : FOOD AND MORE

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (b) 4. (c) 5. (b)

B. Fill in the blanks :

1. beaks, claws 2. webbed 3. muddy water 4. talons 5. down

C. Match the following :

1. (d) 2. (c) 3. (a) 4. (b)

D. Answer the following questions.

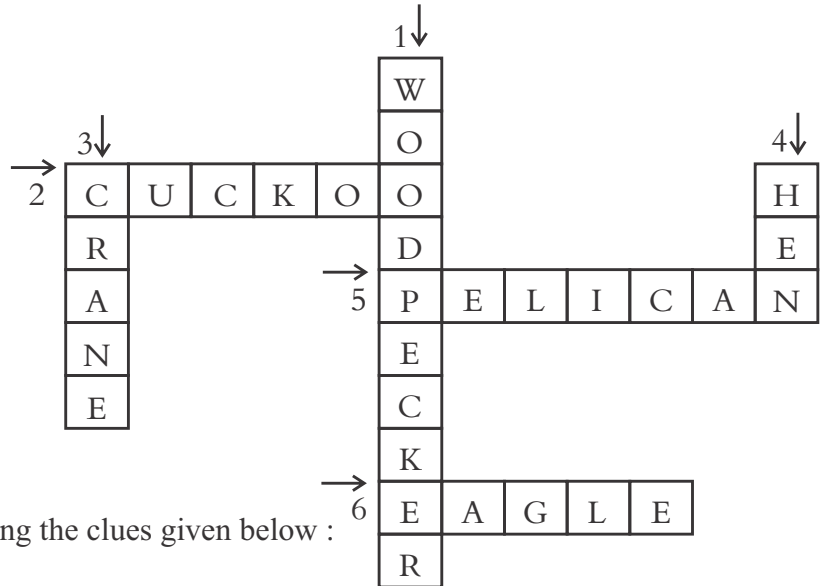
1. A short, hard and horny beak is useful to a sparrow because it can crush grains and seeds.
2. A woodpecker has strong and chisel-shaped beak. It uses its beak to dig out holes in the tree trunks and pull out insects from the holes.
3. A back toe is useful for a perching bird because it curls around the branch due to which this bird does not fall off even while sleeping.
4. Wading means to walk or move in muddy water. The names of two wading birds are crane and heron.
5. The wings of the birds show two types of movement-the upstroke and the downstroke. During the downstroke, the wings move downward and forward. During the upstroke, the wings move upward and backward.

HOT QUESTIONS

- E. 1. If there were no side holes on the beak of a duck, it would be unable to flow out the muddy water from its beak. This water goes into its stomach with insects.
2. If there are no claws on the bird's feet, they would not be able to catch prey and also protect themselves from their enemies.
3. If ducks have no webbed feet it would not swim swiftly in the water.

4. If a bird lacks a tail, it would not be able to change its direction during flight. As we know that the tail of a bird helps it to change its direction during flight.

Let us Try



F. Do yourself.

G. Fill in the crossword by using the clues given below :

H. Do it yourself.

CHAPTER-8 – MAN : THE LIVING MACHINE

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (b) 3. (a) 4. (b) 5. (c)

B. Fill in the blanks :

1. skeleton 2. brain, spinal cord, nerves 3. hair 4. kidneys 5. skin

C. Do it yourself.

D. Answer the following questions.

- Our body is made up of different kinds of cells.
- Our skin helps us to feel pain, touch, pressure and temperature. On the basis of these features we can say that our skin is a sense organ.
- The importance of the skeleton system :
 - It gives shape and support to our body.
 - It helps us to stand, walk and move.
 - It protects delicate inner organs of our body.
- Digestion is the process of changing of food into a simple form so that it can be used by the body. The main organs of digestive system are mouth, food pipe, stomach, small intestine, large intestine and anus.
- The three main parts of the circulatory system are the heart, blood and blood vessels.

HOT QUESTIONS

E. 1. No, it is not right to keep the windows of our rooms closed all the time because it

2. Aman is not doing right because green vegetables, fruits and milk are parts of our body-building and protective food. We need them to be stay healthy and fit.
3. He can tell the difference between the two fruits by using the touch of his skin and by tasting them with his tongue. These two sense organs can help him to know the difference between them.

F. Skeleton system
Nervous system

Respiratory system

[illegible]

H. Fill in the crossword by reading the clues given below :

Let us Answer

1. (b) 2. (b) 3. (c) 4. (b)

1. hands, feet 2. metres 3. electronic balance 4. hour 5. Temperature

1. 100 cm 2. 10 mm 3. $\frac{1}{1000}$ kg 4. 60

E. Answer the following questions.

1. People used their hands and feet to measure length earlier. Some non-standard units for measuring length are the handspan, the cubit and the footspan.
2. A vegetable vendor weights the vegetables by an electronic balance.
3. Capacity is the quantity of a liquid which a vessel can hold.

4. Measuring cylinders and measuring jars are commonly used for measuring capacity.
5. Centigrade and Fahrenheit are the two scales for measuring temperature.

HOT QUESTIONS

- F.
1. Do it yourself.
 2. Length-30 cm and width-110 cm.
 3. 135 cm.
 4. 60cm.
 5. I will pay ₹ 45. ₹ 55 should be return me.

Let us Try – Do it yourself.

CHAPTER-10 – LIGHT, SOUND AND FORCE

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (a) 3. (c) 4. (c) 5. (a) 6. (c)
- B. Fill in the blanks :
1. sun 2. shadow 3. solar eclipse 4. noise 5. force
- C. Do it yourself.
- D. Answer the following questions :
1. The objects that give light are called luminous objects. A bulb is a luminous object.
 2. When something comes in the way of light, a shadow is formed.
 3. When the moon blocks the light of the sun, a solar eclipse occurs. Due to this, shadow of the moon falls on the earth and the sun cannot be seen or is partially hidden.
 4. When the earth blocks the light of the sun, a lunar eclipse occurs. The shadow of the earth falls on the moon and the moon cannot be seen.
 5. Sound which is loud or unpleasant is known as noise. To reduce the noise we should do the following things :
 - (i) We should speak softly.
 - (ii) We should play music and TV a low volume.
 - (iii) We should not use loudspeakers.

HOT QUESTIONS

- E.
1. We find that the ball will move more speedily on a polished floor than on a rough floor or on grass.
 2. Light travels faster than sound. That's why Jasleen saw lightning first and then heard thunder.
 3. Ambulances, fire engines and police vans use sirens to aware people on the road, so that they give them side to move smoothly and they can reach in time at the places they are needed.

Let us Try

- F. Hidden in the word search are the names of four luminous and four non luminous objects. Find and write their names in the correct boxes :

Luminous objects

1. Stars
2. Lamp
3. Sun
4. Candle

Non-luminous objects

- Pen
Pencil
Table
Bottle

G. Do it yourself.

H. Do it yourself.

I. Morning Noon

Evening

J. Do it yourself.

A Life Skill – Do it yourself.

ACTIVITY TIME–III

A. Name the bird that :

1. Weaverbird
2. Eagle
3. Duck
4. Penguin
5. Woodpecker

B. In this word search are hidden the names of some body parts. How many can you find ?

I	L	N	Y	S	V	S	K	I	N
K	I	D	N	E	Y	S	O	P	Q
S	V	H	E	A	R	T	R	T	U
L	E	W	X	Y	N	O	S	E	Z
U	R	B	C	B	R	M	I	N	D
N	P	C	T	B	R	A	I	N	X
G	F	G	M	U	S	C	L	E	S
S	U	S	L	V	E	H	E	K	H

C. Do it yourself.

D. What measure will you use to buy

- (a) l (b) kg (c) l (d) kg (e) kg (f) kg (g) dozen (h) kg

CHAPTER-11 – OUR EARTH AND ITS NEIGHBOURS

Let us Answer

A. Tick (✓) the correct answer.

1. (b)
2. (b)
3. (c)
4. (c)
5. (b)

B. Fill in the blanks :

1. eight
2. spherical
3. Rotation, Revolution
4. gases
5. moon
6. phases of the moon

C. Name the planets in the increasing order of their distance from the sun.

1. Mercury
2. Venus
3. Earth
4. Mars
5. Jupiter
6. Saturn
7. Uranus
8. Neptune

D. Write the times taken for one :

1. 24 hours 2. $365\frac{1}{4}$ days 3. $29\frac{1}{2}$ days

E. Answer the following questions :

1. A planet is a heavenly body that moves around a star like the sun, in a fixed path called the orbit. The names of eight planets are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
2. The earth appears flat to us because what we see is only tiny part of a very big arc.
3. The movement of the earth on its own axis is called rotation. Rotation causes day and night.
4. The earth goes around the sun in a fixed path called the orbit. This movement of the earth is called is revolution. The earth's revolution around the sun causes the change in seasons.
5. Due to the changes in the position of the earth, the moon appears to change its shape. The different shapes of the moon are called the phases of the moon.

We can see only these parts of the moon that get the sunlight. Hence, the moon appears to change its shape every night. When the moon is between the earth and the sun, we do not see it at all. This is called new moon. In two or three days, time the moon looks like a crescent. This is the crescent moon. Within a week, we see half of the moon called the first quarter. When we see more than half of the moon, it is called the gibbous moon. In two weeks time, we see the full moon.

6. The groups of stars that form patterns in the sky are called constellations. The names of two constellations are Ursa Major (The Great Bear) and Orion (Hunter)

HOT QUESTIONS

- G. 1. We should never look straight in the sun because it may harm our eyes.
2. We don't get heat and light from the other stars in the sky because they are very far from us and their light and heat cannot reach to us. The sun is the star that is closest to the earth, so it gives us heat and light.

Let us Try

- G. Do it yourself.
H. Do it yourself.
I. Do it yourself.
J. Do it yourself.
K. Unscramble to words to get the names of the planets to the clue given.
1. VENUS 2. NEPTUNE 3. SATURN 4. MERCURY

Life Skill : Do it yourself

CHAPTER-12 – GOING INTO SPACE

Let us Answer

- A. Tick (✓) the correct answer.
1. (c) 2. (b) 3. (c) 4. (b)
- B. Fill in the blanks :
1. gravity 2. Rockets 3. Neil Armstrong
4. Craters 5. less 4. Kalpana Chawla

C. Join the dots and colour the given figure :

Do it yourself.

D. Answer the following questions :

1. As we go beyond the layer of air surrounding the earth, we reach into space.
2. The other two astronauts who went along with Neil Armstrong were Edwin Aldrin and Michael Collins.
3. There is no life on the moon due to absence of air and water.
4. The persons who go into space in a spacecraft are called astronauts. They do experiments in the spacecraft.
5. Kalpana Chawla went into the space, again in 2003. Her space-shuttle crashed on the return journey on 1st February, 2008. She was died in this accident.

HOT QUESTIONS

- E. 1. Astronaut in the space shuttle seem to fly because of the absence of gravitational force in the space.
2. Rockets and engines in a space be according to Isaac Newton's third law of motion. Every action produces an equal or opposite reaction. This helps a rocket to operate in space.

Let us Try

F. How much would they weigh on the moon ? Complete the given table.

Name	Weight on Earth	Weight of Moon
Suman	30 kg	5 kg
Sumit	40 kg	$6\frac{4}{6}$ kg
Reema	25 kg	$4\frac{1}{6}$ kg
Simaran	33 kg	$6\frac{3}{5}$ kg

G. Write two lines on each of the given pictures :

1. Rakesh Sharma was the first Indian man to go into the space. He was an Indian air force pilot.
2. Kalpana Chawla was the first Indian woman to go into the space. She was died on 1st February, 2003.
3. Sunita Williams was the second woman of Indian origin to go into space. She stayed in space in her space-shuttle for 195 days.

CHAPTER-13 – WATER AND WEATHER

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (a) 4. (c) 5. (a)

B. Fill in the blanks :

- | | | |
|-----------------------------|-------------|------------|
| 1. ice, water, water vapour | 2. droplets | 3. weather |
| 4. sun, wind, clouds, rain | 5. overhead | 6. breeze |

C. Do it yourself.

D. Answer the following questions :

1. Ice, water and water vapour are three forms of water.
2. Water keeps changing its form in nature too. This cycle of change is called the water cycle.
3. The day to day change in the condition of the air is called weather. The sun is low in the sky during morning and evening. Due to this the sun rays are slanting during this time of the day. At noon, the sun is overhead and the sun rays fall straight. That is why, noon is the hottest part of the day. During mornings and evenings the weather is not very hot.

4.		Breeze	Storm
	1.	The wind blowing gently is called a breeze.	Storms are very strong winds.
	2.	A breeze is cool and pleasing. They do not cause any damage to life and property.	A storm can uproot the trees and cause damage to life and property.

5. The cloudy nights are warmer because the clouds act like a blanket and do not allow the heat of the earth to escape.

HOT QUESTIONS

- D. 1. Sumit observed that noon is the hottest part of the day because at noon the sun is overhead and its rays fall straight on the land. This makes the noon the hottest part of the day.
2. When Garima poured some cold drink in a glass, the outer surface of the glass became cool. The water vapour present in the air came in contact of this cold surface and changed into tiny water droplets because of condensation, the process by which water vapour are changed into liquid water.

Let us Try – Do it yourself.

ACTIVITY TIME–IV

A. Identify the given constellations :

1. Scorpius 2. Ursa Major 3. Orion 4. Leo

B. Do it yourself.

C. Do it yourself.

D. Do it yourself.

SCIENCE (CLASS-4)

CHAPTER-1 – FOOD AND DIGESTION

Let us Answer

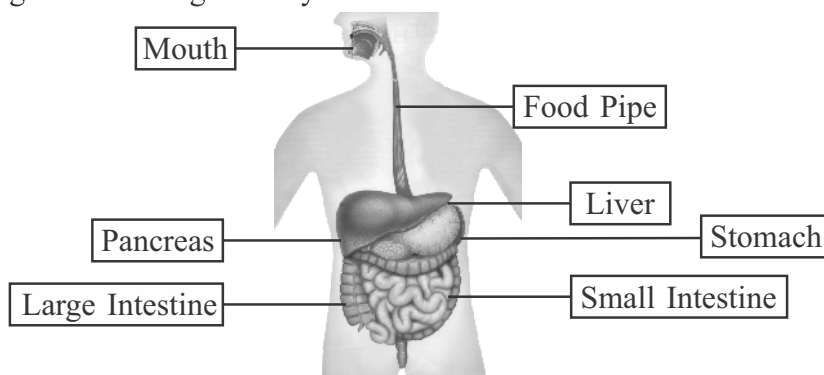
- A. Tick (✓) the correct answer.
1. (b) 2. (c) 3. (c) 4. (c) 5. (b) 6. (b)
- B. Fill in the blanks :
1. children 2. protective 3. Roughage
4. minerals 5. Fats 6. Vitamins, minerals
- C. Write the following as true or false :
1. true 2. true 3. false 4. true
- D. Write the short answers :
- The names of the nutrients present in the food are carbohydrates, fats, proteins, vitamins and minerals.
 - We need foods to stay alive. Food helps us to grow, give us energy to work and to keep us fit and healthy.
 - Some foods rich in carbohydrates are rice, wheat, maize, potatoes, etc.
 - Proteins help our body to grow and repair the worn out or damaged parts.
 - Calcium, potassium, iodine, sodium and iron are some minerals required by our body.
- E. Answer the questions :
- The vitamins and minerals are very important in the body because—
(i) they help our body to fight the diseases.
(ii) they help us in the formation of teeth and bones.
 - The two functions of roughage are as follows :
(i) It helps us to maintain the proper functioning of the digestive system.
(ii) It helps to remove the waste materials from the body.
The food which provide us roughage are fruits, vegetables, brown rice, wheat bread, etc.
 - A diet which has the right amount of all the nutrients, that is, carbohydrates, fats, proteins, vitamins and minerals is called a balanced diet.
 - From the mouth the food goes down the food pipe into the stomach. Here food gets churned. The proteins present in the food are broken down into a simpler form by the help of the digestive juices present in the stomach. From here the food goes to the small intestine. It produces digestive juices which get mixed with food. The liver and pancreas also pour their juices into the small intestine. These juices help to completely digest the food which becomes almost like a liquid. The blood vessels present in the walls of the small intestine absorb the digested food and carry it to all the parts of the body. The undigested food goes into the large intestine and a passed eliminated from the body through the anus as faeces.
 - The food preservation is the process of treating food in a way that preserves its value for a long time. We preserve food by several methods, such as boiling, canning, satting, jellying, drying, etc.

HOT QUESTIONS

- F.
1. We should avoid oily food because it contains fats that causes obesity.
 2. We, need to consume more proteins than our grandparents because they help our body to grow, as we know that proteins are body-building foods.
 3. Mango pickle can be kept for a long period than the pieces of mango because it is preserved to keep for a long time. It does not get spoil soon.
 4. We keep the vegetables like lady finger, cucumber, etc for a long time outside, they do not remain of the same size because they lose the water present in them due to drying up.

Let us Try

- G. Do it yourself.
H. Do it yourself.
I. Label the diagram of the digestive system of humans :

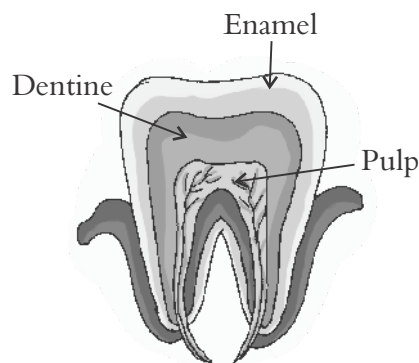


CHAPTER-2 – TEETH AND MICROBES

Let us Answer

- A. Tick (✓) the correct answer.
1. (c)
 2. (c)
 3. (b)
 4. (b)
 5. (a)
- B. Fill in the blanks :
1. face
 2. 20
 3. germs
 4. rinse
 5. decay
 6. dental floss
- C. Unscramble the words to get the correct answer to the clue given :
1. Crown
 2. Incisors
 3. Plaque
 4. Sweets
 5. Yeast
 6. Chickenpox
- D. Write the short answer :
1. The teeth are of four kinds are Incisors, Canines, Premolars & Molars.
 2. The three layers of a tooth are enamel, dentine and pulp.
 3. Tooth decay results in bad breath, cavities, toothache, gum bleeding and indigestion.
 4. Microbes are tiny living things that are not visible to the naked eyes.
 5. The four kinds of microbes are bacteria, viruses, protozoa and fungi.
- E. Answer the following questions :
1. Teeth are important for a us because-
 - (i) they make our smile beautiful.
 - (ii) they give proper shape to our face and help us to speak.
 - (iii) they help us in biting and chewing the food.

2. A tooth has three main parts – the crown, the neck and the root. The visible part of the tooth is called the crown. The neck lies below the crown. The root lies in the gum and holds the tooth in its place. The tooth has three layers. The outer hard, white layer of a tooth is called the enamel. Below the enamel, lies the dentine which is also quite hard. Inside the dentine is the pulp. The pulp is very soft and full of nerves and the blood vessels.



Structure of a tooth

3. The list of four tips for healthy teeth is given below :
 - (i) We should brush out teeth twice a day, once in the morning and once at night.
 - (ii) Rinse the mouth after every meal.
 - (iii) Visit your dentist regularly for checkups.
4. Microbes are tiny living things that are not visible to the naked eye. They can only be seen through an instrument called the microscope.
5. The names of two diseases caused by each of the following are as follows :

Viruses	–	Common cold and chickenpox.
Bacteria	–	Tuberculosis and pneumonia.
Protozoa	–	Malaria and dengue.
Fungi	–	Ringworm and athlete's foot.

HOT QUESTIONS

- F. 1. We should rise our mouth after every meal to remove the tiny food particles stuck between the teeth. It is necessary to keep our mouth clean.
2. We should eat raw carrots and apples to take care of our teeth because they provide nutrients for keeping the teeth healthy. They also make our gum strong.
3. We should wash our hands before taking meals to make our hands clean or germs free. Dirt in our hands may have germs which can cause diseases.
4. When a cavity is formed in the enamel, there is no pain. The tooth start aching only when the cavity becomes bigger and reaches the pulp because the pulp has blood vessels and nerves to feel pain while the enamel is a hard part of the tooth and no blood vessels and nerves present in it, so the cavity does not causes a pain here.

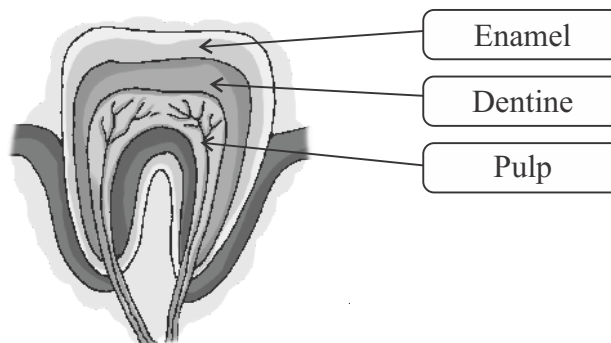
Let us Try

- G. Write two differences between milk teeth and permanent teeth.

	Milk teeth	Permanent teeth
1.	Milk teeth are temporary teeth that fall up to the age of twelve.	Permanent teeth are the teeth that grow in place of milk teeth.
2.	These teeth are ten in each jaw.	These teeth are sixteen in each jaw.

- H. Do it yourself.
- I. Do it yourself.

J. Identify and label the layer marked in the given diagram.



K. Do it yourself.

L. Do it yourself.

CHAPTER-3 – SAFETY FIRST

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (b) 3. (a) 4. (a) 5. (c)

B. Unscramble the words to write the correct answer to the given clue :

1. wet 2. tube 3. accidents 4. step ladder 5. cold

C. Write the following as true or false :

1. true 2. false 3. true 4. true 5. false

D. Answer the following questions :

1. The floor should be kept dry because a person can slip if the floor is wet.
2. The electrical switch should not be touched with wet hands because it can cause an electric shock.
3. We should cross the road at the zebra crossing.
4. First aid is the immediate help given to an injured person before the medical aid arrives.
5. Some common emergencies that need first aid are minor cuts, fainting, insect bites, snake bites and burns.

E. Answer the questions :

1. We should take the following precautions to avoid the accidents at school :
 - (i) Never run on the stairs as you may fall.
 - (ii) Do not climb on the desks and throw things at each other.
2. A list of some safety measures to be followed on the road is as follows :
 - (i) Always cross the road at the zebra-crossing.
 - (ii) Walk on the footpath.
 - (iii) Do not drive fast to reach your destination. Instead, start early to avoid panic.
 - (iv) Do not play on the road.

HOT QUESTIONS

- F. 1. Sunil's father carried the bottle of insecticide along with him to the hospital because it can help the doctor to know about the kind of poison consumed by Sunil and the doctor can give him a solid treatment.

2. In case of snake bite a tight bandage should be tied just above the bite to stop the flow of blood to the heart. This may help to slow down the spread of the poison.
3. Do it yourself.

Let us Try

- G. Do it yourself.
- H. Do it yourself.

ACTIVITY TIME-I

- A. Complete this table of nutrients :

Milk teeth	Permanent teeth	Permanent teeth
Proteins	egg, meat, fish, cheese	help us to grow
Carbohydrates	rice, maize, potato, wheat	give energy to work and play
Fats	oil, ghee, nuts	give energy and keep the body warm.
Vitamins and minerals	fruits and vegetables, meat, fish, liver, milk	protect from various diseases.

- B. Who am I ? Write my name. Draw me and my parts :

I am a tooth.

- C. Do it yourself.
- D. Do it yourself.

CHAPTER-4 – THE RIGHT CLOTHES TO WEAR

Let us Answer

- A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (a) 4. (c) 5. (c)

- B. Fill in the blanks :

1. clothes 2. sweat 3. natural 4. man-made 5. uniforms

- C. Write the following as true or false.

1. false 2. true 3. false 4. true 5. true

- D. Answer the following questions :

1. The early man wore skin of animals.
2. Tiny dust particles settle on our clothes make them dirty.
3. The fibres obtained from the parts of plants or animals are called natural fibres.
4. Kimono is the natural dress of Japan.
5. The students wear uniforms because they help in identifying them as student of a particular school.

- E. Answer the following questions :

1. We need clothes to protect ourselves from heat, cold, rain, dust, etc. Clothes make us look smart.

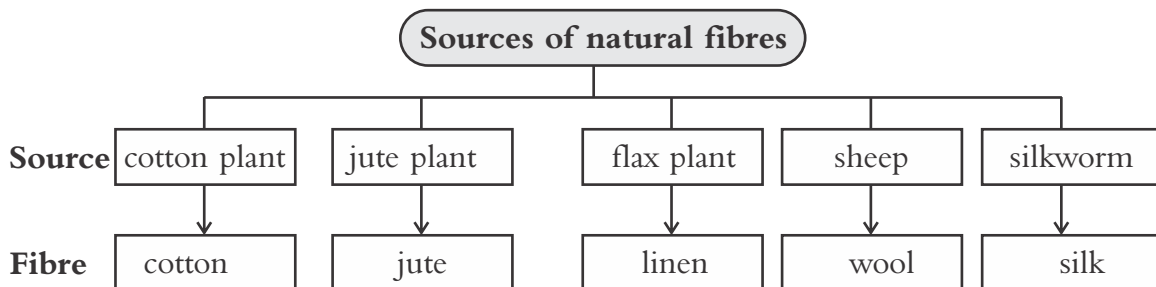
- synthetic fibres are not found in nature, instead they are prepared artificially. They are called man-made fibres. They are usually stretchable, wrinkle free and easy to dry.
- We wear light-coloured clothes in hot weather because they reflect the heat and keep the body cool.
- Cotton clothes should be washed with a detergent and rinsed properly before drying, while silk clothes should be washed in gentle soap and preferably dry cleaned. Silk clothes should be stored along with the naphthalene ball or dried neem leaves. These keep the insects away.
- We should store clothes carefully. Silk and woollen clothes are easily attacked by insects like moths and silverfish. Therefore once the season is over, these clothes should be kept out in the sun for a few hours or dry cleaned. They should be stored along with the naphthalene balls or dried neem leaves. These keep the insects away.

HOT QUESTIONS

- F. 1. Our nightwear should be long-sleeved because long sleeved clothes protect us mosquitoes.
2. Seema should not wear nylon clothes while working in the kitchen, as we know that nylon clothes catch fire very easily.
3. Kohli family should take woollen clothes with them because Shimla is located on the high mountain of Himalayas. Therefore it experiences acute cold in winter.

Let us Try

- G. Natural fibres are obtained from plants and animals. Fill in the blanks with either source of the fibre which are related :



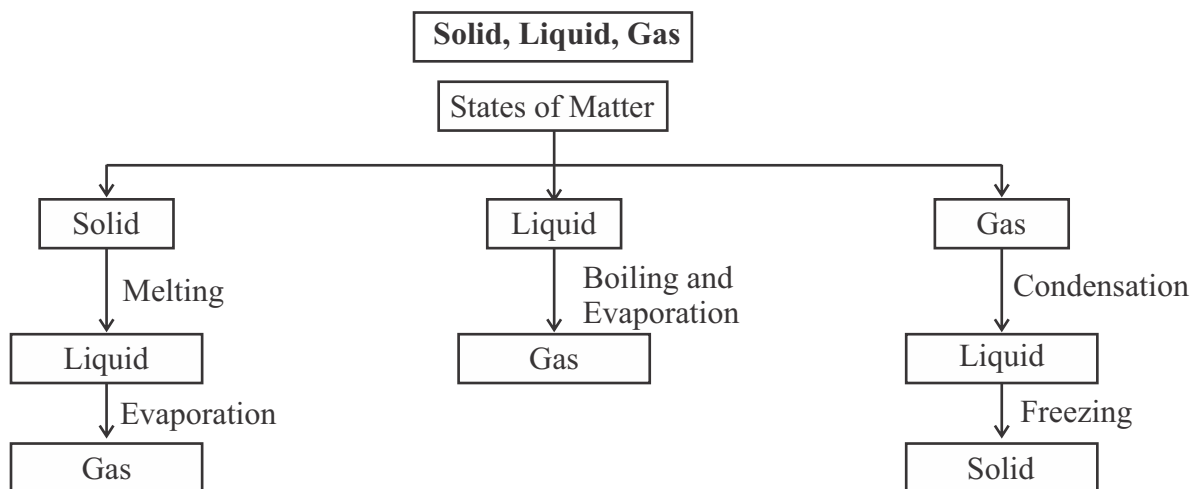
- H. Do it yourself.
- I. Do it yourself.
- J. Do it yourself.
- K. Do it yourself.

CHAPTER-5 – SOLIDS, LIQUIDS AND GASES

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (c) 3. (b) 4. (c) 5. (b)
- B. Fill in the blanks :
1. matter 2. loosely 3. interchangeable 4. solution 5. force

C. Fill in the empty boxes with the help of words given below.



D. Write the following as True or False :

1. True 2. False 3. False 4. True 5. False

E. Write the short answer :

1. Matter is anything that has weight and occupies space.
2. Matter is made up of molecules.
3. Molecules are the smallest substances in matter that can exist independently.
4. Ice.
5. Water.

F. Answer the question :

1. In solids, molecules are tightly packed. They are close to each other, therefore they cannot move around. This makes solids hard.
2. Gases have no fixed shape because they are very loosely packed molecules and they are free to move in any direction. Therefore, they have no fixed shape.

3.	Condensation	Evaporation
	Condensation is a process that changes gases into liquid.	Evaporation is a process by which on heating a liquid is changed into vapour or gas.

4. When sugar is dissolved in water, the volume of the solution does not change because the molecules of the sugar only fill up the empty spaces between the molecules of water. They do not take up extra space.
5. When we add sugar in water, its molecules scatter throughout the water. They occupy the empty space in between the molecules of water. That's why, sugar becomes invisible when dissolved in water. There seems to be no difference between the pure water and sugar solution, however, the sugar solution tastes sweet.

HOT QUESTIONS

- G. 1. I agree with Jyoti because a human body contains matter in all the three states. As the bones in a body are example of solid, blood is the example of liquid and the oxygen which we breathe in is an example of gas present in our body.
2. We always need to store the liquid in containers because in liquids molecules are loosely packed and can move around. If we do not store them in containers they will flow away on the ground.
3. We can smell the food being cooked from a distance because when the food is cooked the substances present in liquid form in it are evaporated on heating and the vapour mix with the air present all around us. That's why, the smell of the food reach to us.

Let us Try

- H. Identify and name the state of matter which have the following arrangement of molecules.
1. Solid 2. Liquid 3. Gas
- I. How are solids, liquids and gases different from each other ? Fill in the table :

SOLIDS	LIQUIDS	GASES
1. The molecules are tightly packed and cannot move around.	The molecules are loosely packed and can move around.	The molecules are very loosely packed and are free to move in any direction.
2. They have fix shape and volume.	They have no fixed shape.	They have no fixed shape and volume.
3. They cannot be poured.	They can be poured.	They can fill the space of a vessels.
4. They cannot flow at all.	They can flow.	They can flow more easily than liquids.

- J. Do it yourself.
- K. Do it yourself.

CHAPTER-6 – PLANTS-PREPARING AND STORING FOOD

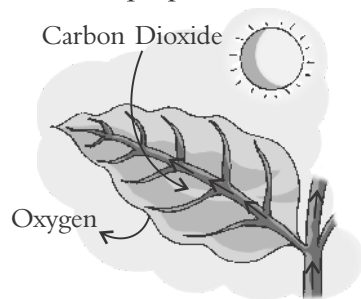
Let us Answer

- A. Tick (✓) the correct answer.
1. (a) 2. (c) 3. (b) 4. (b) 5. (c)
- B. Fill in the blanks.
1. chlorophyll 2. leaf stalk 3. stomata
4. bleaching 5. oxygen 6. mushrooms
- C. Answer the following questions :
1. Green plants can prepare their own food. The name of the process by which they make food is photosynthesis.

2. The extra food is stored in the form of starch in plants.
3. The food prepared during photosynthesis is in form of simple sugar.
4. The names of two non-green plants are mould and mushrooms.
5. The stem of a cactus prepares food for the plant.
6. Yes, the leaves of croton plant contain chlorophyll.

D. Answer these questions :

1. The midrib of a leaf is formed by a double pipeline of cells. One pipeline carries water and minerals to all the cells of the leaf and the other carries prepared food from the green cells to the other parts of the plants.
2. Photosynthesis is a process by which green leaves of a plant make food for it. The leaves make food with the help of water, carbon dioxide and sunlight.



During the photosynthesis, food is prepared in the form of simple sugar and oxygen is given out by the leaf through stomata.

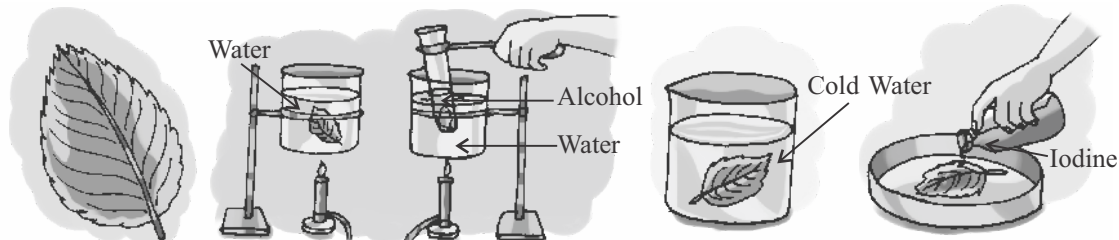
3. The food prepared by plants is in the form of simple sugar which is used in a number of ways :
 - (i) It is used to get energy.
 - (ii) Some of it is used for growth.
 - (iii) The extra food is stored in the form of starch in leaves, stems roots, fruits or even flowers. We eat those plants which have food stored in them.
4. We can show the presence of starch in a green leaf through this experimental activity :

To test the presence of starch in a green leaf.

Take a green leaf from a healthy plant and boil it in water. Then boil it in alcohol, continue heating till the green colour of the leaf is removed. The process of removing the green colour from a leaf is called bleaching.

Now, remove the leaf and wash it in cold water. In order to test for the presence of starch, add a few drops of iodine to the bleached leaf. You will see that the leaf turns blue-black in colour .

This shows that the green leaves contains starch.



5. Moulds and mushrooms do not contain chlorophyll. They get their food from the dead and decaying plants and animals.
6. Energy passes from one living thing to another living things. Let us know about its flow :

The sun is the ultimate source of energy for all the living things. This energy is trapped by the green plants to prepare food during photosynthesis. This energy is passed on to humans and animals when they eat the plant or plant products. This energy flows from the sun to plants and then to animals and human beings. This flow of energy in form of food is called a food chain.

7. A balance between the plants and animals is essential in nature for the life to go on. If there is a sudden increase in the number of animals, then the plants will not be able to supply enough food or oxygen to the animals.

In the same way, if there is a sudden decrease in the number of animals, then they would not be able to supply enough carbon dioxide for plants to make their food. This shows that a balance in nature is necessary for the survival of all plants and animals on the earth.

HOT QUESTIONS

- E. 1. A yellow leaf cannot prepare food because they do not contain chlorophyll.
2. Leaf 'Y' would test positive for starch because this leaf gets the sunlight to make starch through the photosynthesis. The leaf 'X' that is covered with black paper does not get the sunlight.
3. (a) The plants will wither or dry, if they do not get water for a long time.
(b) If all the roots of a plant are cut off, it will not get the water and minerals from the soil. It will dry or die.

Let us Try

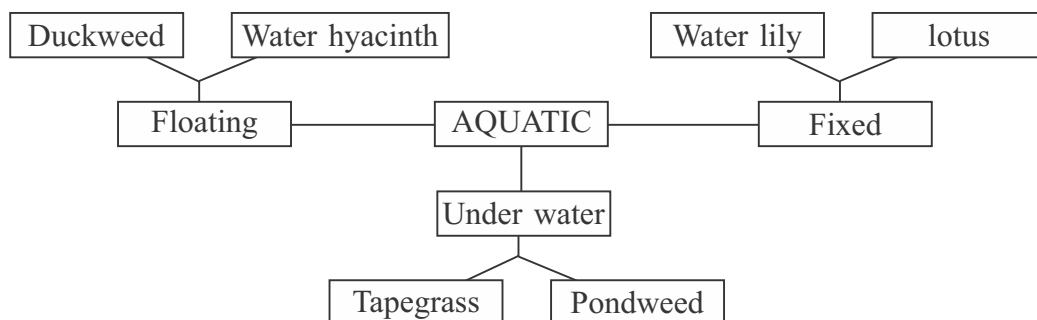
- F. Do it yourself.
G. Do it yourself.
H. Do it yourself.

CHAPTER-7 – PLANTS : LIVING AND SURVIVING

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (b) 3. (c) 4. (b) 5. (c)
- B. Fill in the blanks :
1. hilly areas 2. spines 3. mangroves 4. grass 5. Rainforests
- C. Correct and rewrite the following statements by changing the highlighted words :
1. Mango, banyan and peepal are the trees which grow in the plains.
2. Lotus is fixed to the bed of the pond.
3. Tapegrass and pondweed are examples of underwater plants.
4. Venus-fly-trap and sundew are insectivorous plants.
5. Rainforests are found mostly near the equator.
- D. Do it yourself.

- E. Plants that grow in water are called aquatic plants. Fill in the names of such plants in the empty boxes :



- F. Write the short answer :

1. Mango. 2. Cedar. 3. Cactus. 4. Pitcher plant. 5. Asia and Africa.

- G. Answer these questions :

1. The needle-like leaves are important for the plants growing in the hilly areas because these leaves allow rain water and snow to slide off easily.
2. In the marshy areas, the soil is sticky and clayey. The trees that grow in such places are known as mangroves. These plants have breathing roots which grow above the soil. They breathe through these roots.
3. The floaty plants have spongy bodies filled with air. This make them light and able to float on water.
4. The main uses of plants of the grass family are as follow :
 - (i) Dried grass is used as a packing material.
 - (ii) The roots of these plants help to conserve soil.
 - (iii) Some plants of grass family provide us cereals which are main part of our food.

HOT QUESTIONS

- H. 1. Conifers do not bear broad leaves because they grow in mountainous region where heavy rains and snow falling are common things. Therefore, they bear needle-like leaves which allow rain water and snow to slide off easily.
2. Anuj saw some plants growing in the aquarium. These plants are grown in an aquarium to supply food and oxygen to aquatic animals living in it.

Let us Try

I. Do yourself.

J. Do yourself.

K. Match the picture with their correct feature.

First picture – ②

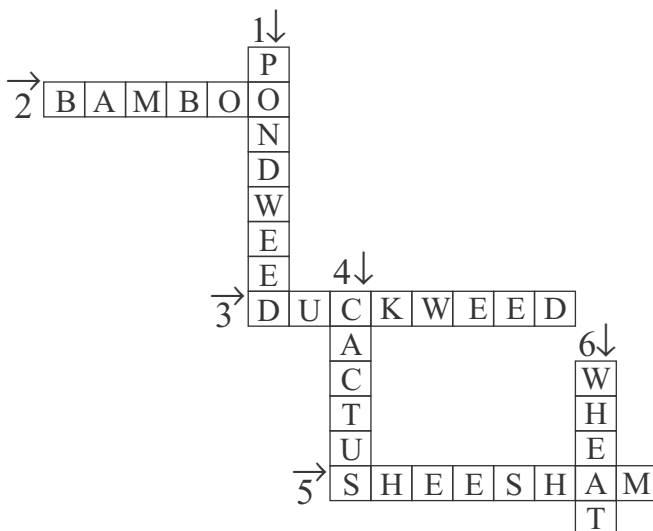
Second picture – ③

Third picture – ①

L. Give one word for the given plants :

Insectivorous Plants

M. Fill in the given crossword by reading the clues given :



N. Do it yourself.

CHAPTER-8 – ANIMALS : HOW LIFE GOES ON

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (b) 4. (c) 5. (c) 6. (a)

B. Fill in the blanks :

1. incubation 2. yolk 3. reptiles 4. nymph 5. moulting

C. Write the following as true or false :

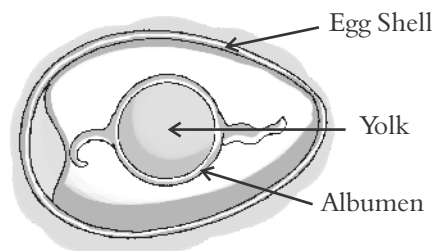
1. false 2. false 3. true 4. false 5. true 6. true

D. Answer the following questions.

1. Animals reproduce by laying egg and by giving birth to young ones.
2. The birds reproduce by laying eggs.
3. The habit of birds to keep their eggs warm by sitting on them is known as incubation.
4. A cluster of eggs of a female frog is called the spawns.

E. Answer the following questions :

1. Birds lay eggs to reproduce their youngones. Each egg has a hard protective outer shell. Within the shell, is the egg white called the albumen. Within the albumen is the round, yellow, yolk. Inside the yolk, the chick is formed. The growing baby is called an embryo, and it is uses yolk as its food. The embryo goes through the different stages of development and then develop into a baby birds.



Internal structure of an egg.

2. There are three stages in the life of a grasshopper. These are egg-nymph and an adult grasshopper. The baby insect which hatches out of the egg is called a nymph. The

nymph grows bigger and sheds its skin several times before it become an adult. This shedding of skin is called moulting.

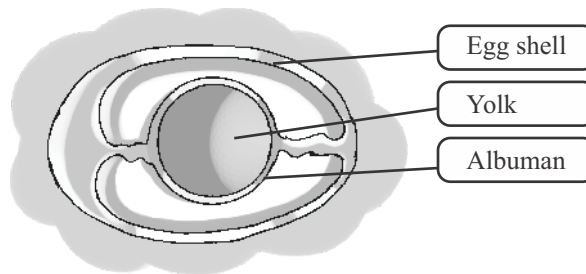
3. A butterfly has four stages in their life cycle. The egg hatches into a larva which is very different from the parents. It looks more like a worm. The larva of a butterfly is called caterpillar. The larva starts to feed on leaves, grow and develop. After some it stops eating and forms a cocoon around itself and turns into a pupa. Inside the pupa, the insect transforms into an adult butterfly which breaks the cocoon and comes out.
4. Animals which give birth to youngones and feed them on their milk are called mammals. Names of two mammals are cow and goat.
5. Mammals are the most developed among all animals. They take care f their youneones for a long period of time. Usually the mother cares for the babies. She feeds the babies and protects them from enemies. Some animals also teach their babies to look for food and live on their own.

HOT QUESTIONS

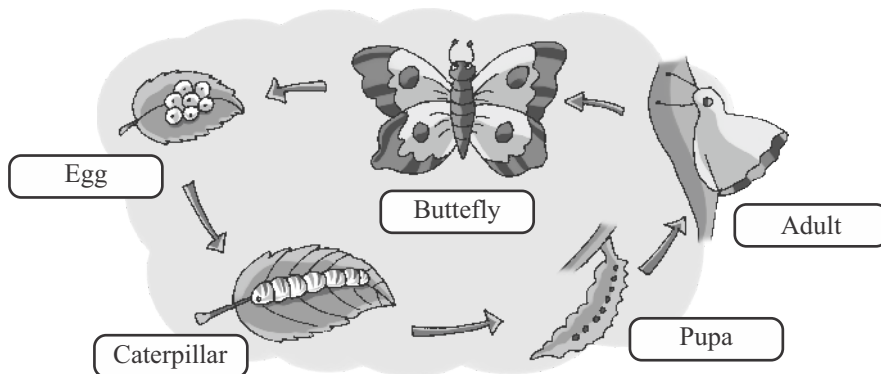
- F. 1. A fish lays a large number of eggs at a time because most of its eggs are ate up by other water animals and they do not get a chance to develop into babies.
2. The name of this animal is a bat.
3. If a bird does not sit on its eggs, they will rot and the embryos inside them will not develop into babies, because the embryos develop only if the eggs are kept warm.

Let us Try

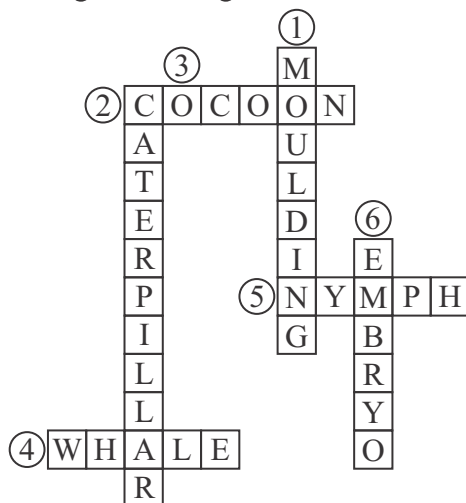
- G. Do it yourself.
- H. Label the given diagram.



- I. In the diagram below label the various states in the life cycle of a butterfly.



J. Solve the crossword by reading the clues given :



CHAPTER-9 – ANIMALS : LIVING AND SURVIVING

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (c) 4. (a) 5. (b) 6. (c)

B. Fill in the blanks :

1. desert 2. mammals 3. parasites 4. fur 5. ship

C. Complete the following :

1. true 2. true 3. false 4. false 5. true

D. Complete the table with suitable statements :

	Terrestrial	Aquatic	Amphibian	Aerial	Arbored
Movement	Legs to move	Fins or flippers to move	Limbs	Wings	limbs
Breathing Organs	Lungs	Gills Lungs	Skin Lungs	Lungs	Lungs
examples	Camel Cow	Fish Dolphin	Frog Salamander	Crow Pigeon	Monkey Squirrel

E. Write short answer :

- The process of changing to suit the environment is called adaptation.
- The home or the natural environment in which an animal lives is called its habitat.
- Amphibians are the animals which live both on land and in water.

F. Answer these questions :

- The animals which live in very cold regions like Arctic have thick fur on their body to keep them warm. Some animals like seals and penguins have a thick layer of fat under their skin called blubber which keeps them warm. All these characteristics help them to survive in cold regions.

2. The birds to aerial habitat because of their wings and body shape. They have wings which help them in flying. The bones of birds are hollow which make their body light to fly in the air. Moreover, they have a boat-shaped body which help them to cut through the air while flying.
3. Some animals spend most of their time on trees. These are called Arboreal animals. The examples of four arboreal animals are monkeys, lizard, flying squirrel and opossums.
4. All the animals do not eat the same kind of food. They eat different kinds of foods according to the need of their bodies. They have different body organs to eat and digest food. So, according to the kind of food eaten by them, can be classified into four main groups. The four groups are as follows :
 - (i) **Herbivores** : Plants-eating animals are called herbivores. The cow is a herbivores.
 - (ii) **Carnivores** : Flesh-eating animals are called carnivores. A lion is a carnivore.
 - (iii) **Omnivores** : Animals that eat both plants and flesh of animals are called omnivores. The bear is an example of an omnivore.
 - (iv) **Parasites** : Some animals live on or side the bodies of other animals for their food. They are called parasites. Lice is a parasite.
5. The following are the different ways by which animals protect themselves :
 - (i) Some animals use their ability of moving fast to protect themselves from their predators. Such animals are houseflies, frog, fish, etc.
 - (ii) Some animals like whales, elephants and hippos are too big to be eaten by other animals.
 - (iii) Some animals use camouflage to protect themselves from their enemies.

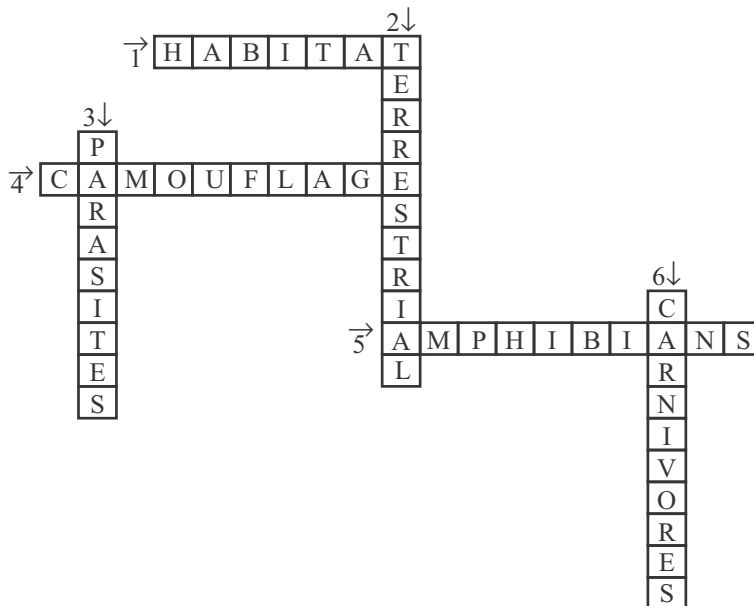
HOT QUESTIONS

- G. 1. If aerial animals have heavy bodies, they will found themselves unable to fly in the air. They will become terrestrial animals.
2. An octopus is an aquatic animal but it does not have streamlined body. However, it makes its body-shape streamlined while moving in water because such kind of body-shape helps an aquatic animal to swim smoothly and swiftly.

Let us Try

- H. Identify the animals shown below and write any two features that help them to adapt to their surroundings :
1. **Camel** : A camel lives in a hot desert. It has a thick skin which is not very hairy. It protects itself from the heat of the sun.
 2. **Fish** : Fish is an aquatic animal. It has gills to breathe under the water. It has fins which help itself to swim in the water.
 3. **Monkey** : A monkey spends it most of time on trees. It has a long and curly tail which helps it to swing from a branch.
- I. Do it yourself.

J. Solve the crossword puzzle by reading the clues given :



CHAPTER-10 – FORCE, WORK AND ENERGY

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (b) 4. (c) 5. (b)

B. Fill in the blanks :

1. Work, distance 2. Force 3. Solar energy 4. Energy 5. Wind

C. Answer these questions :

- Force is a pull or push up acts as an object.
- Work is said to be done when force moves an object through a certain distance.
- The force by which the earth pull an object towards it is called gravitational force.
- A simple machine is a device or a tool that makes our work easier, faster and more convenient.

D. Answer these questions :

- The solar energy can be converted to heat energy, light energy, and electrical energy.
- If we push or pull an object, and it does not move, then we will say that we do not do any work. On the other hand, if the object changes its place or moves when we apply force on it. It can say that we have done work. We can calculate the work done by the following formula :

Work done : Force applied on an object \times Distance moved by the object.

- A simple machine helps us in many ways. It helps us to
 - do our work faster and with the less effort.
 - change the direction of force used
 - do work with less force.
- The wedge is a tool which has sharp edges in front and blunt at the back. They are shaped like to inclined planes attached back to back. We use it to cut hard objects.

HOT QUESTIONS

- E. 1. If we rub our palms together for a short while and place them on our cheeks, we will feel warm touch because when we rub our palms with each other they become warm because of friction.
2. Which action would need more physical energy ?
- (a) riding a rickshaw up a hill. (b) running in the park.
- (c) playing basketball

Let us Try

- F. What kind of force do the following pictures indicate ?
- Muscular force Gravitational force Mechanical force
- G. Do it yourself.
- H. Do it yourself.

CHAPTER-11 – THE EARTH AND ITS NEIGHBOURS

Let us Answer

- A. Tick (✓) the correct answer.
1. (c) 2. (b) 3. (c) 4. (c) 5. (c)
- B. Fill in the blanks :
1. constellation 2. planets 3. moon 4. axis 5. equator 6. summer
- C. Write the following statements as true or false.
1. true 2. false 3. false 4. false 5. false 6. true
- D. Match short answers :
1. (f) 2. (d) 3. (e) 4. (c) 5. (a) 6. (b)
- E. Answer the following questions :
1. A group of stars forms an imaginary pattern in the sky. This group of stars is called a constellation.
2. Satellites are small heavenly bodies that revolve around the planets.
3. An active Volcano is the one which erupts regularly.
4. Two kinds of movements of the earth are-Rotation and Revolution.
5. Holi, Baisakhi, Onam, Pongal, Bihu and Lohri are some festivals which are linked to the seasons.
- F. Answer these questions :
1. The sun and the eight planets revolving around it along with their satellites make up the solar system. The eight planets of solar system are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.
2. Below the mantle, the second layer of the earth, is the core which has an extremely high temperature and pressure. The boiling liquids and gases of the core push against the outer crust. The weak spots of the earth crack open under this pressure, letting the hot boiling liquid and gases gush out. This is how a volcano is formed.
3. The day and night cause by the earth's rotation. The earth rotates on its axis once is 24 hours causing day and night. When it rotates on its axis, one half of it faces the sun and this side has day. The other half faces away from the sun, and this side has night.

4. The revolution of the earth around the sun causes seasons. During its revolution, when the North Pole is towards the sun, it is summer in the Northern Hemisphere, and winter in the Southern Hemisphere because it is turned away from the sun. On the other hand, when the North Pole is turned away from the sun, it is winter in the Northern Hemisphere and the Southern Hemisphere experiences summer because it comes near the sun. This cycle of seasons goes on with the revolution of the earth year by year. Some short seasons also come in between the summer and winter.
5. If the earth's axis was not tilted, then the distance of the South Pole and the North Pole from the sun would have been the same. Both the hemispheres would have received the same amount of heat and there would have been no change of seasons.

HOT QUESTIONS

- G. 1. The season in the Northern Hemisphere can never be the same as the season in the Southern Hemisphere because both the hemispheres cannot come near the sun at a same time. As we know that the earth's axis is tilted at an angle, therefore the season in the Northern Hemisphere can never be same as the season in the Southern Hemisphere.
2. Amit should carry warm clothes with him because Australia is located in Southern Hemisphere and there will be winter, when here in the Northern Hemisphere we experience summer.
3. When there is day in India, there is night in U.S.A. because India is located in the Northern Hemisphere and USA is located in the Southern Hemisphere. So, when the Northern Hemisphere faces the sun and this side has day, the Southern Hemisphere, the other half of the earth away from the sun and this side has night.
4. If there was no sun, we would not see the moon because it would not get the light from the sun. As we know that the moon has no light of its own, it gets light from the sun.

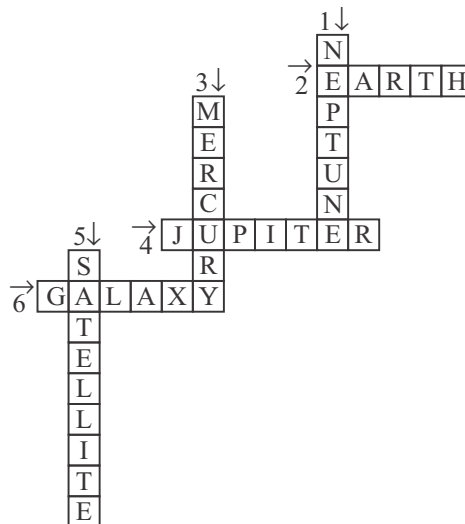
Let us Try

H. Write the correct letter opposite each questions.

1. A 2. N 3. A 4. N 5. S 6. N 7. N 8. A

I. Do it yourself.

J. Solve the crossword puzzle by reading the clues given.



K. Do it yourself.

CHAPTER-12 – AIR, WATER AND WEATHER

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (c) 3. (a) 4. (b) 5. (c)

B. Fill in the blanks :

1. weather 2. atmosphere 3. heating, cooling
4. ice crystals 5. water table 6. covered

C. Change the underlined words to make correct sentences.

1. The sun causes weather change.
2. The rotation of the earth on its axis causes day and night.
3. During evaporation, water changes into water vapour.
4. Hot air is lighter than cold air.
5. About three-fourth of the earth's surface is covered with water.
6. Raindrops on freezing become hails.

D. Write the short answer.

1. Weather is the condition of the air around us at a particular time, in terms of temperature, atmospheric pressure, wind and moisture.
2. Very fast and strong winds are known as storm.
3. The rate of evaporation depends on the wind, temperature and the amount of exposed surface.
4. Hails are frozen raindrops.
5. The three ways to purify water are chlorination, boiling and filtration.

E. Answer the following questions.

1.		Condensation	Evaporation
(i)	The wind blows from the sea towards land is called the sea breeze.	The wind blows from the land towards the sea is called land breeze	
(ii)	It blows during the day.	It blows at night.	

2. On heating and cooling water changes its form. The heat of the sun heats the water on the earth's surface to change it into water vapour. Water vapour goes up in the atmosphere and forms clouds. These clouds fall on the earth as rain. The continuous flow of water from the earth's surface to the atmosphere and from the atmosphere take to the earth is called water cycle in nature.
3. On cooling, water vapours change to drops of water. This process is called condensation. In nature, water vapour condense to form clouds, rain, dew, forest, hail and snow.
4. The four methods to kill the germs in water are as follows :
 - (i) Chlorine is added to water to kill the germs. This process of adding chlorine is called chlorination.
 - (ii) Boiling is the simplest way to purify water. On boiling the germs get killed.

- (iii) Bleaching powder also kills germs in water.
- (iv) Potassium permanganate can be used to purify the water from the well.

HOT QUESTIONS

- F. 1. A few years ago water filters were not used, but the water was safe for drinking because there were no big industries at that time which release waste water with toxic chemicals on a large scale into the rivers and other water bodies. The water present on surface and under the ground was safe from these toxic chemicals and heavy metals at that time.
2. The underground water is mostly safe and fit for drinking because it is rain water that seep into the ground and passes through several layers of the soil before collected into the hard rocks that are not porous. The various layers of the soil work as a filter to purify this water.
3. Even on a hot day, people in coastal areas do not feel very hot because of sea breezes. These winds keep the climate of the coastal areas cool and pleasant.

Let us Try

- G. Do it yourself.
- H. Identify the pictures and name them.
 Sea Breeze Land Breeze
- I. Do it yourself.
- J. Name six forms of condensation hidden in the maze.

C	A	F	R	O	S	T	V
L	A	O	P	A	R	O	M
O	L	G	N	H	A	I	L
U	A	M	S	H	A	A	N
D	E	W	R	S	N	O	W
L	A	P	I	H	S	A	O

CHAPTER-13 – A CLEAN WORLD

Let us Answer

- A. Tick (✓) the correct answer.
1. (a) 2. (c) 3. (b) 4. (c) 5. (b) 6. (c)
- B. Fill in the blanks :
1. environment 2. pollution 3. microorganisms
4. manure 5. drains 6. Reuse, Reduce, Recycle
- C. Match the following.
1. (d) 2. (c) 3. (e) 4. (a) 5. (b)
- D. Answer the following questions :
1. More trees are being cut to make the land available for making houses.
2. Pollution refers to the presence of harmful substances in air, water and land that can cause harm and discomfort to human beings and other living organisms.
3. The harmful substances that pollute air, water and land are called pollutants.

4. When harmful wastes mixed with soil, it causes land pollution.
5. Two biodegradable wastes are peels of fruits and vegetables and dried leaves of plants.

E. Answer these questions :

1. The three causes of air pollution are as follows :
 - (i) Smoke emits by vehicles and industrial units.
 - (ii) Bursting crackers during festivals like Diwali.
 - (iii) Forest fire.
2. Water gets polluted by many ways. Some of the them are as follows :
 - (i) Waste or dirty water from various houses.
 - (ii) Waste water from various industrial units which are released into fresh water bodies.
 - (iii) Farmers use chemical fertilizers to grow crops. These fertilizers get washed away from agricultural fields to the water bodies by rain.

3.		Biodegradable Wastes	Non-biodegradable Wastes
	(i)	The wastes which decay and mix with soil naturally are called biodegradable wastes.	The wastes which do not decay and mix with soil naturally are called non-biodegradable wastes.
	(ii)	Peels of vegetable, fruits, paper, and wood are examples of these wastes.	Plastic, metal and glass are some examples of such wastes.

4. The four ways to prevent pollution are as follows :
 - (i) Biodegradable wastes should be recycled as manure and used it in the fields to grow crops.
 - (ii) We must avoid the use of plastic bags and in place of them we can use paper or cloth bags.
 - (iii) To check air pollution CNG should be used as fuel to run various vehicles, as it is an environment friendly gas.
 - (iv) Industrial units should establish waste water treatment plants to treat the waste water before flowing it into various water bodies.
5. We can use waste objects made from iron, plastic and glass as raw materials to make new items. This process of making new items from the waste items is called recycling, Newspaper, plastic bottles, metals articles, etc. can be recycled as new items.

HOT QUESTIONS

- F. 1. Our government has banned the use of plastic bags because these are non-biodegradable and also create serious land pollution.
2. We should never burn the polythene bags and styrofoam cups because when we burn them they release smoke with toxic gases that pollute the air all around us.

Let us Try

- G. Do it yourself.
- H. Do it yourself.
- I. Do it yourself.
- J. Do it yourself.
- K. Do it yourself.

SCIENCE (CLASS-5)

CHAPTER-1 – PLANTS – INCREASING THE NUMBERS

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (b) 3. (a) 4. (c) 5. (b) 6. (c)

B. Fill in the blanks :

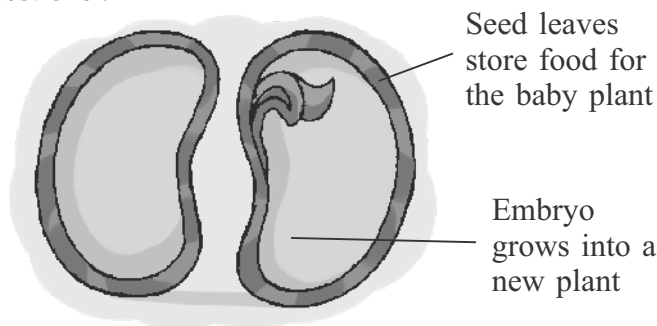
1. seed coat 2. embryo 3. seedling
4. bryophyllum 5. pesticides, insecticides 6. air tight

C. Write short answers :

1. Plants produce so many seeds because all the seeds do not grow into new plants.
2. Dicots are seeds with two leaves. Grams and peas are examples of them.
3. The development of seed into a seedling is called germination.
4. Seeds germinate when they get air, water (moisture) and warmth (sunlight) in a sufficient amount.
5. The various agents of dispersal are wind, water, animals and explosion of fruits.

D. Answers these questions :

1.



2. A seed has an outer covering called the seed coat which protects the seeds. On removing the seed coat of a gram, we will be able to see two seed leaves or cotyledons. Now If we separate them, we find a baby plant inside called embryo. The embryo has tiny root and a tiny shoot.

The cotyledons store food for the baby plant. As long as the baby plants does not grow green leaves it depends on the food stored in the seeds. Some seeds have one leaf, while some have two seed leaves.

3. Plants produce so many seeds because-

- (i) when they are separated from their parent plants, some of them are not fully grown :
- (ii) some seeds are destroyed by strong winds and heavy rains.
- (iii) some seeds are eaten by animals, insects and birds.
- (iv) some seeds do not get the right condition to germinate

CHAPTER-2 – FOOD AND HEALTH

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (c) 4. (a) 5. (b) 6. (b) 7. (c)

B. Fill in the blanks :

- | | | |
|------------------|-------------------|------------|
| 1. balanced diet | 2. sugar, starch | 3. plant |
| 4. malaria | 5. pasteurization | 6. outdoor |

C. Match the following :

1. (e) 2. (d) 3. (b) 4. (c) 5. (a)

D. Write the short answer :

1. A disease is an abnormal condition in which the body is unable to function properly.
2. A diet containing all the nutrients in the right amount is called a balanced diet.
3. The diseases which can pass from one person to another are called communicable diseases.
4. The lack of particular minerals or vitamins in the body causes diseases. These diseases are called deficiency diseases.
5. Vaccination can prevent or protect the body against certain diseases even if disease-causing germs enter the body.

E. Answer these questions :

1. Regular exercise helps us to gain good health. Exercises build strong muscles and bones. During exercise air is pumped in and out of the lungs at a faster rate. Thus more oxygen is taken in and more carbon dioxide and water vapour are given out. Moreover our blood circulation increases. Exercise also helps the nervous system by supplying more oxygen to the brain.
2. The two ways by which the communicable diseases spread are as follows :
 - (i) Through Direct Contact : Certain diseases like chickenpox, measles, ringworm, scarlet fever, whooping cough and common cold spread through direct contact between the healthy person and the infected person.
 - (ii) Through Infected Food and Water : Food and water get contaminated when they are not stored properly. Flies and cockroaches carry germs from sewers and contaminate our food and water. When the contaminated food is consumed, it can cause diseases like cholera, diarrhea, polio and jaundice.
3. The following precautions should be taken to check the spread of malaria :
 - (i) Water should never be allowed to stand as it becomes a breeding ground for mosquitoes. Mosquitoes lay eggs in the standing water.
 - (ii) In order to destroy the mosquito larvae, the surface of the water in the tanks and ponds must be sprayed with oil.
 - (iii) Always use a mosquito net or a mosquito repellent at night to keep safe yourself from mosquitoes.
4. The houseflies play a vital role in spreading diseases. They carry germs from sewers and other dirty places and contaminate our food. When the contaminated food is consumed, it can cause diseases like cholera, polio, diarrhoea, jaundice etc.

5. A healthy person can catch whooping cough from a diseased person through infected air. When a diseased person coughs the germs are released into the air. When the healthy person breathes in this air, the germs enter his body leading to the disease.
6. Seema is suffering from anaemia. This is caused by the deficiency of iron in food. Seema should eat iron rich food like grapes, apples, bananas, dates, meat, spinach, etc. to get rid of this disease.

HOT QUESTIONS

- F. 1. Anita's mother did not allow Khushid to play with Anita and she also used separate utensils to serve food to Anita, because Anita was suffering from chickenpox, a communicable disease. Her mother did so to keep Khurshid safe from the disease of chickenpox.
2. I do not think Karan is doing the right thing because games or exercise are necessary to keep the body healthy and fit.

Let us Try

- G. Do it yourself.
- H. Do it yourself.

CHAPTER-3 – SAFETY AND FIRST AID

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (c) 3. (b) 4. (a) 5. (c)
- B. Fill in the blanks :
1. First-aid 2. accidents 3. crosspiece 4. blisters 5. sprains
- C. Write short answers :
1. First-aid is the immediate help given to an injured person before the doctor arrives.
 2. A sprain is a twist in a joint, such as the ankle or wrist.
 3. Minor burn can be treated at home. Immediately put the burnt area under running cold water till the pain subsides. Then apply an antiseptic lotion or paste of baking soda and water.
 4. In case of sprain, keep or applying ice-packs or ice-cubes on the injured joint till the swelling subsides.
 5. Rabies.
- D. Answer the questions :
1. The following first-aid should be given in case of cuts and scratches :
 - (i) Wash the dust around the wound properly.
 - (ii) Clean the affected area with cotton wool soaked in an antiseptic lotion.
 - (iii) Cover the wound with cotton wool and bind it with a bandage on a clean handkerchief.
 - (iv) If the cut is deep, it may bleed more. In this case use a tourniquet to stop the bleeding.
 2. The following steps should be taken in case of animal bite :
 - (i) Wash the wound with soap and water to remove the germs, as the virus causes hydrophobia or rabies.

- (ii) Then apply an antiseptic lotion to prevent infection. Bandage the wound with a sterilize gauze. Rush the victim to a doctor.
3. The following first-aid should be given in the case of nose bleed :
 - (i) Keep the victim upright in a comfortable position with his head held back.
 - (ii) Pinch the bridge of the nose firmly.
4. A break or crack in the bone is called a fracture. In case of fracture the following things should be done :
 - (i) Keep the patient calm and do not let the patient move the fractured part.
 - (ii) Apply a splint to give support to the broken bone. Any easily available article like sheets of newspaper, magazines, a piece of cardboard or a pillow around the injured bone can also act as a splint.
 - (iii) A sling of made from a triangular piece of cloth can be used for support.
5. The following first-aid should be given is cause of a snake bite :
 - (i) Let the poisonous blood flow out and do not try to stop the wound from bleeding.
 - (ii) Tie a tourniquet just above the bite to stop the flow of blood to the heart. This may help to slow down the spread of poison.
 - (iii) Immediately take the victim to the nearest doctor. Always takes precautions while walking through areas where snakes are found. Wear high boots to protect your feet.
6. A fire can be put out by the following methods :
 - (i) If a fire has been caused by defective wiring or an electric gadget. Do not throw water on it. This can cause electrocution. Immediately turn off the main switch. Throw sand on it or use a fire extinguisher.
 - (ii) In a case fire is caused by petrol, do not throw water on it, instead put out the fire by throwing lots of sand or mud on it.
 - (iii) In case, there is a fire in the building, inform the nearest fire station.

HOT QUESTIONS

- E. 1. In case of petrol fires, water is not suitable for extinguishing the fire because it is less dense than water and will float in water. As water will spread such the oil will spread and the fire will become more uncontrollable.
2. Aman is five years old boy. His mother keeps all the medicines out of his reach because he may eat any medicine and fall in a trouble. So Aman's mother does it for his safety.
3. Reema's teacher had thought her that is case of gas leak, electrical switches should not be operated. She thinks correctly because in case of gas leak if we operate electrical switches the gas can catch fire and a fire accident may occur. As we know that when an electrical switch is operated it emit sparks.

Let us Try

- F. Do it yourself.
- G. Do it yourself.
- H. Do it yourself.

ACTIVITY TIME-I

- A. Do it yourself.
B. Complete the following.

Nutrient	Found in			
Carbohydrate	Potato	Wheat	Rice	Sugar
Protein	Fish	Chicken	Egg	Milk
Vitamin A	Mango	Papaya	Tomato	Milk
Vitamin C	Tomato	Amla	Potato	Pulses
Iron	Grapes	Apples	Dates	Spinach

- C. Do it yourself.

CHAPTER-4 – HOUSES ALL AROUND

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (b) 3. (c) 4. (b) 4. (c)
- B. Fill in the blanks :
1. F 2. T 3. T 4. F 5. T
- C. Write short answer :
1. We need a house to live in.
2. The houses in plains have thick walls because these kinds of walls keep the houses cool from inside in summers.
3. Stilts are wooden pillars. A house made on a stilts is called a stilt house. They are found in flood prone areas.
4. The houses in hilly areas have sloping roofs because such roofs do not allow rainwater or snow to collect and make house damp and cold.
5. Cooperative housing societies construct houses for the people at a reasonable cost.
- D. Answer these questions :
1. The three main factors which determine the type of house we build are as follows :
(i) The climate of the place
(ii) The materials to be use and
(iii) The budget available to use
2. Bricks, cement, stones, marble, metals like iron, wood, etc. are some building materials used to build a house.
3. The following things should be kept in mind before the construction of a house :
(i) The doors and windows of the house must be in a direction such that fresh air and sunlight can enter every room.
(ii) The walls of the house must be strong, damp proof and well-plastered.
(iii) Doors and windows must be fitted with grills in order to make the house safe.
(iv) It should have good drainage system. All the drains should be covered.

4. The following things should be kept in mind once the house gets constructed :
 - (i) The house should be kept clean in order to prevent the spread of diseases.
 - (ii) The house should be kept germ-free. The floors must be swept and mopped everyday using a disinfectant.
 - (iii) The kitchen, the bathrooms and the latrine must be washed and disinfected regularly.
 - (iv) The doors, windows and walls must be dusted regularly. Dirt and dust make the house unclean.
- E. 1. I would give him an advice to fit the large glass windows with grills in order to make them safe.
2. Mr. Kung Fu is going to face loss of life and property because a house made from bricks and cement is not a safe in an earthquake prone area. The collapse of a such house during an earthquake may cause a serious loss. In such areas people mostly make wooden houses.

Let us Try

- F. We need to take care of certain points before (B), during (D) and after (A) building a house. Write B, D or A against each statement :
1. D 2. D 3. B 4. A 5. D 6. A
- G. Do it yourself.

CHAPTER-5 – SOLIDS, LIQUIDS AND GASES

Let us Answer

- A. Tick (✓) the correct answer.
1. (b) 2. (c) 3. (c) 4. (c) 5. (b)
- B. Fill in the blanks :
1. matter 2. atoms 3. water 4. physical change 5. compound
- C. Write T for true and F for false statements.
1. (T) 2. (T) 3. (T) 4. (F)
- D. Write short answers :
1. Anything that occupies space and has mass is called matter.
 2. Molecules are extremely small invisible particles which make all the matters.
 3. The liquids can flow because the molecules of them can move around freely.

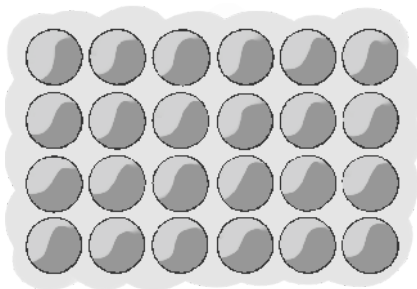
	Physical Change	Chemical Change
1.	A physical change is a temporary change that can be reversed.	A chemical change is a permanent change in the in the state of a matter.
2.	No new substance is formed.	A new substance is formed.

5. Names of two solids that can dissolve in water are sugar and salt. Names of two liquids that can dissolve in water are glycerine and alcohol.
Names of two gases that can dissolve in water are oxygen and carbon dioxide.

E. Answer these questions :

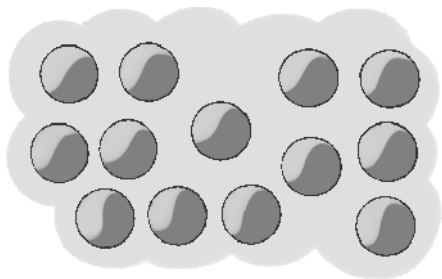
1. **Particle arrangement in solids–**

In solids, the molecules are closely packed with very little space between them. The molecules attract each other with great force as a result they cannot move freely or away from each other. Hence, solids have a fixed shape and definite volume.



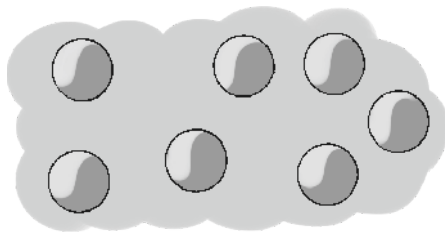
2. **Molecules arrangement in liquids–**

In liquids, the molecules are not packed closely together. The attraction between the molecules in liquids is less as compared with that in solids. Molecules can move around freely due to which the liquids can flow. A liquid has a definite volume but no definite shape. It takes the shape of the container.



3. **Molecules arrangement in gases–**

In gases, molecules are very loosely packed. Hence, they are separated by large empty space. The force of attraction between the molecules of a gas is so less that the molecules are free to move in any direction. Thus, gases have no fixed shape or volume and free to flow in any direction.



4. When we boil water, bubbles are formed on the side of the vessel and at the bottom of the water. These bubbles are actually of the dissolved gases that separate from water on heating.
5. When we burn a piece of paper, it change into ash. The molecules of paper are different from the molecules of ash. Therefore the burning a piece of paper is a chemical change.

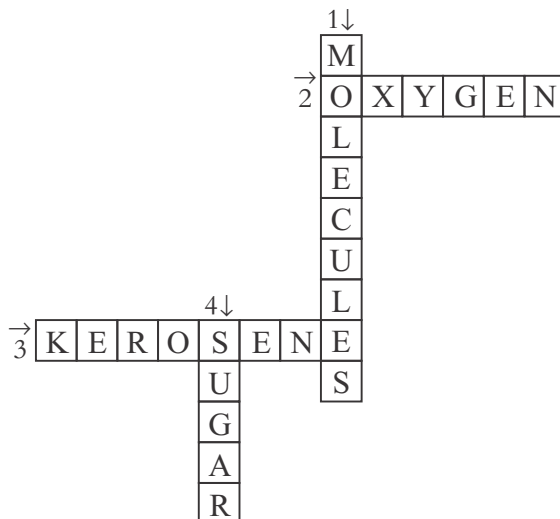
HOT QUESTIONS

- F.
1. Water cannot dissolve paint in it but turpentine is a paint. solvent. The paint molecules find space between the molecules of turpentine thus, it helps to get the paint off the hands.
 2. The level of water will not change because sugar does not take up extra space. Its molecules only fill up the empty spaces between the molecules of water.

Let us Try

- G. Do it yourself.
H. Do it yourself.

I. Solve the crossword puzzle by reading the clues given below :



J. Do it yourself.

K. Write P against physical changes and C against the chemical changes

1. P 2. C 3. C 4. P 5. P 6. C

CHAPTER-6 – SOIL EROSION AND CONSERVATION

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (b) 3. (b) 4. (c) 5. (c)

B. Fill in the blanks.

1. soil
2. air and hard rocks
3. fertility
4. rivers, lakes
5. grass, creepers

C. Write short answers :

1. The process of breaking down of rocks under the action of wind, water and temperature changes is called weathering.
2. Soil erosion is the process by which the top fertile layer of the soil is washed away by moving water or wind.
3. Floods damage crops and carry away top soil leaving the poor farmer with less fertile soil for the next season of crop.
4. The protection of soil against erosion is called soil conservation.

5.	Deforestation	Afforestation
	The act of cutting or burning the tree in an forest area is called deforestation.	The process of planting areas of land with trees in order to form a forest is known as afforestation.

D. Answer these questions :

1. The soil formation is a long process. Due to the action of wind, water and temperature, the rocks broke down into small pieces. These small pieces further broke into still smaller pieces. They were carried around by wind and water. They rubbed against each other till they became tiny particles which we call soil. Soil formation takes million of years.
2. Human activities also cause soil erosion. Roots of trees and plants hold the soil together. Felling of trees or deforestation is a major cause of soil erosion. when trees are cut down the soil becomes loose and is easily carried away.
The ploughing of hill slopes is get another human factor that leads to soil erosion. Overgrazing by cattle also causes soil erosion.
3. Floods are caused by heavy rains. During the monsoon when it heavy rain many rivers overflow and the water spreads in the nearby areas. In this way these areas face serious floods.
4. Wind is an agent of soil erosion because when it blows in a great speed, it carries away the top fertile soil from the fields and leaving the layer barren.
5. The tree ways to conserve soil are :
 - (i) Plant more trees. Roots of plants hold the soil firmly and do not allow it to be washed away with water.
 - (ii) Step farming should be practiced on hill slopes. Steps reduce the speed of running water. As the water stays on the steps, it gets absorbed by the roots of plants, or seeps through the soil.
 - (iii) In the plains, fast winds blow away the soil. Tall trees should be planted in a row to reduce the speed of the wind. This prevent soil from blowing away with the wind.

HOT QUESTIONS

- E. 1. The farmers grow hedges along the boundary of their farms because they reduce the speed of the wind which cause soil erosion.
2. In rocky areas trees grow in rocky soil which is present in cracks of rocks. No one waters these trees, they get water from the rain to survive in those regions.
3. We celebrate 'Earth Day' on 22nd April.

Let us Try

F. Do it yourself.

G. Do it yourself.

CHAPTER-7 – ROCKS AND MINERALS

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (c) 3. (b)

B. Name the following :

1. magma 2. Granite 3. Shale 4. Calcium Carbonate 5. Petroleum

C. Write short answers :

1. The three kinds of rocks are igneous rocks, sedimentary rocks and metamorphic rocks.
2. The three minerals present in granite are quartz feldspar and mica.
3. In India, coal mines are located in Jharkhand, Madhya Pradesh, West Bengal, Tamil Nadu and Andhra Pradesh.
4. Petroleum is obtained by drilling holes called oil wells into the earth's crust.
5. In India, petroleum is obtained from Ankaleshwar in Gujarat, Digboi in Assam and Bombay High on the Mumbai coast.

D. Answer these questions :

1. The igneous rocks are formed from magma. Deep inside the Earth rocks are present in the molten state. These hot, molten rocks present in huge underground pockets of the earth are called magma. Due to the intense pressure of other rocks magma is pushed towards the surface. Some of it cools and hardens below the surface of the earth while some flows out on the earth's surface and then hardens to form igneous rocks. Granite is an example of igneous rocks.
2. As the weathering of rocks occur due to the action of wind and water, the broken rocks and stones flow down the rivers and streams. River and streams flow to lakes and seas carrying tiny particles of rocks, solid and dissolved minerals with them. These particles make a layer at the bottom of lakes and seas. As more and more layers sediments pile up, the layers below get squeezed together. Due to the continuous pressure, the bottom layers harden, leading to the formation of sedimentary rocks. Sandstone and shale are two example of these rocks.
3. Metamorphic rocks are formed from igneous or sedimentary rocks. When the igneous and sedimentary rocks are subjected to increase heat and pressure inside the earth, the minerals present in those rocks undergo a change and they turn into metamorphic rocks. Slate and marble are two examples of these rocks.
4. Metals are extensively used in making cycles, scooters, cars, buses and aeroplanes. They are also used to make wires, coins and furniture.

Precious metals like gold, silver and platinum are used for making jewellery

5. Coal is one of the most valuable minerals stored in the earth. Millions of years ago, the land was covered with swamps. Many plants grew in the swamps. As they died they fell into the swamps and were soon covered with layers of soil and more dead plants. Over the years, because of the heat and pressure, they get converted to coal.

Petroleum is formed from the remains of ancient land and sea animals. Millions of years ago, these animals got buried under the surface of the earth. The intense heat and pressure slowly turn them into petroleum.

6. Few ways to conserve the fossil fuel-coal and petroleum.
 - (i) Coal and petroleum should be used carefully.
 - (ii) We should use the inexhaustible sources of energy like the sun, the wind and water.
 - (iii) We should keep our vehicles in good condition as they will use less fuel.

HOT QUESTIONS

- E. 1. Pumice is formed when the lava cools quickly with a lot of air trapped within it. It has many holes in it, which makes it very light and helps it to float on water.
2. Granite is commonly used for making kitchen counters and floors because it is a hard rock and a good building material. Limestone cannot be used to make kitchen counters because it is a soft rock.
- F. Do it yourself.

CHAPTER-8 – ANIMALS EVERYWHERE

Let us Answer

- A. Tick (✓) the correct answer.
1. (c) 2. (b) 3. (b) 4. (a) 5. (c) 6. (a)
- B. Fill in the blanks :
1. habitat 2. spiracles 3. snakes 4. forelimbs 5. migration
- C. Match the columns :
1. (e) 2. (f) 3. (d) 4. (c) 5. (b) 6. (a)
- D. Write short answers.
1. The home or the natural surroundings of an animal is called its habitat.
 2. The air holes found along the sides of insect's body are called spiracles.
 3. Fish breathe in water through their gills.
 4. Frog breathe in water through their moist skin and on land they breathe through their lungs.
 5. Animals move from a one place to another in search of food and shelter and to protect themselves from being hunted.
 6. Animals migrate to escape harsh weather, to search for food and to reach their breeding grounds.
- E. Answer these questions :
1. Human beings take in air through the nose. This air enters the lungs through the wind pipe, Exchange of gases takes place in the lungs. The lungs are richly supplied with blood vessels. Oxygen from the air passes into the blood and carbon dioxide from the blood passes into the air.
 2. Herbivores like cows, goats and giraffe have sharp front teeth to bite and strong broad teeth to chew green plants.
The carnivores like lion, tigers have sharp, pointed and curved teeth for tearing flesh. They also have grinding teeth to chew the flesh and bones.
 3. The following special features help water animals to move :
 - (i) A fish uses its fins for swimming. The paired fins help it to move forward and unpaired fins help it to keep its balance. Tail fin helps it to change the direction.
 - (ii) Frogs and aquatic birds use webbed feet to swim.
 - (iii) Turtles have four paddle-like limbs to push water back and to swim.

4. Snakes are reptiles and they do not have legs. They have scaled or plates on the underside of their bodies. As the snake moves forward or backward the scales push against the ground. This helps it to grip the ground and to move its body.
5. The following features help most of the birds to fly :
 - (i) Most birds do not weight much compared to their body size because their bones are light and hollow.
 - (ii) Their wings are attached to the breastbone of them with the help of strong muscles. These muscles enable them to flap their wings and to fly.
6. The mass movement of some animals over thousands of miles at certain times of the year is called migration. Migration is most common in birds. The Europes stork travels from Europe to Africa every winter. During spring, it returns to Europe to the same nest.
The Arctic terms travel a distance of nearly 35,000 km between the Arctic and the Antarctic twice a year.

HOT QUESTIONS

- F. 1. fish and whale both are aquatic animals, yet they are different from each other because whale is a mammal.
2. Insects are the small organisms which have six legs. but spiders have no six legs, they have eight legs. On the basis of this, we can say that the spider is not an insect.
3. Jelly fish is really a fish.

Let us Try

- G. Write in the correct column the names of the animals given in the box.

Lungs	Gills	Spiracles	Body surface
elephant crow monkey pigeon camel crocodile dolphin whale bat frog	prawn tadpole shark frog	cockroach grasshopper butterfly spider honeybee	amoeba paramecium

H. Do it yourself.

I. Do it yourself.

CHAPTER-9 – OUR SKELETON SYSTEM

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (b) 4. (c) 5. (a)

B. Fill in the blanks :

1. organ system 2. vertebrae 3. rib cage 4. radius, ulna 5. hinge

C. Complete the following :

1. (c) 2. (d) 3. (b) 4. (a) 5. (b)

D. Write short answers.

1. The different parts of a skeleton are the skull, the backbone, the rib cage, the limbs and the girdles.
2. The lowest two pairs of ribs in our rib cage are called floating ribs. They are joined only to the backbone.
3. The place where two or more bones meet is called joint.

Movable Joint	Immovable Joint
Joint that allow free movement of bones are called movable joints. This happen because of a fluid which acts like a-lubricant.	Immovable joints are those which do not allow free movement of bones. As the bones in the skull except the lower joints jaw) are interlocked making the joints immovable.

4. The lower jaw is movable part of the facial region.
5. The muscles are joined to the bones with the help of tissues called tendons.

E. Answer these question :

1. The main functions of skeleton are :
 - (i) The bones of skeleton give shape, strength and support to our body.
 - (ii) They protect the delicate organs. The skull covers the delicate brain, the backbone protects the spinal cord and the rib cage protects the lungs and the heart.
 - (iii) The bones are attached to the muscles and help in movement.
2. The backbone is mole up of 33 small bones called vertebrae which is turn form a strong column called the vertebral column. Each bone of the vertebral column has a hole in the centre through which the spinal cord passes.
3. Forelimbs are our arms. They are joined to the spine by the help of shoulder girdles which consists of a pair of shoulder blades and a pair of collarbones.

	Ball and socket joint	Hinge joint
(i)	A ball and socket joint is very flexible and allow movement in almost in all directions.	A hing joint is similar to the hinges present in a door. It allows only back and forth movement.
(ii)	The hip and shoulder joints are of this type.	The elbows, knees, fingers and toes have hinge joints.

5. **Voluntary muscles** : These muscles are under our conscious control. Our legs, neck, shoulders have voluntary muscles.

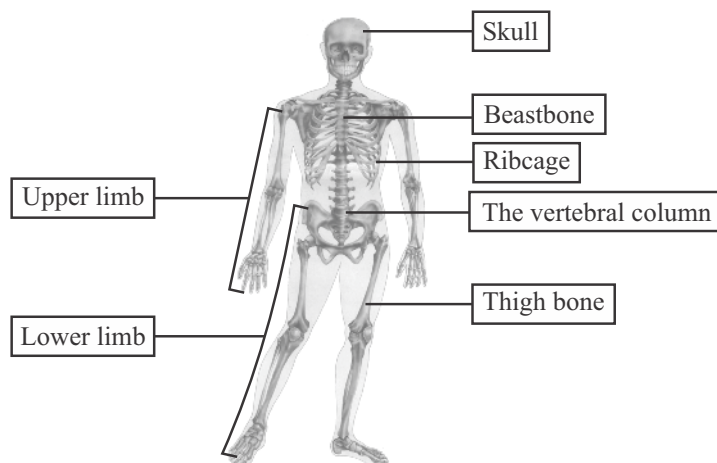
Involuntary muscles : These muscles are not under our control, they move on their own. The muscles in our stomach and intestines are example of such muscles.

HOT QUESTIONS

- F. 1. If our body had only the skeleton system but no muscular system, movement would not be possible. As we know that our bones got movement with the help of muscles.
2. If our backbone is made up of just one long bone we would find ourselves unable to bend it.

Let us Try

- G. Label the different parts of the human skeleton system.



- H. Which joints help you to do the following actions ?
1. Ball and socket joint
 2. Pivot joint
 3. Gliding joint
 4. Hinge joint
 5. Ball and socket joint and hinge joint
- I. Do it yourself.
- J. Do it yourself.

CHAPTER-10 – OUR NERVOUS SYSTEM

Let us Answer

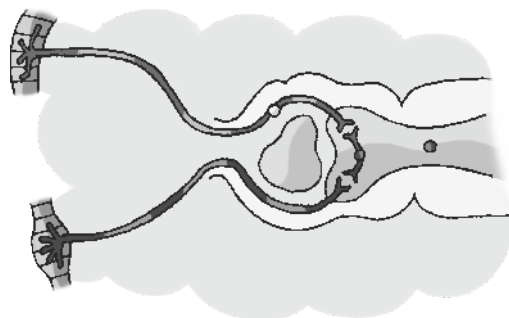
- A. Tick (✓) the correct answer.
1. (c)
 2. (a)
 3. (c)
 4. (c)
 5. (c)
- B. Fill in the blanks :
1. brain, spinal cord, nerves
 2. reflex actions
 3. Nerves
 4. mixed nerves
 5. sense organs
- C. Mark the following as true or false :
1. false
 2. true
 3. false
 4. true
 5. true
 6. false
- D. Write short answers :
1. The nerous system consists of the brain, spinal cord and nerves.

Sensory Nerves	Motor Nerves
These are the nerves which bring message from the sense organs to the brain or the spinal cord.	These are the nerves that carry orders from the brain or the spinal cord to the muscles or the glands.

3. The outer ear helps us to receive and direct sound waves to the inner ear.
4. When a cold blocks our nose, food does not taste so good.
5. The four major tastes that our tongue can detect are sweet, salty, sour and bitter.

E. Answer these questions :

1. The three parts of brain are cerebrum, cerebellum and medulla. One function of each part of the brain is given below :
 1. **Cerebrum** – It controls the working of our eyes, ears, nose, tongue and even our voice.
 2. **Cerebellum** – It controls and coordinates the movements of voluntary muscles as well as helps in keeping the body balance.
 3. **Medulla** – It controls the involuntary actions like breathing, sneezing and heart beat.
2. The spinal cord extends from the medulla to the lower end of the backbone. It is enclosed inside a tough bony but flexible spine. It is responsible for the transfer of messages or information between the brain and other parts of the body through nerves. It also controls the actions that do not involve the brain. Such actions are called reflex action.
3. Not all the messages go to the brain. Some messages require an immediate response. Such automatic and immediate responses are controlled by the spinal cord and are known as reflex action. For example, When our finger comes in contact with a hot object, the sensory nerves immediately pass a message to the spinal cord. The spinal cord sends orders through the motor nerves for the muscles to tighten up. We pull our hand away from the hot object even before we feel the pain.
4. The four points to take care of our eyes are given below :
 - (i) Always wash your eyes with clean water regularly.
 - (ii) Do not read in a moving vehicle as this strains our eyes.
 - (iii) Do not read or write in a dim light.
 - (iv) Sit upright while reading. Keep your book about 12 inches away from your eyes.
5. To keep our skin healthy we should do the following things :
 - (i) Take bath everyday with soap and clean water.
 - (ii) Wear clean and comfortable clothes.
 - (iii) Protect the skin from powerful sunrays by proper clothes and application of sun screen lotion.
 - (iv) Always treat a cut on the skin with an antiseptic solution to prevent infection.

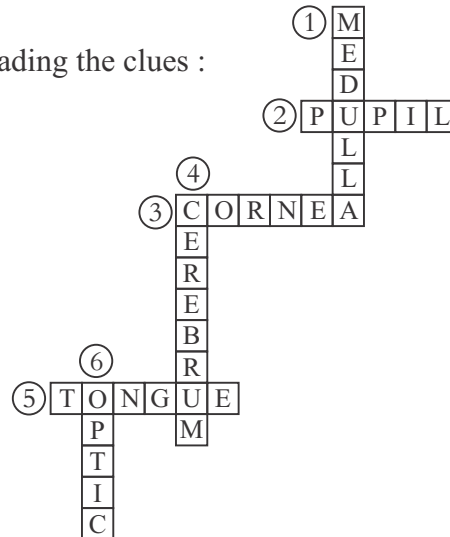


HOT QUESTIONS

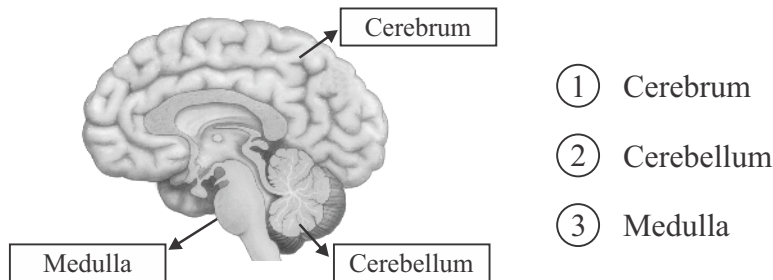
- F. It will affect Vinod's vision because the damaged optic nerve will find itself unable to carry the image formed on the retina to the brain. This is the main obstacle for his vision.

Let us Try

G. Solve the crossword puzzle by reading the clues :



H. Label the parts of the brain in the given diagram.



I. Do it yourself.

J. Do it yourself.

CHAPTER-11 – FORCE AND ENERGY

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (a) 3. (b) 4. (b) 5. (b)

B. Fill in the blanks:

1. muscular 2. elastic 3. pulley 4. energy 5. running water

C. Write the following statements as true or false.

1. false 2. false 3. true 4. true 5. true

D. Write short answer :

1. A force is a push or pull action on an object.
2. The different types of forces are muscular force, gravitational force, frictional force, elastic force, mechanical force and buoyant force.
3. Simple machines are tools that make our work easier, faster and more convenient.
4. The law of conservation of energy is that energy can neither be created nor destroyed but it changes from one form to another.
5. The names of four different forms of energy are mechanical energy, electrical energy, sound energy and light energy.

E. Answer these questions :

1. A force can be used to-
 - (i) move a stationary object and can even make a moving object move faster.
 - (ii) stop a moving object and can even slow down a moving object.
 - (iii) change the direction of a moving object.
 - (iv) change the shape and size of an object.
2. A lever is a bar or board that rests on a support or is fixed at a point. The levers can be classified as the following :
 - (i) First class lever – The fulcrum is in between the load and the effort.
 - (ii) Second class lever – The load is in between the fulcrum and the effort.
 - (iii) Third class lever – The effort is in between the fulcrum and the load.
3. An inclined plane is a flat surface that is raised at one end. It takes less time to move an object up along an inclined plane than it does to lift it straight up. In hospitals and some other buildings, inclined planes called ramps are provided next to staircases. This helps in pushing up wheelchairs. A slide too is an inclined plane.

HOT QUESTIONS

- F. 1. A rolling ball stops after sometime because of frictional force that opposes its movement.
2. The screw is better than a nail because things joined with a screw held together through a longer distance and thus cannot be forced apart easily. On the other hand, things joined with a nail held together only for a short distance, that is through the length of the nail.

Let us Try

G. Identify the figures and tell whether it is a first class, second class or third class lever.

First class lever

Third class lever

Third class lever

H. Name the simple machine used for the following.

1. lever

2. pulley

3. pulley

4. wheel and axle

5. wheel and axle

6. lever

7. lever

8. pulley

I. Do it yourself.

CHAPTER-12 – OUR LIFE SUPPORTS

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (b) 3. (c) 4. (c)

B. Fill in the blanks :

1. air 2. atmosphere 3. humidity 4. wells, ponds, river, lakes
5. distillation 6. cholera, jaundice, dysentery

C. Write the following as true or false :

1. true 2. true 3. false 4. false 5. false

D. Write short answers.

1. The layers of atmosphere are troposphere, stratosphere, mesosphere, thermosphere, and exosphere.
2. Atmosphere is important as it protects the earth from the intense light and heat of the sun.
3. Two types of impurities are found in water-soluble and insoluble or disease-causing germs.

4. Filtration is a method to remove insoluble impurities in water through a filter paper.

E. Answer these questions.

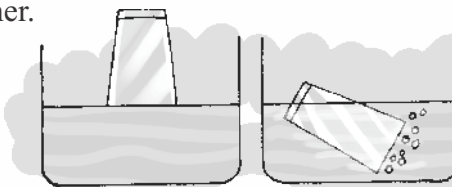
1. Air is a mixture of many gases. Clean air consists of about 78 percent nitrogen, 21 percent oxygen and less than 1 percent of argon, carbon dioxide and other gases. It also contains water vapour, dust and smoke.
2. The uses of air pressure are as follows :
 - (i) Air pressure is used in a doctor's syring.
 - (ii) Filling fountain pens and droppers require air pressure.
 - (iii) We need air pressure for sucking a liquid through a straw.
3. The following activity show that air occupies space :

Experiment-1

Take some water in a glass tub or a container.

Try to push an empty glass into water while holding it upside down. You would not be able to push it into the water. This is because the space inside the glass is filled with air and hence there is no space left for water to enter.

Now, tilt the glass, you will observe that the air escapes from the glass in the form of bubbles. Now, water can enter the glass.



Air takes up space.

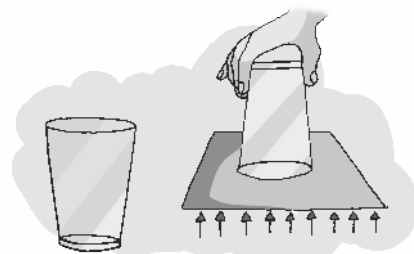
4. The following activity process that air exerts pressure.

Experiment-3

Take an empty glass and fill it with water upto its brim. Now place a piece of cardboard over the glass in such a way that there is no air bubble or space between the water and the cardboard.

Now, hold the cardboard with one hand and turn the glass upside down. Remove your hand gently from the cardboard. You will observe that the cardboard stays in its place and the water does not fall. The outside air exerts pressure on the cardboard and prevents it from falling.

Similarly, you will observe that juice flows out of a tin can having two holes much faster than a tin can having single hole. This is because of the fact that air enters the juice can from the second hole and its pressure pushes out the juice from the first hole.



Air exerts pressure in the upward direction.

5. The water collected in the flask after distillation is totally pure and free from all impurities. This water is known as distilled water. This water is mainly used in car batteries, medicines and science experiments.
6. The water is treated through the following ways before being supplied to our homes :
 - (i) The water is pumped from the river into a tank and is left undisturbed for a few

- (ii) After sedimentation, the water is filtered through a clean sand bed to remove finer suspended particles.
- (iii) The filtered water is then disinfected with very small quantity of chlorine gas to kill bacteria. This water is now safe for drinking.

F. 1. When the air has a high humidity, the sweat cannot evaporate. This leaves our body feeling hot and sticky. This makes us feel uncomfortable.

2. The underground water is safe to drink because it is free from all kind of impurities- solutble and insoluble impurities.

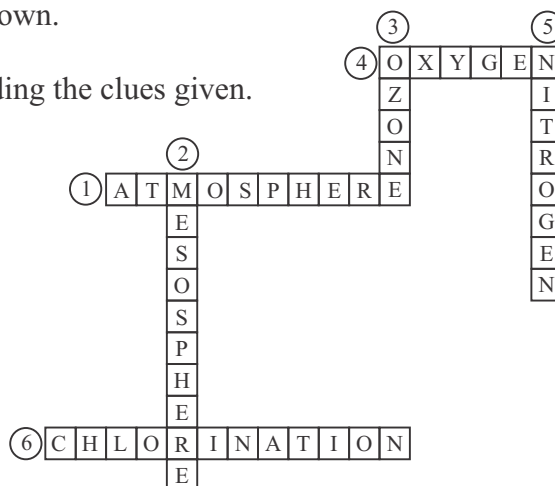
3. There are people who collect the used bottles and refill them with normal water. Unknowingly, we buy this water and it may cause serious health issues.

4. When oil comes out through a tin with one hole, the pressure inside the tin becomes less than the atmospheric pressure when two toles are made in the tin, air keeps on entering the tin through the other hole and maintains pressure inside. This makes oil come out of the tin easily

5. Alum is added to remove the insoluble impurities from water because it helps the insoluble impurities to settle down.

(2) (5)

G. Solve the crossword puzzle by reading the clues given.



```
graph TD; A[Purification of water] --> B[Removal of soluble impurities]; A --> C[Removal of insoluble impurities]; A --> D[Removal of germs]; B --> B1[Evaporation]; B --> B2[Distillation]; C --> C1[Decantation]; C --> C2[Filtration]; D --> D1[Addition of potassium permanganate]; D --> D2[Chlorination]; D --> D3[Boiling];
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The diagram illustrates the purification of water through three main stages:

- Purification of water**
 - Removal of soluble impurities**
 - Evaporation
 - Distillation
 - Removal of insoluble impurities**
 - Decantation
 - Filtration
 - Removal of germs**
 - Addition of potassium permanganate
 - Chlorination
 - Boiling

I. Do it yourself.

CHAPTER-13 – OUR EARTH'S NATURAL SATELLITE

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (a) 4. (c)

B. Fill in the blanks :

1. satellite 2. rough, uneven 3. phases 4. Lunar Eclipse 5. Apollo 11

C. Write short answer.

1. The moon has no light of its own, but it reflects the light of the sun that falls on it. As a result it seems shining.
2. The moon has no air or water, therefore, no life exists on the moon.
3. The moon looks different at different times when viewed from the earth. These varying appearances are called phases.
4. The eclipses occur due to revolutions and changing positions of the earth and the moon.
5. Satellites which send messages from one country to another are called communication satellites.

D. Answer these questions.

1. The effect of moon's gravity can be seen on the earth. The moon seems to pull the earth's water towards it. The water of the seas and oceans, on the side of the earth facing the moon is attracted upwards. This attraction causes high tides.
2. In certain positions of the earth and moon cast their shadows on each other. This blocks the sun light and caused eclipses to occur.
3. During a solar eclipse, the moon comes between the sun and the earth. Thus, the moon blocks out the sunlight and the shadow of the moon falls on some part of the earth. This is called solar eclipse.
4. When the moon is only partly hidden by the dark shadow of the earth, it is a partial lunar eclipse.
5. Artificial satellites are the man-made satellites that revolve around the earth. Some India's satellites are Aryabhata, Bhaskara, Rohini, Apple, Insat 1A, Insat 1B, Insat 1c, Insat 1D, Insat 2A, Insat 2B, Insat 2C, Insat 3B, Insat 3C, Insat 3A and Insat 3E. India launched a remote-sensing satellite into space in April 2008 called CARTOSA T-2A.

HOT QUESTIONS

- E. 1. It is because, there is no air on the moon.
2. It is because gravitational force on the moon is very less in comparison to the earth.
3. According to the known information regarding to the universe, the earth is the only planet that has life on it.
4. Air is the medium through which sound travels. But there is no air on the moon and as a result we cannot hear the crashes on the surface of the moon.

Let us Try

F. 1. Lunar Eclipse 2. Solar Eclipse

CHAPTER-14 – NATURAL DISASTER

Let us Answer

A. Tick (✓) the correct answer.

1. (b) 2. (c) 3. (a) 4. (c) 5. (c)

B. Fill in the blanks :

1. plates 2. vent 3. Barren Island 4. extinct 5. twentieth

C. Write the short answer.

1. Earthquakes are caused due to the sudden movements under the surface of the earth.
2. A volcano is an opening on the earth's surface which allow hot. molten rocks, ash and gases to escape from below the surface.
3. Volcanoes which have no erupted for thousands of years and are the expected to erupt again as the opening of the volcano has been closed by hardened lava are called extinct volcanoes. Mt. Kilimanjaro in Africa is an extinct volcano.
4. Volcanoes that have not erupted in recent years but may erupt in the further are called dormant volcanoes. mount Fujiyama is a dormant volcano.

D. Answer these questions.

1. Seismograph is an instrument used to measure the intensity, duration and direction of an earthquake, It consists of a frame, a spring, a stone, a drum, paper and a pen, As the earth trembles, the spring moves the pen over the paper wrapped on the drum. This reading or pattern obtained on the paper is called a seismogram.
2. The mantle of the earth contains molten rocks called magma. Since the pressure inside the earth is very high, the molten magma and gases are sometimes forced to escape through cracks or openings on the earth's crust. Such cracks or openings form volcanoes. The molten magma and gases escape through a tunnel called a vent. Once the magma reaches the earth's surface, it is called lava. The bursting of the magma from the vent is called an eruption.
3. A seismograph consists of a frame, a spring, a stone, a drum, paper and a pen.
4. During a tsunami, large amounts of water swell up in the form of gigantic waves that move towards the land at a very great speed.
5. Some particular area receives no rain or less rain than normal for a long period, it is said to be affected by drought. Drought affects plants, animals and people. People have to wait for help to come in the form of food, water and medicines from neighbouring places or international agencies.

HOT QUESTIONS

- E. 1. When temperature increases, the intensity of evaporation of water increases. Evaporated water change into vapour and vapour makes clouds. More vapour means more clouds in the sky and more clouds in the sky means more rain on the earth. More than average rain on the earth causes floods.
2. Out break of epidemics is very common after any natural disaster, Infectious diseases are caused by poor sanitation, a lack of safe drinking water, contaminated food and huge mass of rubbish which includes parts of dead plants and animals and sometimes human dead bodies.

Let us Try

F. 1. Tsunami 2. Flood 3. Earthquake

G. Do it yourself.

CHAPTER-15 – CHANGES IN OUR ENVIRONMENT

Let us Answer

A. Tick (✓) the correct answer.

1. (c) 2. (b) 3. (c) 4. (b) 5. (a)

B. Fill in the blanks :

1. farmlands 2. air 3. escape 4. Global warming 5. ice caps

C. Write short answers.

1. The greenhouse gases have the property of trapping energy from the sun. These gases warm up the earth and this effect is called as the greenhouse effect.
2. Chlorofluorocarbon (CFC) is a chemical widely used in refrigerators.
3. Global warming is the steady rise in the average temperature of the earth's surface.
4. Pollution refers to the contamination of air, water on land by human activities.

D. Answer these questions.

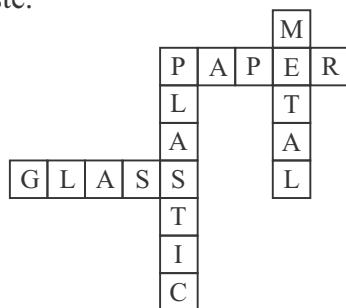
1. Earth's atmosphere is a natural atmosphere that we see around. We survive in this atmosphere and this atmosphere supports plants and animals to live and survive. Greenhouse is an artificial kind of atmosphere. It is an atmosphere created by a green house, that is, a house made of green plastic or glass which traps the heat of the sun. This trapped heat allows the plants to grow in winter (the weather not fit for the plants).
2. Smoke coming from the factories, vehicles burning of coal or wood causes air pollution. Waste water release from factories, offices, industries etc. is the main source of water pollution. Garbage from house dumped in open leads to lead pollution.
3. Global warming can leads to a climate change. It can cause the polar ice caps to melt, This can lead to a rise in the water levels of oceans and flooding of places near the sea. Plants, animals and buildings a long coastline would be in danger.
4. Smoke coming from the factories, vehicles burning of coal or wood causes air pollution. Waste water release from factories, offices, industries etc. is the main source of water pollution. Garbage from house dumped in open leads to lead pollution.
5. The following measures should be taken to control pollution.
 - (a) The factories should have tall chimney fitted with filters to let out smoke and gases.
 - (b) Tree are air purifiers. They should be grown in a large number.
 - (c) All vehicles should be checked for pollution.
 - (d) Waste should be treated and made harmless.
 - (e) House-hold garbage should be thrown at proper dumping places.
6. The process of getting a thing back to its original form is called recycling. Using a thing again after recycling is known as reuse. Metal and rubber goods can be recycled and reused both.

HOT QUESTIONS

- E. 1. Scraps of waste food, used paper plates and napkins will decompose and become part of the soil. The other things like empty tins and bottles will not decompose soon and create soil pollution. The children should have thrown the waste in their respective dustbins i.e., green dustbin for the biodegradable waste and the blue bin for non-biodegradable waste.

Let us Try

F.



G. Do it yourself.