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 :
1. The names of the nutrients present in the food are carbohydrates, fats, proteins, vitamins and minerals.
2. We need foods to stay alive. Food helps us to grow, give us energy to work and to keep us fit and healthy.
3. Some foods rich in carbohydrates are rice, wheat, maize, potatoes, etc.
4. Proteins help our body to grow and repair the worn out or damaged parts.
5. Calcium, potassium, iodine, sodium and iron are some minerals required by our body.

E. Answer the questions :
1. 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.
2. 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.
3. A diet which has the right amount of all the nutrients, that is, carbohydrates, fats, proteins, vitamins and minerals is called a balanced diet.
4. 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.
5. 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

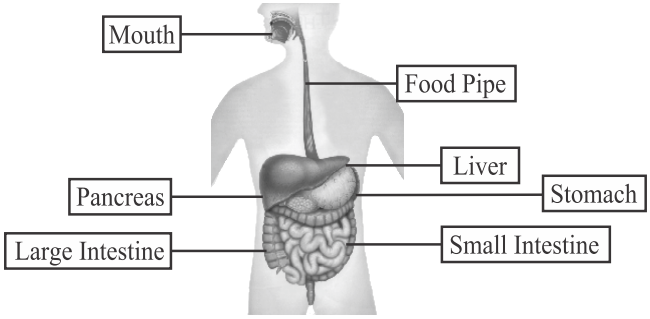
F. 1. We should avoid oily food because it contains fats that causes obesity.
2. We, need to consume more proteins than our grandparents because they help our body to grow, as we know that proteins are body-building foods.
3. Mango pickle can be kept for a long period than the pieces of mango because 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)

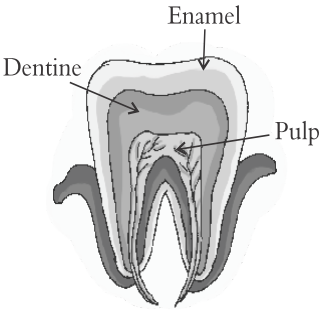
B. Fill in the blanks :
1. face 2. 20 3. germs 4. rinse 5. decay 6. dental floss

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

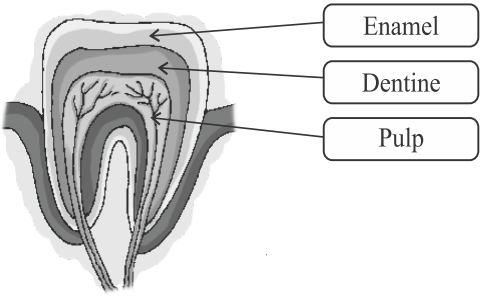
G. Write two differences between milk teeth and permanent teeth.

	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 no 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'a father carried the bottle of insecticide along with him to the hospital because it can help the doctor 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 hent. 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) 4. (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.

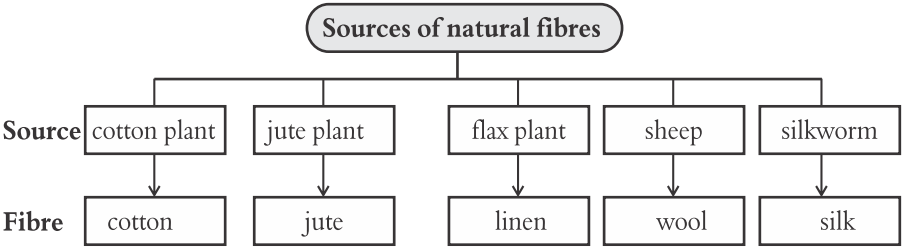
2. synthetic fibres are not found in nature, instead they are prepared artificially. They are called man-made fibres. They are usually stretchable, wrinkle free and easy to dry.
3. We wear light-coloured clothes in hot weather because they reflect the heat and keep the body cool.
4. Cotton clothes should 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 balk or dried neem leaves. These keep the insects away.
5. 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 aor 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. ll in the blanks with either source of the figre which are related :



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

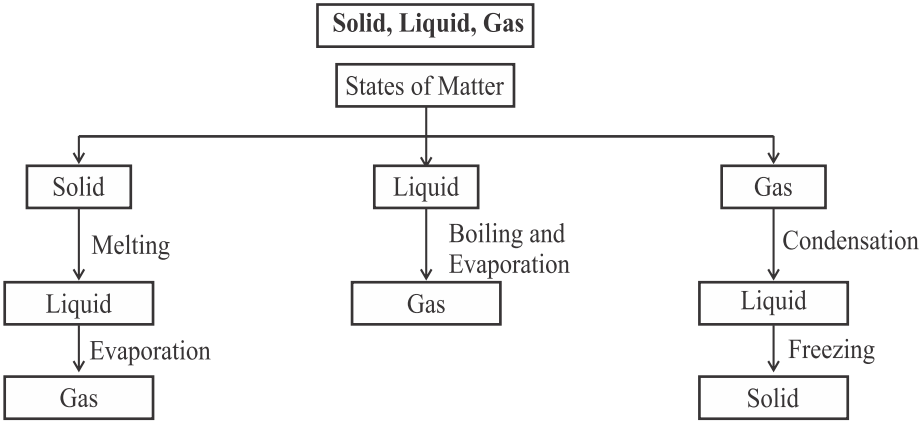
CHAPTER-5 – SOLIDS, LIQUIDS AND GASES

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

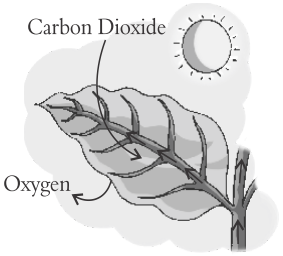
C. Answer the following questions :

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.

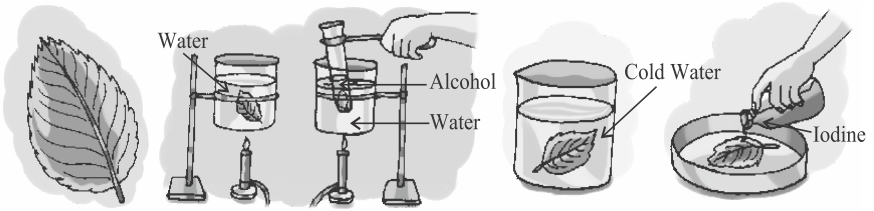
3. The food prepared by plants is in the form of simple sugar which is used in a number of ways :
   (i) It is used to get energy.
   (ii) Some of it is used for growth.
   (iii) The extra food is stored in the form of starch in leaves, stems roots, fruits or even flowers. We eat those plants which have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

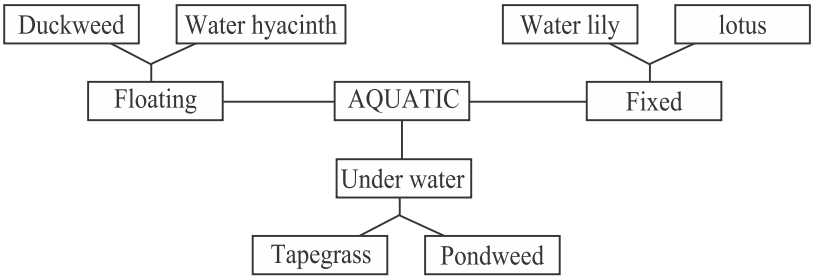
1. hilly areas 2. spines 3. mangroves 4. grass 5. Rainforests

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.

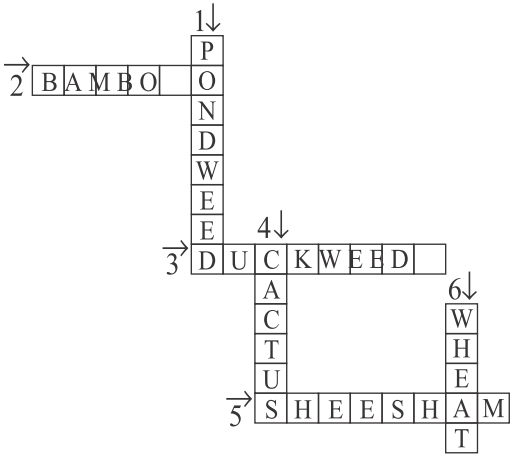
K. Match the picture with their correct feature.

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 :

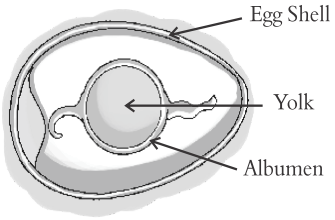
1. false 2. false 3. true 4. false 5. true 6. true

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 worm 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 oat 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.

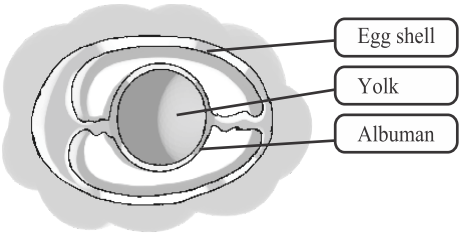
HOT QUESTIONS

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.

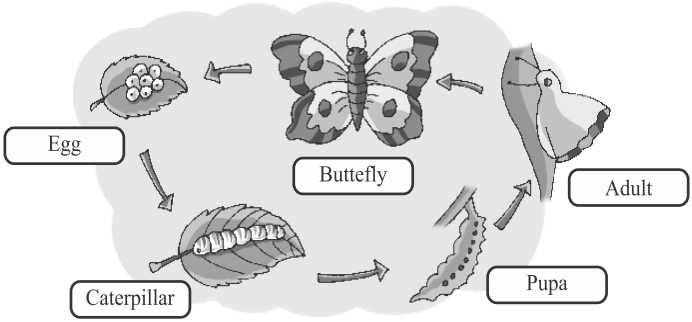
Let us Try

G. Do it yourself.

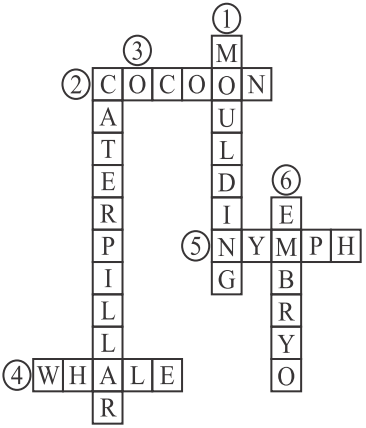
H. Label the given diagram.



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
Breating Organs	Lungs	Gills Lungs	Skin Lungs	Lungs	Lungs
examples	Camel Cow	Fish Dolphin	Frog Salamander	Crow Pigeon	Monkey Squirrel

E. Write short answer :

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

F. Answer these questions :

1. The animals which live in very cold regions like Artic 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

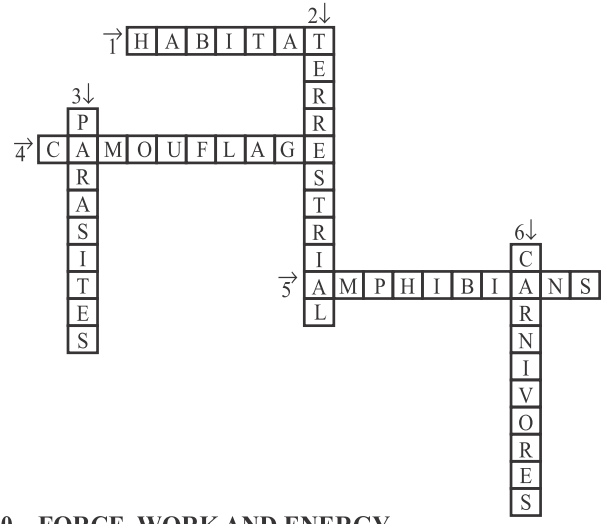
G. 1. If aerial animals have heavy bodies, they will found themselves unable to fly in the air. They will become terrestrial animals.
   2. An octopus is an aquatic animal but it does not have streamlined body. However, it makes its body-shape streamlined while moving in water because such kind of body-shape 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 :
1. Force is a pull or push up acts as an object.
2. Work is said to be done when force moves an object through a certain distance.
3. The force by which the earth pull an object towards it is called gravitational force.
4. A simple machine is a device or a tool that makes our work easier, faster and more convenient.

D. Answer these questions :
1. The solar energy can be converted to heat energy, light energy, and electrical energy.
2. 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 × Distance moved by the object.
3. A simple machine helps us in many ways. It helps us to
   (i) do our work faster and with the less effort.
   (ii) change the direction of force used
   (iii) do work with less force.
4. 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

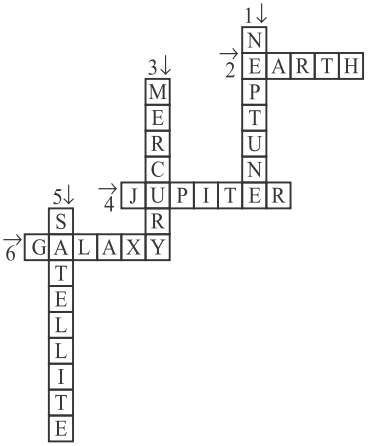
G. 1. The season in the Northern Hemisphere can never be the same as the season in the Southern Hemisphere because both the hemispheres cannot come near the sun at a same time. As we know that the earth's axis is tilted at an angle, therefore the season in the Norther Hemisphere can never be same as 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 filteration.

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 form 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 form 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.