

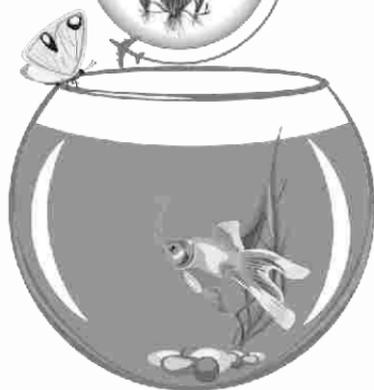
Smart
SERIES

Science

Key Book



Class Four



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**UNIT
1****Our Diet**

A. Answer the following questions.

i). What do we get from food?

Ans. We get carbohydrates, proteins and fats from food. They also have vitamins, minerals, fibers and water.

ii). Name different nutrients of food?

Ans. Food have three main kinds of nutrients carbohydrate, proteins and fats.

iii). How do proteins help our body?

Ans. Proteins are very essential and necessary for our body. They are body building foods and they help the body to grow and repair itself.

iv). How do carbohydrates help us?

Ans. Carbohydrates are energy giving food containing lots of starch and sugar.

v). What is the importance of water for our body?

Ans. All living things need water as well as food to stay alive water is major component of the blood. It helps to take nutrients to all parts of body. No one can live for more than a few days, without water.

vi). What is balanced diet?

Ans. That diet which contains carbohydrates protein and fats as well as vitamins minerals, fibre and water in the right amount is a balance diet.

vii). Why do we need to exercise daily?

Ans. All exercises strengthen our body. So, running skipping, swimming, cycling, dancing, walking are all good exercises that keep strength the whole body.

viii). Why do we need to rest?

Ans. Besides exercise, our body also needs rest to relax. It is important to go to bed at a regular time and take plenty of rest.

ix). How do we feel when we have not enough sleep?

Ans. If we do not get enough sleep, the body is unable to relax and repaired. It is difficult to concentrate; we feel restless, tired and generally unwell.

x). What do you know about deficiency diseases?

Ans. If any one of the essential nutrients is missing from our diet, we may not grow properly and

suffer from deficiency diseases.

B. Fill in the blanks.

- i). Sugar and starch are rich in carbohydrates.
- ii). Fats give us more energy than carbohydrates.
- iii). Children of your age should sleep for 10-12 hours a day.
- iv). Exercise is an activity, which can tone and strengthen our body.
- v). We must eat balanced diet to stay healthy.

C. Give two main sources of each of the following.

Carbohydrate	(Bread, Corn)
Fats	(Butter, Cheese)
Protein	(Fish, Meat, Eggs)
Vitamin	(Fresh Fruits, Cereals)
Minerals	(Vegetable, Milk)
Fibers	(Cereals, Vegetable)

D. Give one main function of each of following.

Carbohydrate:

Carbohydrates are energy giving foods.

Protein:

Proteins are body building foods. Proteins help the body to grow.

Fat:

Fats have twice as much energy as carbohydrates.

Vitamin:

They are essential to help the body fight

diseases.

Water:

Water is a major component of the blood.

Rest:

When we sleep, the muscles relax, the heartbeat slows down and body grows and repairs itself.

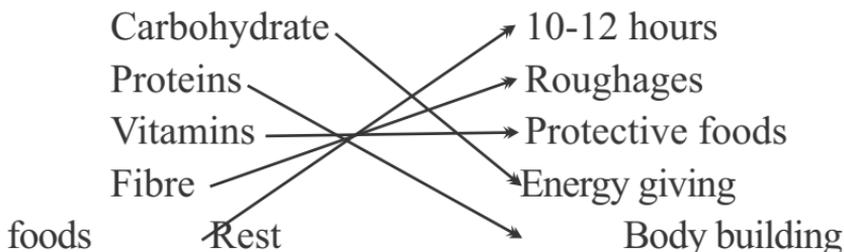
Exercise:

Exercise is an activity, which can tone and strengthen our body so that it is in the best possible condition.

Minerals:

They are essential to help the body fight diseases and keep well.

E. Match the column.



foods

Rest

Body building

**UNIT
2****Plant Kingdom**

A. Answer the following questions.

i). What do we call scientists who study plants?

Ans. Botanists are scientists who study plants.

ii). Plants are divided into two main groups. What are they?

Ans. Scientist classified all plants into two major groups. The simple plants and the higher.

iii). What is the difference between coniferous and deciduous trees?

Ans. The coniferous plants do not lose the spines in winter the do not produce flower. Whereas the deciduous trees lose their leaves in winter.

iv). How are flowering plants different from non-flowering plants?

Ans. Flowering plants produce flowers where non-flowering plants do not produce flowers.

i). Simple plants are sometimes called non-flowering plants because they never produce flowers or seeds.

ii). Flowering plants:

Most abundant plants in the world are the flowering plants. They produce flowers and seeds.

v). Where are seeds produced in coniferous trees?

Ans. The coniferous seeds develop inside special structures called cones.

vii). Which fungus is called mould?

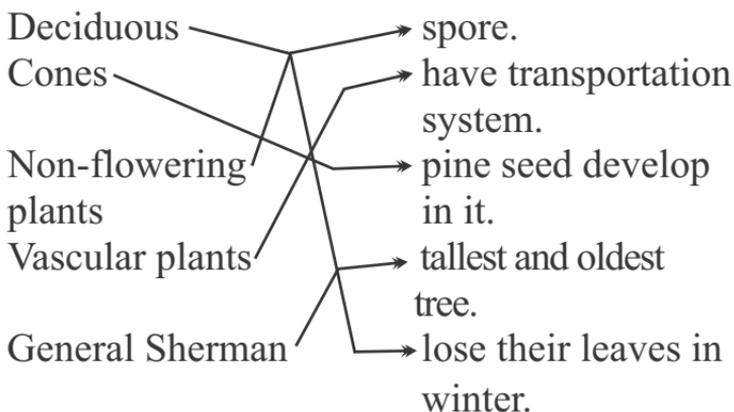
Ans. Sometimes we see fungus growing on dump walls and bread or an orange. This type of fungus is called mould.

B. Fill in the blanks:

- i). Conifer plants have spines like leaves.
- ii). Fungus growing on bread is called mould.
- iii). Mosses absorb water through roots structure.
- iv). Algae are microscopic plants.
- v). Fungi do not have proper roots.

C. Tick (✓) for correct and (×) for false statement.

- i). Fungi reproduce by spores. ✓
- ii). Conifers have flowers. ×
- iii). The seeds of conifers are not covered by a protective wall. ×
- iv). Non-vascular plants have transporting tubes. ×
- v). Fungus growing on bread is called Mould. ✓

D. Match the following.

E. Choose the correct answers.

- i). Scientist who study the plants are called.
a) Pilot b)✓ Botanist c) Guitarist
- ii). Algae and Mosses are belongs to.
a) Higher plants b) Lower plants
c)✓ Simple plants
- iii). The most famous type of fungus is.
a)✓ Mushrooms b) Living room
c) coniferous
- iv). Deciduous trees lose their leaves in.
a) Summer b)✓ Winter
c) Autumn
- v). How many types of higher plants are there?
a) Three b) Four
c)✓ Two
-

**UNIT
3****Balance of Nature**

A. Answer the following questions.

i). What is environment?

Ans. The surrounding in which we live is known as environment.

ii). What are abiotic and biotic components?

Ans. The non-living components are called abiotic and living components are called, biotic components.

iii). Why are plants called autotrophs?

Ans. The plants which prepare their own food are called autotrophs.

iv). Who are called consumers?

Ans. Those animals who depend for their food on plants are known as consumers.

v). Why are carnivores called secondary consumers?

Ans. Carnivores are known as secondary consumers as they depend upon animals (Primary Consumers).

vi). What is food chain?

Ans. The relationship between the plants and animals through food is called food chain.

vii). How is the balance in nature disturbed?

Ans. The natural balance is maintained due to the food chain. But if for some reasons single link of the food is broken, the balance is disturbed.

viii). What are the bad effects of population on the balance of nature?

Ans. The increasing population and industrialization deplete resources of fuel and increase population of air, water and land. Population is basically responsible for disturbing the natural balance.

B. Fill in the blanks.

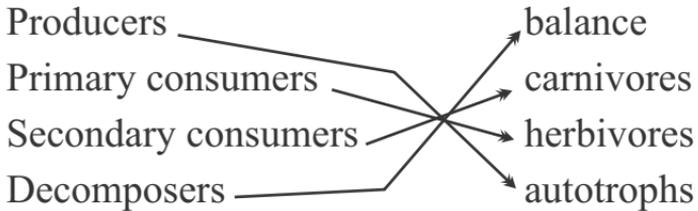
- i). No organism can live in isolation.
- ii). The sun is the most important source of energy for the earth.
- iii). Plants are called producer because they prepare their own food.
- iv). Some types of bacteria are called decomposers.
- v). Carnivorous animals use the flesh of other animals.

C. Tick (✓) for correct and (×) for false statement.

- i). The main non-living components of our surrounding are plants. ×
 - ii). The sun is the most important source of energy for the earth. ✓
 - iii). Plants can not prepare their own food. ×
 - iv). Animals who depend for their food on plants are called consumers. ✓
-

v). The relationship between plants and animals through food is called “Food Chain”. ✓

E. Match the following.



**UNIT
4****Continuity of Life**

A. Give a reason for your answer.

I). Why do living things need to reproduce?

Ans. In order to continue to exist they have to reproduce.

ii). What is fertilization?

Ans. The combine process of egg and sperm is called fertilization.

iii). Name two animals which look different from their parents when they are young?

Ans. Some animals such as frog and butterflies, do not look like their parents when they are born.

iv). Name the four stages of human life cycle?

Ans. There are about four stages to human life cycle. They are infancy, childhood, adolescence and adulthood.

v). How will you define infancy?

Ans. When a baby is born it is totally dependent on its parents. It has no teeth and suckles milk from its mother. The stage from the age of being a new born to the age of two years, is called infancy.

vi). What is aging?

Ans. When certain changes occur such as greying of

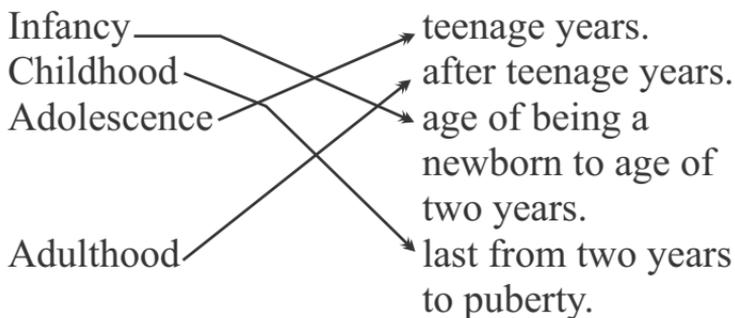
hair, hair falling out and decreased physical activity. It is called aging.

B. Fill in the blanks.

- i). All living things get old and eventually die.
- ii). Life cycle varies from organism to organism.
- iii). When a baby is born it is totally dependent.
- iv). Childhood lasts from the age of two years.
- v). As soon as the baby has teeth it stops depending on milk alone.

C. Tick (✓) the correct options.

- i). There are stages to human life cycle.
 - (a) 2
 - (b)✓ 4
 - (c) 6
 - (d) 8
 - ii). The stage from the age of being a newborn to the age of two years is called.
 - (a)✓ Infancy
 - (b) childhood
 - (c) adolescence
 - (d) adulthood
 - iii). In developed countries humans can expect to live for well over, after which they die.
 - (a) 60
 - (b) 40
 - (c)✓ 70
 - (d) 90
 - iv). Adolescence is the age during years.
 - (a) 2 to 4 years
 - (b)✓ teenage years
 - (c) after 45 years
 - (d) after born
 - v). Females do not reproduce after the age of:
 - (a) 25
 - (b)✓ 45
 - (c) 65
 - (d) 75
-

D. Match the following.

**UNIT
5****Water in Our Life**

A. Answer the following questions.

i). Mention some of the uses of water in daily life?

Ans. There are many uses of water in our daily life. Water is essential for drinking, cooking, bathing, washing, cleaning and agriculture.

ii). Write the properties of water?

Ans. Water has some properties like air.

a). Water is colourless and transparent.

b). Water is odourless. c). Water is taste-less.

d). Water exists in all three states that is solid, liquid and gaseous forms at different temperatures.

e). Water is a universal solvent because it has the property of dissolving many substances.

iii). What are the simple methods of making water safe for drinking?

Ans. There are three methods of making water safe for drinking:

i). Straining ii). Settling

iii). Chemically purification and boiling.

iv). How is water cleaned by the government agencies to supply in towns?

Ans. **Preservation:** For preservation a reservoir is used. Rain water is collected and send to the reservoir through canals and rivers. This water

is generally not clean. Heavy particles of dirt go down to the bottom of the water. **Cleaning:** Now the water is filtered in filter beds, other particles of dirt floating on the water are removed. However, bacteria cannot be eliminated by filtering. Chlorine is sent into water for destroying bacteria. This process is called Chlorination.

Supply: This clean water is supplied to houses, schools, hospitals, offices and factories through pipes.

v). **Which water do you consider safe for drinking?**

Ans. That water is filtered in filter beds, other particles of dirt floating on the water are removed. This water is best for drinking.

B. Fill in the blanks.

- i). Nearly three fourth of the earth's surface is covered by oceans, seas and rivers.
 - ii). In the village, people bring water from wells.
 - iii). The rain is main source of water.
 - iv). The water is a universal solvent.
 - v). The water which looks clean may still not be or fit for drinking.
 - vi). Not all water is safe for drinking.
 - vii). Boiling the water for about 10 minutes kills all the germs.
 - viii). Water exists in all the three states solid, liquid and gaseous.
-

C. Give reasons:

I). You must not drink contaminated water.

Ans. It can be harmful for us.

ii). Vessels in which water is stored must be cleaned from time to time.

Ans. Because dirt particles can be settle down in it.

iii). In villages, sometimes some chemicals are added to the well of water.

Ans. Because well is open all the times so for cleaning purpose chemicals are added in it.

iv). To make the water clean by settling, alum is used.

Ans. Alum is used to hasten the process of settling down dust particles, so, it is added in water to clean.

D. Name the following:

I). Two chemicals used to make water safe for drinking.

a). Potassium permanganate crystals

b). Chlorine

ii). Two methods for purifying water.

a). straining

b). settling

iii). Three states of water.

a). solid

b). liquid

c). gaseous

- iv). Three properties of water.
- a). water is colourless and transparent
 - b). water is odourless
 - c). water is taste-less
- v). Three sources of water in villages.
- a). wells b). tanks c). rivers

E. Tick (✓) for correct and (×) for false statement.

- i). Water is a universal solvent. ✓
- ii). Not all water is safe for drinking. ✓
- iii). Nearly half of the surface is covered by oceans and rivers. ×
- iv). Turbid water can be cleaned by straining. ×
- v). River, lakes and well are public source of water. ✓

F. Choose the correct answer:

- i). Nearly _____ of the earth's surface is covered by oceans, rivers and seas.
- a) One third b) One half
 - c) ✓ Three fourth
- ii). Muddy water can be cleaned by _____.
- a) ✓ Settling b) Boiling
 - c) Adding chemicals
- iii). The chemical used to make water safe for drinking is _____.
- a) ✓ Chlorine b) Copper chloride
 - c) Caustic soda
-

**UNIT
6****Living Safely**

A. Give a reason for your answer.

i). What will you do before crossing a busy road?

Ans. Whenever, you cross the road look at your right, then at your left and then at your right again. Now you can cross the road only if it is clear.

ii). What will you do if someone is injured in an accident?

Ans. Try to give first aid and call for 1122.

iii). How can you avoid accidents on the playground?

Ans. You must remember safety rules in the games. If you play the game in the right spirit, then you can reduce chance of accident chance of accident.

iv). What will you do for safety measures in kitchen?

Ans. In the kitchen, you have to be careful of the fire, knives, scissors and other tools using in our houses everyday. They are sharp and can cause cuts.

v). What is first aid?

Ans. The first help that an injured person need is called first aid.

vi). Why is first aid necessary?

Ans. With first aid risk of life reduces.

vii). List the things in your home that can be dangerous.

Ans. There are many things in our home which may cause danger, e.g. electric wires, electric switches matchsticks, knives, scissors, medicines, electric plugs, etc.

viii). Is it safe to taste anything without being sure?

Ans. No, it can be very dangerous.

B. Fill in the blanks.

- i). The world is beautiful place to live.
- ii). Remember that roads are not meant for playing.
- iii). The zebra crossing is to cross the road on.
- iv). Fire and electricity are useful for us.
- v). Do not try to taste anything you are not sure about.

E. Tick (✓) for correct and (×) for false statement.

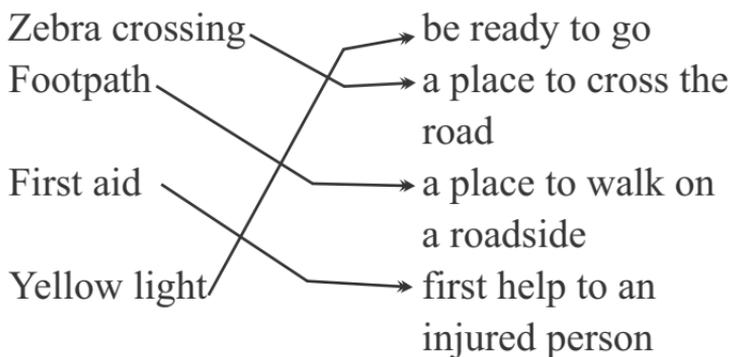
- i). Rules are for our safety. ✓
- ii). Running around inside the class and climbing on desks can not cause accident. ×
- iii). Need not to be careful when you go to science room. ×
- iv). First help that an injured person needs is called first aid. ✓
- v). Take the injured person to the doctor. ✓

D. Name These:

- i). This is the place you should cross the road from zebra crossing.

- ii). You should keep to this side of the road when riding a bicycle left.
- iii). A sharp instrument must be used carefully.
- iv). A useful thing that can give you a dangerous shock if you are not careful with it handling.
- v). The first help that an injured person needs first aid.

E. Match the following.



**UNIT
7****Pollution**

A. Answer the following questions.

i). What do you mean by environmental pollution?

Ans. The disturbance of environment with different things is called environment pollution.

ii). What is air pollution?

Ans. The air pollution is very dangerous health. The pollution produced by vehicle and factor is called air pollution.

iii). Name the factor that cause air pollution?

Ans. Smoke of vehicles, factories wood and coal and burning garbage and trash.

iv). How is water polluted?

Ans. The water is polluted when harmful substances get into water it does not remain fit for drinking or domestic purposes.

v). What do you understand by the word-noise?

Ans. All the sounds that are not pleasant to hear are noises.

vi). Write control measures for noise pollution?

Ans. There are given below some points to control measures for noise pollution.

i). All motor vehicles should move without use

of horn too many times.

- ii). Use of loud-speakers should not be allowed particularly in areas where there are schools, hospitals and other sensitive institutions.
- iii). Proper steps should be taken to prevent noise pollution in factories.
- iv). Trees must be grown all around the house. They also prevent external noise from entering the house trees must also be grown around factories and along streets and roads.
- v). Airports must be constructed sufficiently away from cities.
- vi). People working in noise conditions should wear ear masks or put small cotton balls in their ears.

vii). Write the hazards of noise pollution?

Ans. Hazards of noise pollution.

- i). Intense noise pollution may make a person temporarily or permanently deaf.
 - ii). Noise pollution is particularly harmful to babies and children.
 - iii). Constant exposure to noise pollution may lead to impatience, burning sensation in heart, indigestion, ulcer in stomach, high blood pressure and heart diseases also.
 - iv). Noise pollution may also spoil sleep, work
-

efficiency and concentration.

viii). What is soil pollution?

Ans. Soil pollution is mainly due to chemicals in herbicides and pesticides. These chemicals harm the useful micro-organisms that act as decomposers in the soil.

B. Fill in the blanks.

- i). The random sounds create noise pollution.
- ii). Noise pollution spoils sleep , work efficiency and concentration .
- iii). Human beings cause air pollution by burning fuels.
- iv). When harmful substances get into water it does not remain fit for drinking.
- v). Soil pollution is mainly due to chemicals in herbicides and pesticides.

C. Tick (✓) for correct and (×) for false statement.

- i). Water cannot be polluted by industrial wastes. ×
 - ii). Use of herbicides cannot pollute water. ✓
 - iii). Sounds that are not pleasant to hear are called noise. ✓
 - iv). Noise pollution can make a person permanently deaf. ✓
-

- v). Airports should be quite near the cities. ×
vi). Insecticides become the cause of water pollution. ×

D. Write each of the following.

i). Four factors causing air pollution.

- Ans. i). Burning of fuels
ii). Factories
iii). Burning garbage and trash

ii). Four methods to control noise pollution.

- Ans. 1. Intense noise pollution may make a person temporarily or permanently deaf.
2. Noise pollution is particularly harmful to babies and children.
3. Constant exposure to noise pollution may lead to impatience, burning sensation in heart, indigestion ulcer in stomach, high blood pressure and heart diseases also.
4. Noise pollution may also spoil sleep, work efficiency and concentration.

iii). Four factors causing water pollution.

- Ans. Factories, fertilizers, pesticides and garbage.

iv). Two methods to control water pollution.

- Ans. i). Treatment of sewerage water
ii). Orientation of people to keep water clean

v). Four hazards of noise pollution.

Ans. **Hazards of Noise Pollution:**

1. Intense noise pollution may make a person temporarily or permanently deaf.
-

2. Noise pollution is particularly harmful to babies and children.
3. Constant exposure to noise pollution may lead to impatience, burning sensation in heart, indigestion ulcer in stomach, high blood pressure and heart diseases also.
4. Noise pollution may also spoil sleep, work efficiency and concentration.

E. Match the following.

Deforestation	→	Water Pollution
Industrial wastes	→	Noise Pollution
Crackers and bands		A i r

Pollution

F. Tick (✓) the correct answers.

- i). Waste products which contaminate our environment are called:
 - a) Contaminants
 - b) Pollutants
 - c) Fungicides
 - d) ✓ By products
- ii). Factors causing air pollution are:
 - a) Deforestation
 - b) Emission of gases by vehicles
 - c) Garbage
 - d) ✓ All of above
- iii). Intense noise pollution can make a person:
 - a) Blind
 - b) ✓ Deaf
 - c) Dumb
 - d) Crippled

G. Fill in the blanks by finding the suitable words

from the lesson.

- i). Water is discharged from factories after having been used in production processes.
 - ii). This waste water may contain acids, salts, poisons, oil and in some cases harmful bacteria.
 - iii). Wastes from farms include animals wastes, fertilizers and pesticides.
 - iv). A large amount of these materials drain off
-

**UNIT
8****Simple Machines**

A. Answer the following questions.

i). What is simple machine? Give three examples.

Ans. Any thing which makes our work easy is called a simple machine.

ii). Give three examples of each of the three kinds of levers.

Ans. Levers are of three types.

a). A pair of scissors

b). Nut cracker

c). Iron block in the palm.

iii). How will you load a heavy drum into a truck?

Ans. We can load a heavy drum by use a plank of wood that acts as a simple machine with into the truck easily with comparatively little effort. This simple machine is called inclined plane.

iv). How does pulley help us to draw water from a well?

Ans. A pulley is a wheel with a grooved rim. The pulley makes it easier to draw water from the well. It is an example of simple

machine.

v). **What is the difference between wheel, axle and pulley?**

Ans. Wheel and axle is adaptation class lever and one of the commonly used simple machine. It consists of a wheel attached to a road or axle arranged that wheel and axle move together. A steering wheel of an automobile is common example of a wheel and axle.

vi). **Explain what is meant by an inclined plane?**

Ans. Any flat surface which is kept so that one end is at a higher level than the other end is called an inclined plane.

vii). **Explain the construction of a screw.**

Ans. You must have seen a screw and ordinary nails. Driving a screw nail into a block of wood with screw driver is much easier than, hammering an ordinary nail with hammer. A screw is also a simple machine. It helps us to do work easily. With the help of a jack screw, we can lift a car. A screw is an ordinary plane.

B. Define the following:

i). **Lever:** A heavy object can be moved with the

help of simple bar is called lever.

- ii). **Fulcrum:** The lever can be turned about a fixed point. The fixed point is known as fulcrum.
- iii). **Pulley:** A pulley consists of a wheel with a grooved rim to lift things.
- iv). **Inclined plane:** A flat and plane surface with slope is called an inclined plane.
- v). **Screw:** Driving a screw nail into a block of wood with screw driver is much easier than, hammering an ordinary nail with hammer. It helps us to do work easily. With the help of a jack screw, we can lift a car. A screw is an ordinary plane.
- vi). **Axle:** Wheel and axle is adaptation class lever and one of the commonly used simple machine. It consists of a wheel attached to a rod or axle arranged that wheel and axle move together. A steering wheel of an automobile is common example of a wheel and axle.

C. Fill in the blanks

- i). In the first kind of lever fulcrum will be in the middle.
 - ii). Hand pump is an example of first kind of
-

lever.

- iii). A wheel brown is used to shift heavy objects from one place to another.
- iv). A wedge is a double inclined plane.
- v). A see-saw and a crow bar are examples of first kind of lever.
- vi). Staircases in our houses are example of inclined plane.
- vii). A screw is an example of simple machine.

D. Match the followings.

1st kind of levers.

2nd kind of levers.

3rd kind of levers.

Pulley

Inclined plane.

Screw

Fishing rod.

Winding inclined plane.

Sloping road in mountain.

Door hinges.

A pair of scissors.

A wheel that can move freely on it.

E. Tick (✓) the correct answers.

- i). In a simple machine, if the effort reduces, the speed of work.
- a) ✓ Increases b) Decreases
- c) Remains the same
- ii). Two heavy objects can be joined together tightly with the help of a:

**UNIT
9****Friction**

A. Answer the following questions.

i). What is friction?

Ans. Friction is resistance provided by the body to stop movement.

ii). Write two uses of friction and two problems caused by it.

Ans. **Use of friction:**

i). Soles of shoes and tyres are made with uneven pattern called tread to increase friction.

ii). Roads are made rough to help cars slow down quickly.

Problem of frictions:

i). Ice skiers polish their skies to reduce friction.

ii). Slides in play ground are made smooth to reduce.

iii). How does streamlining help to speed up moving objects?

Ans. A fish or a boat with streamlined body travels in water with ease because streaming helps to reduce the force of friction.

iv). Write two uses of air resistance.

Ans. Air resistance can be useful too.

i). Parachutes is made wide so that they can catch the wind and stay in the air.

ii). Kites and gliders are also made wide so that they can catch the wind and stay in the air.

v). How can friction be reduced?

Ans. Friction can be reduced with the used of oil or

smooth surface.

B. Fill in the blanks.

- i). A fish or a boat with streamlined body travels in water with ease.
- ii). We use lubrication to reduce friction.
- iii). Friction is not always helpful.
- iv). Soles of shoes are made with uneven pattern called tread to increase friction.
- v). Friction occurs when two surfaces move over each other.

C. Tick (✓) for correct and (×) for false statement.

- i). Even surfaces that appear to be quite smooth have tiny bumps on them. ✓
- ii). Roads are made rough to help car slow down quickly. ✓
- iii). Grit is added to icy roads to increase friction. ✓
- iv). Friction occurs when two surfaces move over each other. ✓
- v). Friction gives us grip. ✓

D. Match the following.

Friction produces	→	Increase friction
Friction can be reduced by	→	Tread
Friction gives	→	Grip
Tyres have	→	Lubricants
Grit	→	Heat

**UNIT
10****Evaporation and Condensation**

A. Answer the following questions.

i). What is evaporation?

Ans. The heat of the sun makes water evaporates from lakes, ponds, river and seas.

ii). What factors cause quick evaporation?

Ans. Wind increases the rate of evaporation.

iii). What is condensation?

Ans. One cooling, water vapours turn into water. This process is known as condensation.

iv). How does snowfall occur? What is meant by water cycle?

Ans. **Snowfall:**

When water vapour high up in the air cools suddenly, it forms small particles of ice. A number of particles of ice, which look like fluffy bits of cotton come gently down to the earth and we have snowfall.

Water Cycle:

Thus, we see that water on land and in the seas changes into water vapour and goes up into the air due to evaporation. The water vapour in air cools down, forms water and comes down

again as rain due to condensation. This process goes on continuously in nature. It is called water cycle.

v). How is dew formed?

Ans. When water vapour condenses on cold object, dew is formed.

vi). What is humidity?

Ans. Humidity is the amount of water vapour present in the air in a particular place. Due to it the air becomes humid.

vii). How are clouds formed and how do they bring rain?

Ans. When water vapour, goes high up in the air, it cools and forms clouds. Clouds are very tiny droplets of water. If these clouds come against a mountain, they rise up. So, more water vapour condenses and the tiny drops of water get bigger and bigger. At last the big drops of water fall down in the form of rain.

B. Fill in the blanks.

i). The process of water changing its form and becoming water vapour is called condensation.

ii). Water evaporates faster when the weather is windy.

iii). Water vapour in the air changes into water

again.

- iv). When water vapour condenses on cold objects dew is formed.
- v). Humidity is the amount of water vapour present in the air in particular place.
- vi). Change of water vapour into water is called condensation.
- vii). The weather in the coastal areas is moderate.

C. Tick (✓) for correct and (×) for false statement.

- I. Coastal areas have dry weather. ×
- ii. The weather becomes humid when the amount of water vapour in the air decreases. ×
- iii. Wet clothes dry up after sometime due to evaporation. ✓
- iv. Drops of water falling due to cooling of the clouds is called rain. ✓
- v. You can see snowfall in very clod places. ✓

D. Give one word each for the following events.

- i. The turning of water into water vapour.

Evaporation

- ii. The turning of water vapour into water on cooling.

Condensation

- iii. Soft white flakes falling slowly to ground.

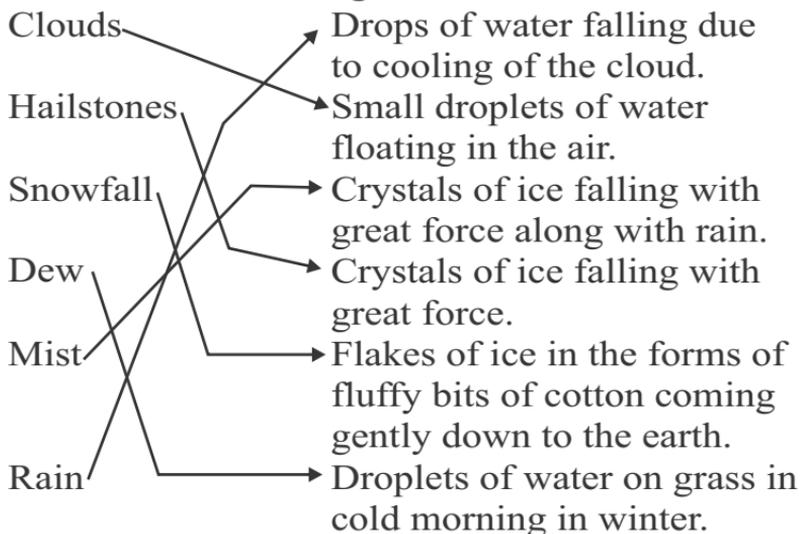
Snowfall

- iv. Pellets of ice coming down from the clouds at a great speed along with the rain.

Mist

- v. When water vapour goes high up in the air and cools.

Clouds

E. Name the following.**F. Choose the correct answers.**

- i. Mist can be seen in:
 - (a) Spring
 - (b) ✓ Winter
 - (c) Autumn
- ii. We have snowfall in:
 - (a) ✓ Cold areas
 - (b) Hot areas
 - (c) Desert
- iii. On cooling water vapours turn into water, it is called:
 - (a) Snow
 - (b) Dew
 - (c) ✓ Condensation
- iv. When water becomes vapour it is called:
 - (a) ✓ Evaporation
 - (b) Condensation
 - (c) Humidity
- v. The falling iceball from the sky are:
 - (a) Dew
 - (b) ✓ Hailstones
 - (c) Mist

**UNIT
11****Building Unit of Matter**

A. Answer the following questions.

i). What is an atom?

Ans. Actually atoms are the basic building blocks of all matter in the universe. Every thing in this universe made up of matter, even we are also made up atoms.

ii). Define element?

Ans. The matter which is compose of molecules of just one kind of atoms is called element.

iii). What do you know about compound?

Ans. The matter which is composed of molecules of different kinds of atoms is called compound.

iv). How many atoms of oxygen make one oxygen molecule?

Ans. Two atoms of oxygen makes on molecule of oxygen.

v). What are the atoms that combine to form a water molecule?

Ans. Two hydrogen and one oxygen atoms form an molecule of water.

vi). What are physical and chemical changes?

Ans. **Physical Change:**

When a physical change takes place, no new substance is formed e.g, when ice melts it changes into water and when water freezes it changes into ice.

Chemical Change:

When a chemical change takes place, a new substance is formed e.g, when a piece of a paper is burnt it will change into ash.

B. Write a few lines about each of the following:**Electron:**

Electrons are the lightest particles in an atom.

They carry a negative charge on them.

Protons:

Protons are much heavier than electrons. They carry positive charge on them.

Neutrons :

Neutrons are also heavy particles but they do not carry a charge. They are neutral.

Molecules:

Atoms are rarely found free. They usually bind together. When two or more atoms bind together, they form molecules.

Compound:

The matter which is composed of molecules made of different kinds of atoms is called compound.

C. Write down the names of any ten elements.

- | | |
|--------------|----------------|
| 1. Hydrogen | 6. Chlorine |
| 2. Nitrogen | 7. Iodine |
| 3. Oxygen | 8. Sodium |
| 4. Calcium | 9. Sulpha |
| 5. Potassium | 10. Phosphorus |

D. Write few elements and compound with their symbols and chemical formula:

Elements	Compound
Iron	Carbon dioxide
Magnesium	Sodium chloride
Phosphorous	Calcium carbonate
Sodium	Sulphur dioxide
Carbon	Water
Oxygen	

**UNIT
12****Fuel**

A. Answer the following questions.

i). Why are coal, oil and natural gas called "fossil fuels"?

Ans. Because they are formed with fossils of living organisms.

ii). How are fossil fuels formed?

Ans. They are formed with extreme pressure and temperature in million of years.

iii). Why is it important to conserve energy?

Ans. We know that fossil fuels are very necessary and essential for us. If we continue to use fossil fuels at the present rate, at the most it will last for the next 50-70 years. We can save fossil fuels by conserving energy.

iv). What is global warming?

Ans. Carbon dioxide is responsible for raising the world's temperature. This is called global warming.

v). Write some problems of using fossil fuels.

Ans. Fossil fuel extraction requires digging deep tunnels underground or under the seabed, which is very costly and involves great risks. Many lives are lost annually. Accidental oil spills pollute the seas and oceans causing tremendous damage to coastlines as well as

killing and distressing plants and animals. Burning of fossil fuels produces carbon dioxide as well as some very dangerous gases such as sulphur dioxide and nitrogen dioxide. These substances reach our lungs with the air we breathe and cause irritation.

vi). How do we find natural gas?

Ans. To find natural gas companies drill through the earth to get to the deposited gas deep below the surface. The gas is pumped from below the ground by oil rings.

vii). What is methane?

Ans. The methane is the part of natural gas.

B. Fill in the blanks.

- i). Coal, oil and gas are called fossil fuels.
- ii). Oil and petroleum are the dead remains of plants.
- iii). Fossil fuels have taken million of years to form.
- iv). Accidental oil spills pollute the seas and oceans.
- v). Burning of fuels produces carbon dioxide gas.

C. Tick (✓) for correct and (×) for false statement.

- i). The world's largest oil field is in America. ×
 - ii). Global warming is due to carbon dioxide. ✓
 - iii). The fuels we are using now were made more than 300 million years ago. ✓
 - iv). Coal and natural gas are used as fuel in our homes. ✓
-

v). Natural gas is also called methane gas. ✓

D. Match the following.

Coal, oil and gas	→	methane gas
Natural gas	→	global warming
Carbon dioxide	→	pollute the sea and oceans
Oil spills	→	Saudi Arabia
World's largest oil field	→	fossil fuel

E. Tick (✓) the correct answers.

i). Natural gas is usually found near _____ under the ground:

- a) Minerals b)✓ Petroleum
c) Salt

ii). Raw petrol is also known as _____.

- a) Black Diamond b)✓ Black Gold
c) Black Salt

iii). Million of years ago the earth was covered by _____:

- a) Black water b)✓ Dense forest
c) Salt mines

iv). Natural gas is also called _____.

- a)✓ Methane b) Ethane
c) Dropper

v). The world's largest oil field is in _____.

- a) America b) Pakistan

**UNIT
13****Soil Erosion and Conservation**

A. Answer the following questions.

i). Why is soil so important to us?

Ans. Soil is the upper most layer of our earth and it has a very important role in our life. All living things depends directly or indirectly on plants. Plants need soil to grow and they obtained essential nutrients from soil.

ii). Which layer of soil is good for the growth of plants?

Ans. Upper layer of soil is suitable for the growth of plants.

iii). What is soil erosion?

Ans. The removal of top soil by natural agents such as rain and wind is known as soil erosion.

iv). Name agents causing Soil Erosion.

Ans. The natural agents for soil erosion are rain, rivers and strong winds.

v). What is deforestation?

Ans. Deforestation (cutting down of forest trees) helps soil erosion. If the land is covered with trees, soil erosion will be prevented as the soil particles get themselves firmly bound to roots. So, soil particles cannot be easily washed away by running water and strong wind. Soil

erosion does not take place in the forest area.

vi). How does soil erosion harm us?

Ans. The progress of a country depends on its rich fertile soil for its agriculture. So, soil erosion destroys the soil for cultivation.

vii). How do plants help in conserving soil?

Ans. Trees, grasses and other plants prevent soil erosion. The branching roots of trees make strong underground nets. These nets bind the particles of soil in such a way that they are not blown away even by strong winds or washed by heavy shower.

B. Fill in the blanks.

- i). The roots of plants absorb water and minerals.
- ii). The blowing and washing away of soil is called soil erosion.
- iii). Terraces on hill slopes reduce soil erosion.
- iv). The soil deposited by rivers is called silt.
- v). Deforestation help soil erosion.

C. Tick (✓) for correct and (×) for false statement.

- i). If the humus in the soil is more, the soil is said to be unfertile. ✓
- ii). The top soil is soft and loose with humus. ✓
- iii). Soil erosion produces a barren and unproductive land. ✓
- iv). The terraces on the hill slopes weaken the force of running water. ✓
-

- v). Soil should not be left bare. ✓
 - vi). The protection of soil from erosion is called conservation. ✓
 - vii). The uppermost layer of soil is the sub-soil. ✗
-

**UNIT
14****The Universe**

A. Answer the following questions.

i). Name the planets of the solar system?

- Ans. i). Mercury 2. Venus
3. Earth 4. Mars
5. Jupiter 6. Saturn
7. Uranus 8. Neptune
9. Pluto

ii). What are moons?

Ans. Moons are heavenly objects of our universe, which are revolving around planets. Our earth has only one moon. Except Mercury and Venus every planet has its own moon.

iii). What is a Satellite?

Ans. A satellite is a machine which revolves around the planet.

iv). What are asteroids?

Ans. Asteroids also called planetoids or minor planets are small bodies which go round the sun.

v). How are comets formed?

Ans. Comets are objects came from outer solar system and revolve around our sun.

B. Name the following.

- i). The largest planet is Jupiter .

- ii). The smallest planet is Mercury .
- iii). The planet nearest to the sun is Mercury .
- iv). The planet farthest from the sun is Pluto .
- v). The planet having life on it is Earth .
- vi). The planet known as the morning star is Venus .
- vii). The brightest object in the night sky is Venus .

C. Fill in the blanks.

- i). Planets do not have energy of their own.
- ii). The path along which a planet revolves round the sun is called orbit .
- iii). Except earth the other planets do not have favorable conditions for life to exist.
- iv). Asteroids are also called planetoids .
- v). The Halley's comet was last seen in the year 1986.
- vi). The Halley's comet appears once in every 79 years.
- vii). The brightest object in the night sky is Venus.

D. Tick (✓) the correct answers.

- i). The solar system is shaped like a:
 - a) Triangle
 - b) Sphere
 - c) Straight line
 - d) ✓ Disc
- ii). Bodies of dust and frozen gases in the solar system are called:
 - a) Comets
 - b) Meteoroids
 - c) ✓ Asteroids
 - d) Planets

- iii). The largest planets in the solar system is:
- a) Mercury b)✓ Jupiter
c) Pluto d) Earth
- iv). A comet named after an astronomer:
- a)✓ Halley b) Galileo
c) Pluto d) Jupiter
- v). Meteoroids are called while falling through the atmosphere.
- a) meteorites b)✓ Meteors
c) Asteroids d) Planets
-

**UNIT
15****Constructing a House**

A. Answer the following questions.

i). What benefits do you derive from a house?

Ans. A house is a place where we live with our family. There are many benefits of a house which we get from it. For example, It protects us from heat, cold, rain and wild animals.

ii). Which is an ideal site for constructing a house?

Ans. Rocky soil is a perfect site for constructing a house as it is hard enough.

iii). What happens if a house is constructed on improper soil?

Ans. A house should be built proper soil, other wise the foundation sinks and the walls develop cracks and all soils are not suitable for constructing a house.

iv). Why should a house have a foundation?

Ans. The foundation is very to important every house. The foundation of a house lies below the ground level.

v). What is a basement?

Ans. The foundation of a house that is raised above the ground is called basement.

vi). What are uses of walls?

Ans. Walls are important parts of any house. They are constructed on the basement of a house they divide the space in a house into rooms and also bear the weight of the roof, bricks, wood and stones are used to construct house.

vii). Which are the qualities of a good floor?

Ans. The ground surface in a house is called floor. These qualities should be of a floor.

- i). It should not absorb water.
2. Its cleaning should be easy.
3. It should be smooth with an even surface.
4. It should be hard to bear the weight of different articles, we place on it.

viii). What are the different materials used for roofing of the house?

Ans. Roof is a covering to the house. In village houses, roofs are often constructed with palmyrah or coconut leaves or dried grass.

- i). They also formed with cement and woods.
- ii). Tiles are also used for tiled roof.
- iii). Asbestos or zinc sheets are also used for roofs.
- iv). Cement concrete roofing is used in modern construction.

B. Fill in the blanks.

- i). Rocky ground is perfect site for constructing a house.
- ii). Houses are to be constructed on high level ground to prevent water accumulates around them.
- iii). The foundation of a house lies below the ground level.
- iv). The foundation of a house raised above the ground is called basement.
- v). Walls divide the space in a house into rooms.
- vi). The covering of a house is known as Roofing.
- vii). Floor is the ground surface in a house.

- iv). Most beautiful looking floor is:
 a) Cement Flooring b) Mud Flooring
 c) Slab Flooring d) ✓ Marble Flooring

E. Cross out the wrong word/words given below in brackets:

- i). Floors should be dried in the (Sun / Shade[✓]).
 ii). Floors and roofs should be (Damp / Damp[✓]proof).
 iii). Ventilators (Let out / Let in[✓]) warm air.
 iv). A (Concrete[✓] / Mud) floor is best for the house.
 v). A house should get (Sunlight[✓] / Humidity).

F. Match the following.

