

Science

Young children have keen minds but their attention span is very short. So it is very important for the teacher to make science interesting so that they grasp well. Keeping this in mind our Science book is more activity oriented and gives importance to 'learning by doing'.

So the teacher has to involve the child in every step and make sure that the concept is made very clear.

By taking the children for nature walks and by talking to them, and by involving them in group work, discussions etc. the teacher can make learning, fun.

We have provided notes to teachers in the text book which will help the teacher make Science simple and at the same time very interesting to the children.

Parts of a Plant and Their Functions

Exercise

Fill in the blanks:

- The part of a plant which grows upwards forms the Shoot.
- The part of a plant which grows under the ground forms the roots.
- Fruits on a plant grow from the flower
- Green leaves prepare food using water and carbon dioxide with the help of chlorophyll.
- Plants breathe through stomata in their leaves.
- Flowers help the plant to reproduce.

Match the following:

- | A | | B | |
|-----------------|-----------------------------------|---|--|
| 1) Roots | e) absorb water and mineral salts | | |
| 2) Stem | d) has leaves, flowers and fruits | | |
| 3) Green leaves | a) prepare the food for the plant | | |

- Flowers b) help the plants to reproduce
- Fruits f) protect the seeds
- Seeds c) grow into a new plant

State 'true' or 'false'. If false give the correct statement:

- Roots are green in colour. False
Leaves are green in colour.
- In trees the stem is hard and not green. True
- You eat the root of potato plant. False
You eat the stem of potato plant.
- Flowers make food for the plant. False
Leaves make food for the plant.
- Seeds fix the plant to the soil. False
Roots fix the plant to the soil.
- Animals can make their own food. False
Plants can make their own food.

Name two plants which can be grown without seeds:

- Potato
- Ginger

Worksheet (Workbook)

Colour and label the parts:

Stem, root, bud, flower, leaf, fruit

Name the following:

- root 2) shoot 3) root 4) leaf 5) stomata

State 'true' or 'false'. If false write the correct statement:

- False. Fruits protect the seeds. 2) True 3) True
- False. Stem and its branches bear the leaves, flowers and fruits.

Answer the following:

- Give two functions of-
 - Root - 1) fixes the plant to the soil,
 2) absorbs water and mineral salts.
 - Stem - 1) carries water and mineral salts to other parts,

- c) Leaf - 1) helps in making food,
2) plants breathe through stomata.
- d) Flower - 1) helps to reproduce,
2) flowers grow into fruits.
- e) Stomata - 1) helps in breathing,
2) excess water is thrown out through stomata.
- f) Seeds - 1) grow into new plants,
2) stores food for the baby plant.

- 2) Why do we need plants ? Give 3 reasons:
- a) Plants give us food. We cannot live without them.
 - b) Plants, purify the air by taking in carbon dioxide.
 - c) Plants make their own food. All animals need plants to live.
 - 3) What does a seed need, to grow into a healthy plant?
The seed needs enough sunshine, water, air and good soil to grow into a healthy plant.

Match the following:

- 1) d) help the plant to reproduce
- 2) c) grow into new plants
- 3) a) throws out excess water.
- 4) e) green colour pigment in leaves, which helps to prepare food.
- 5) b) absorbs water and mineral salts

Animals and Their Food

Fill in the blanks:

- a) Lizards and frogs have sticky tongue to catch insects.
- b) Herbivorous animals do not have pointed teeth.
- c) Snakes have curved teeth to hold the prey.
- d) Scavengers eat flesh of dead animals.

Write down the names of the animals in the box in the correct

parts of the circle:

Eat Plant	Eat both Plants and animals	Eat meat
Goat	Rat	Tiger
Deer	Man	Lion
Elephant	Ant	Fox
Rabbit	Bear	Snake
Cow	Dog	Lizard
Giraffe	Crow	Frog
Squirrel		

Answer the following with 2 examples each:

What are –

- a) herbivorous animals?
They are animals that eat only plants. Examples: Elephant, Horse.
- b) carnivorous animals?
They are animals that eat the flesh of other animals. Examples: Tiger, Lion
- c) omnivorous animals?
They are animals that eat both plants as well as the flesh of other animals. Examples: Bear, Crow.

What type of mouth parts do carnivorous animals have?

Carnivorous animals have sharp, pointed teeth and strong grinding teeth to help chew meat and bones.

Rearrange the food chain.

plant ———> goat ———> tiger

Worksheet (Workbook)

Fill in the blanks:

- 1) plant 2) carnivores 3) lizards and frogs
- 4) trunk 5) hold their

State 'true' or 'false'. If false write the correct statement:

- 1) false. Deer have flat, sharp teeth and have hoofs instead of claws.

- 2) d) sews leaves to make its nest
- 3) b) weaves its nest with straw
- 4) e) cuts out hole in a tree trunk with its beak
- 5) a) makes its nest on the ground

Give reasons:

- a) Water birds like ducks have oil glands which keep their feathers water proof.
- b) Eagles fly at great height. Their sharp eyes help them to see their prey on the ground.
- c) The strong curved beak of parrots help them to crack nuts and seeds.
- d) Kingfishers have long scissor - like beak, which help them to catch small fish.
- e) Ducks have webbed feet that help them to swim.
- f) Cranes have long legs which help them to wade in water.
- g) Crows have three toes in front and one at the back which help them to hold on to the branches. They even sleep while perching.

Food

Exercise

Answer the following:

Why should we eat food ?

We should eat food because food gives us energy to work and play. Food helps us to grow and helps us to stay healthy.

Name 2 foods that give us-

- a. energy : Rice, Potatoes
- b. keep us healthy : Fruits, Vegetables
- c. help us to grow : Egg, Milk

Write 4 rules for healthy eating:

- We must eat food that is cooked at home or in a clean place.
- We must have our meals at the same time everyday.

- Before and after eating food, we must wash our hands with soap and water.
- We must chew our food well and eat slowly.

Underline the correct word:

- a) We should wash our hands before eating.
- b) Food should not be left open.
- c) We must chew our food.
- d) We must have meals at the same time everyday.

Worksheet (Workbook)

Fill in the blanks:

- 1) food 2) energy 3) water 4) wash 5) grow

Match the following:

- 1) c) helps us to stay healthy and grow well
- 2) e) energy giving food
- 3) d) keeps us strong and healthy
- 4) a) to remove bits of food stuck between teeth
- 5) b) attracts germs and dust

Answer the following:

- 1) We need food because it gives us energy to work and play. It also helps us to grow and stay healthy.
- 2) We should wash our hands before and after a meal. We should also wash our mouth after eating.

The Human Body

Exercise

Answer the following:

- | Sense organs | Function |
|--------------|------------------------------------|
| a) Eyes | To see. |
| b) Nose | Helps us to smell. |
| c) Ears | Helps us to hear different sounds. |
| d) Tongue | To taste food. |
| e) Skin | Helps us to feel. |

Fill in the blanks:

- a) The skeleton gives shape and support to our body.
- b) Good food and exercise make the muscles strong.
- c) The stomach helps to digest the food.
- d) Lungs help to breathe.

Match the following:

- | A | B |
|------------|-----------------------------------------|
| a) Heart | pumps blood. |
| b) Kidney | helps to filter the waste. |
| c) Brain | controls all the functions of the body. |
| d) Stomach | digests the food. |
| e) Bones | give shape to the body. |

Answer the following:

- a) Why do we need muscles ?
We need muscles because they help to move the bones.
- b) What is the skeleton made of ? What are its functions ?
The skeleton is made up of bones. The skeleton gives shape and support to the body.
- c) What should we do to keep our body strong and healthy ?
We should have plenty of rest, fresh air, clean water, good food and exercise to keep the body strong and healthy.

Worksheet (Workbook)

Fill in the blanks using the words from the box below:

- 1) lungs 2) brain 3) kidney 4) heart 5) stomach

Match the following:

- 1) e) largest sense organ
- 2) d) help to move the bones
- 3) a) gives shape and support to the body

- 4) c) join together to form skeleton of the body
- 5) b) develops muscles

State the functions of -

- 1) a) skeleton - gives shape and support to the body
- b) tongue - to taste different food items
- c) lungs - help us in breathing
- d) brain - helps us to think. It controls the functions of the body.

Our Teeth

Exercise

Ask the children to write their own dental record:

Make a list of the things you should and should not do for your teeth.

- | I should | I should not |
|------------------------------------------------|-----------------------------------|
| 1. brush my teeth twice a day | 1. eat too many sweet things |
| 2. eat lots of fruits,nuts and raw vegetables. | 2. drink sweet drinks. |
| 3. drink plenty of milk and water | 3. brush my teeth only once a day |

Difference between milk teeth and permanent teeth:

- | Milk teeth | Permanent teeth |
|-----------------------|-----------------------------|
| 1. they fall out | 1. they remain till the end |
| 2. 20 in number | 2. 32 in number |
| 3. first set of teeth | 3. Second set of teeth. |

Circle the things that are needed to have good teeth:

Brush, Milk, Tomato, Carrot, Apple, Tooth Paste.

Worksheet (Workbook)

Fill in the blanks:

- 1) milk teeth 2) permanent teeth 3) permanent
- 4) bite, chew 5) twice

Answer the following:

- 1) sweets, ice creams, cakes
- 2) carrot, apple, milk
- 3) a) to bite and chew the food
b) they give shape to the face
c) help us to speak properly and clearly
- 4) a) we should brush our teeth twice daily
b) eat lots of fruits, nuts, raw vegetables and drink milk and water
c) do not eat too many sweet things
d) do not drink sweet drinks that are too cold.

These are bad for our teeth. Circle them:

cake, chocolate, ice cream, sugar

The Matter

Exercise

Answer the following:

- a. What is matter? Give 2 examples.
Matter is anything that has weight and occupies space.
Wood, water.
- b. Name 3 states of matter. Give 2 examples each:
 - 1) solids e.g: stones, wood
 - 2) liquids e.g: milk, water
 - 3) gases e.g: steam, oxygen

State what happens when-

- a) water is heated it changes into steam (gas)
- b) water is cooled it changes to ice (solid)
- c) steam is cooled it changes into water (liquid)
- d) ice is heated it changes into water (liquid)

Match the following:

- | | |
|-----------|-------------------------------------------|
| 1) Gas | b) no definite shape and cannot be poured |
| 2) Liquid | c) can be poured, no definite shape |
| 3) Solid | a) definite shape |

Worksheet (Workbook)

True or false. If false write the correct answer below:

- 1) false. Water on heating changes to water vapour.
- 2) true
- 3) true
- 4) false. Gases have weight and occupy space
- 5) true

Fill in the blanks:

- 1) liquids
- 2) oxygen, carbon-dioxide
- 3) heating or cooling
- 4) liquid wax
- 5) water vapour

Match the following and write the correct sentences below:

- 1) b) helps to make food in green leaves
- 2) d) on heating becomes water
- 3) a) on cooling changes to ice
- 4) e) on cooling changes to water
- 5) c) has weight and occupies space

Answer the following:

- 1) ice, water, water vapour
- 2) a) ice b) cooling c) water d) heating

Water

Exercise

Name the following:

- a) One gas dissolved in water Oxygen
- b) One solid that dissolves in water Salt
- c) One liquid that does not mix in water Kerosene
- d) The dissolved gas in coca-cola Carbon dioxide

Match the following:

- | A | B |
|-----------------------|------------------------------|
| 1. Milk and water | c. mix well |
| 2. Oil and water | d. do not mix, form 2 layers |
| 3. Salt in hot water | e. dissolves fast. |
| 4. Salt in cold water | a. dissolves slowly |
| 5. Soil in water | b. does not dissolve |

Worksheet (Workbook)

Fill in the blanks:

- 1) carbon dioxide 2) oxygen 3) rain
4) drinking, bathing, etc. 5) air

Match the following and write the complete sentences in the space given below:

- 1) kerosene - will not mix in water
2) salt - will dissolve in water
3) soil - will not dissolve in water
4) lime juice - will mix in water

This experiment proves that sugar dissolves faster in hot water.

Air

Answer these questions using the words in the boxes:

- a. Can you see air ? I can't
b. Can you feel air if you blow it on your hand ? Yes, I can.
c. Can people breathe air under water ? No, they can't .
d. Can people breathe air on land ? Yes, they can
e. Is air moving in the picture of a boy running ? Yes, it is.
f. Is air moving in your classroom now ? Yes, it is.
g. Can astronauts breathe air in space? Yes, they can

Exercise

Answer the following:

- a. Can you see air ? No
b. Can you feel air if you blow on your hand ? Yes
c. Can you live without air ? No
d. What are bubbles made of ? Air
e. What happens to a candle flame if it has no air ?

The flame will go out.

Name three things that make use of air to do work:

Vacuum cleaner, hair dryer, aeroplane.

With the help of wind we are able to fly kites, hang-glide and wind surf.

Name two musical instruments that produce sound when we

blow air into them. - flute, bag-pipe

Match the following:

A	B
Smoke from factory	pollutes the air.
Trumpets	produce sound when we blow air.
We use wind for	hang gliding
Aeroplanes make use of	air for movement.
Puffer fish	puffs itself to scare its enemies.

Worksheet (Workbook)

Fill in the blanks using the words given in the box:

- 1) fire 2) space 3) smoke 4) air 5) soil
1. Activity : This experiment proves that there was no air in the glass.
2. Activity : This experiment proves that there was no air in the jar.

Light and Shadow

Exercise

Answer the following:

- a) How are shadows made ?
Shadows are made when light is blocked by an object.
- b) How do light rays travel ?
Light rays travel in straight lines.

Fill in the blanks:

- a) Sun is the natural source of light.
b) A shadow is made when the path of light is blocked by an object.
c) Light rays cannot bend around things.
d) Light travels in straight lines called rays.

Write the name of things in the table given below:

Light passes through these	Light cannot pass through these
----------------------------	---------------------------------

glass
clear plastic

rock
wood
rubber
metal

Worksheet (Workbook)

Match the following:

- 1) Light travels - in straight lines called rays.
 - 2) Light rays - cannot bend around things.
 - 3) Shadows - are formed when light is blocked by an object.
 - 4) Through solid objects like rock - light rays cannot pass.
 - 5) Through glass - light rays can pass.
- 1) Shadows are formed when light is blocked by an object.
 - 2) Natural source of light - sun
Artificial source of light - candle
 - 3) Bright, shiny objects reflect more light.

Activity: 1. It proves that light cannot pass through solid objects.

2. It proves that light can pass through glass.

What does this prove ?

- 1) this proves that light travels in a straight line.
- 2) this proves that light cannot bend around things.

Rocks and Soil

Exercise

Answer the following:

- a. How do rocks become soil?
Soil is formed by breaking up of rocks by wind, water, etc.
- b. What is blackboard made of ?
Blackboard is made of slate.
- c. What are the two uses of diamond?
Diamonds are used in jewellery and also to cut glasses.
- d. 1) Name 3 types of rocks

- a) diamond b) sandstone c) granite
- 2) and 3 types of soil
- a) gravel b) clay c) sand

Match the following:

- | A | B |
|----------------------------|---------|
| a. hardest rock | diamond |
| b. softest rock | talc |
| c. Taj mahal is made up of | marbles |
| d. used in buildings | granite |

Cross word puzzle:

Name ten rocks, soil and minerals hidden in this word search.

Red stone, sand, chalk, clay, granite, marble, coal, diamond, talc, mica.

Worksheet (Workbook)

Fill in the blanks using the words given in the box below:

- 1) chalk 2) crust 3) talc 4) granite 5) diamond

Answer the following:

- 1) Granite - used in buildings
Marble - used in buildings
Slate - used for making blackboards
Chalk - used to write on blackboards.
- 2) The rocks when heated by sun and cooled by rain, break into small pieces. Strong winds and running water break these into smaller pieces and become soil.
- 3) Gravel, clay and sand are three types of soil.
- 4) Diamond, talc, coal are minerals.

Match the following and write in the space given below:

- 1) d) break the rocks into small pieces
- 2) a) is made from powdered talc
- 3) e) is made of slate
- 4) c) is used in jewellery and to cut glasses
- 5) b) are different types of soil

The Earth

Exercise

Answer the following:

- a) What are the three layers, which make up the earth ?

The three layers which make up the earth are mantle, core, and crust.

- b) What is rotation ?

Rotation is the spinning of the earth on its axis.

- c) What is revolution ?

Revolution is the earth's movement around the sun.

What would happen:

- a) If there is no sun ?

There will be no life on earth.

- b) If the earth did not spin on its axis and only revolved round the sun ?

Some parts of the earth would have only days while other parts would have only nights.

Give reason for the following:

- a) We do not feel the movement of the earth.

Because everything on earth including the air is moving.

- b) When it is morning in India, it is night in America.

Because India and America are on the opposite sides of the earth. They face the sun at different times.

Write 'T' for true and 'F' for false statements:

- a) Living things have been present on the earth from the very beginning. (F)
- b) The inside of the earth is so hot that even iron would melt there. (T)
- c) When seen from the moon, the earth appears like a big, round ball. (T)
- d) The rotation of the earth causes seasons. (F)

- e) The earth has a fixed orbit along which it moves around the sun. (T)

Worksheet (Workbook)

Label the diagram, colour and answer the following questions: core, mantle, crust

- 1) crust 2) round 3) centre 4) mantle
5) the crust 6) sea

Answer the following:

- 1) The spinning of the earth on its axis causes day and night.
- 2) The movement of the sun around the earth causes the seasons.
- 3) The path the earth takes around the sun is called its orbit.
- 4) From the photographs taken by astronauts who have gone to space, we know that the earth is round.

The Moon and the Stars

Exercise

Answer the following:

- a) Though the sun is much bigger in size than earth, it looks smaller. Why ?
Though the sun is much bigger in size than earth, it looks smaller because it is very far away.
- b) Why do the moon and the sun appear to be of the same size?
The moon and the sun appear to be of the same size because the moon is much nearer to the earth than the sun.
- c) Why are the stars not seen during the day ?
The stars are not seen during the day because of the bright light of the sun.
- d) How many planets are there in the solar system ? Name them.

There are eight planets namely:- Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune.

e) Name 2 man made satellites and their uses.

Arya Bhatta, INSAT 2B. They give us weather forecasts and T.V. pictures.

Fill in the blanks:

- a) The moon is round in shape. (round / crescent)
- b) Things look smaller when seen from a distance. (bigger / smaller)
- c) Huge ditches on the surface of the moon are called craters. (wells / craters)
- d) Star patterns are called constellations. (constellations / solar system)

Worksheet (Workbook)

State whether 'True' or 'False'. If false write the correct answers in the space given below:

- 1) false. Moon is earth's satellite.
- 2) true
- 3) true
- 4) false. Sun is made of hot burning gases
- 5) true

Define the following:

- 1) The sun and its planets make up the solar system.
- 2) The earth and the moon cast shadows when they block the path of sunlight. This is called the eclipse.
- 3) Patterns in the sky formed by stars are called constellations.
- 4) Huge ditches on the surface of the moon are called craters.

Write four sentences about the Moon:

The moon is a satellite of the earth. It revolves round the earth. The moon has no light of its own. There is no air or water on the moon.

Draw solar system and name the 8 planets:

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

Name one natural satellite and one artificial satellite:

Natural satellite - moon Artificial satellite - Insat 2B

1. Lunar Eclipse happens when the shadow of the earth falls on the moon.
2. Solar Eclipse happens when the shadow of the moon falls on the earth. Here the moon blocks the light of the sun from reaching the earth.