



Today SCIENCE

(Teacher Manual)

Class-3



Today Science Class - 3

Chapter - 1 — Living and Non-living Things

Let's Explore

| Living Things | Non-Living Things |
|---------------|-------------------|
| Animals | Table |
| Human | Chain |
| Trees | Bottle |

Assessment Zone

- 1.
- | Living | Non-living |
|--|--|
| A plant sprouting flowers. | A train moving fast. |
| A monkey hiding itself in a tree during rains. | A football bouncing. |
| A cow having calves. | Brick wall growing in size. |
| A tiger growing. | A plate breaking and forming two plate. |
| An elephant chewing leaves. | The The paint on a wall peeling off due to rain. |
2. Living Beings: Snake, tree, Mimosa
Non living things: car, star, trains

Life Skills — Do it yourself.

Revisit and Relearn

- A. 1. (c) Fish 2. (b) Plant 3. (a) Chair 4. (c) Snake 5. (a) Hen
B. 1. (d) has fins to move 2. (a) crawls on ground 3. (e) has feelers
4. (b) has stomata 5. (c) lays eggs
C. 1. living 2. crawl 3. gills 4. grow
5. Non-living
D. 1. F 2. T 3. F 4. F 5. F
E.1. Animals move from place to place to find food and shelter.
2. Plants breathe through small openings in their leaves called stomata.
3. Living things need food to live and grow.
4. All living things produce young ones of their own kind. This is called reproduction.
5. Cow and hen are different because cow gives birth to babies and hens lay eggs.

HOTS — Do it yourself

National Cyber Olympiad Question : (b) 1 and 2

Chapter - 2 — Parts of a Plant

Let's Explore

1. Leaf 2. flower 3. Fruit 4. Stem 5. Roots

Assessment Zone

1. Seed 2. Leaf 3. Leaf 4. Blade
5. Main vein

Research & Discover — Do it yourself. **Life Skills** — Do it yourself.

Track your Progress

1. Fruit 2. Lower side 3. Chlorophyll 4. Germination

Revisit and Relearn

- A. 1. (c) Carrot B. 1. stem
 2. (a) leaf blade 2. fibrous
 3. (c) flower 3. chlorophyll
 4. (a) fruits 4. stomata
 5. (b) mango 5. stem
- C. 1. T 2. T 3. T 4. F 5. T
- D. 1. leaf blade 2. stem 3. sugarcane 4. carrot
 5. seed

E.1. Root and shoot are the main parts of a plant

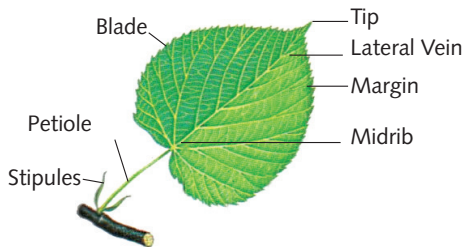
2. **Tap root** – The single main root that grows from the end of the stem is called tap root. Plants like carrot and mustard have tap roots.

Fibrous root – A number of tiny roots growing from the end of the stem are called fibrous roots. Plants like grass, wheat and onion have fibrous roots.

3. Two functions of a stem are:

- (i) The stem keeps the plant upright and straight.
(ii) The stem bears leaves, buds, flowers and fruits.

- 4.



Parts of a leaf

The flat and broad part of a leaf is called the leaf blade. In the centre of a leaf is a thin tube, it is called the main vein. Many side tubes arise

from the main vein, they are called the side veins. The lower side of the leaf has many tiny holes called stomata.

5. The process of growth of a seed into a new plant is called germination.

HOTS

- Plants require sunlight to prepare food and there is no sunlight at night so they cannot prepare food.
- Branches on a tree serve as a way to get the leaves further out so they can absorb sunlight.

Value-Based — Do it yourself.

National Cyber Olympiad Question

(d) 1, 2, 3 and 4

Activity Bonanza — Do it yourself

Chapter - 3 — Food Habits of Animals

Let's Explore

| | | | | | |
|----------|---|-----------|--------|---|--------|
| Elephant | — | Sugarcane | Rabbit | — | Carrot |
| Panda | — | Bamboo | Shark | — | Fish |

Research and Discover — Do it yourself

Track Your Progress

- Carnivores
- strong and grinding
- long and sticky
- carbondioxide

Subject Connect

a. Coop b. Kennel c. Pigsty d. Burrow e. Shed

Life Skills — Do it yourself.

Revisit and Relearn

- | | | | |
|----|----------------------|----|---------------|
| A. | 1. (c) Lion | B. | 1. Carnivores |
| | 2. (b) Squirrel | | 2. Omnivores |
| | 3. (a) Snake | | 3. Bees |
| | 4. (b) Dog | | 4. Trunk |
| | 5. (a) A small plant | | 5. Herbivores |

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

- D.1. Animals like cow and buffaloes first swallow their food without chewing it. Later, they bring this food back into the mouth and chew it for hours with grinding teeth. This is known as chewing the cud.
- A frog has a long sticky tongue. It throws out its tongue to catch a small insect, then it rolls the tongue back into its mouth and swallows it.
 - A tiger has sharp curved teeth to tear the flesh of their prey and strong

grinding teeth at the back to help them chew the flesh and break the bones.

4. Some animals like cats and dogs use their tongue to lap up water or milk. This method of taking liquid is called lapping.
5. A food chain begins with a plant and ends with an animal. For example, a grasshopper eats grass. A grasshopper is eaten up by a frog and then frog is eaten up by an eagle. This chain between plants and animals is called food chain.

HOTS

1. Elephants have long trunk to pull out grass and sugarcane from the ground. They also use their trunk to drink water and take a bath.
2. Frogs do not need teeth because they swallow their food without chewing it.

Value Based Questions — Do it yourself

National Cyber Olympiad Question

(d) both (a) and (b)

Chapter - 4 — Birds

Track Your Progress

- a. sparrow b. duck c. vulture d. crow

Let's Explore — Do it yourself.

Research and discover — Do it yourself

Revisit and Relearn

- A. 1. (a) Body feathers 2. (b) Broad and flat beak
3. (c) Both a and b 4. (a) Kingfisher
5. (b) Tailor bird
- B. 1. wings 2. tail 3. beak 4. Bulbuls 5. three
- C. 1. T 2. F 3. T 4. F 5. T
- D. 1. Parrot 2. Humming Bird 3. Sparrow
4. Peacock 5. Wood peakers
- E. 1. Birds fly with the help of their wings.
2. Birds have three types of feathers –
Flight feathers, down feathers and body feathers.
3. Woodpeakers have strong, hard and chisel shape beak. Humming birds have long and pointed beak.
4. Claws are used to catch their food, they also protect them and also to sit on trees branches.

5. Tailor bird sews leaves together to make a nest. It uses its sharp beak as needle to sew the leaves with cotton, hair or wood.

HOTS

1. Ducks can swim in water because they have webbed feet whereas cranes can't swim.
2. If birds would not have light and hollow bones, they would not be able to fly in the sky because hollow and light bones make them light-weighted so that they can fly freely in the sky.

Value-Based Question — Do it yourself.

Activity Bonanza — Do it yourself.

National Cyber Olympiad Question

- (c) Tailor bird

Chapter - 5 — The Human Body

Let's Explore

Eyes: We see everything with eyes.

Legs: We use legs to walk.

Nose: We use nose to breath.

Assessment Zone

1. NERVE : Nervous System
2. HEART : Circulatory System
3. INTESTINE : Digestive System
4. KIDNEY : Excretory System
5. WINDPIPE : Respiratory System

Track Your Progress

- a. Stomach, Liver
- b. Windpipe, Lungs
- c. Left Atrium, Right Atrium

Revisit and Relearn

- A. 1. (b) Cell 2. (b) 206 3. (c) Kidneys 4. (b) Nose
5. (b) Brain

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

C.1. **Cell** : Our body is made up of very tiny living units called cells. A cell is the smallest structure of our body.

Tissue : A tissue is made up of cells. The same kind of cells join together to form tissues.

Organ : An organ is made up of different tissues. The tissues join together to form an organ as stomach, heart, etc.

- The human body has eight important systems. They are:
Skeletal system, muscular system, circulatory system, respiratory system, digestive system, excretory system, nervous system and reproductive system.
- The food is first chewed well in our mouth. It gets mixed with saliva and becomes soft. From here the food passes into the stomach through food pipe. In the stomach, the food gets mixed with some digestive juices and passes to small intestine. Here the food is completely digested and absorbed in the blood which is then carried to all parts of the body. The undigested food is passed into the large intestine and is thrown out from the body through anus.
- Lungs, kidneys and skin are the main organs of our excretory system.
- The main function of the nervous system is to control all other systems of our body.

HOTS

- Nails are made of dead cells. They do not have nerve cells so we don't feel pain.
- When we do exercise, our body uses more oxygen and more carbondioxide is released so we breathe faster.

Value-Based — Do it yourself.

Activity Bonanza — Do it yourself.

National Cyber Olympiad Question

(d) C and D

Chapter - 6 — Safety and First Aid

Assessment Zone

- stand
- First aid
- wet
- anything
- slide

Life Skills

Uneven Road ahead.

Revisit and Relearn

- A. 1. (c) both a and b 2. (b) footpath 3. (c) go
4. (a) swimming tube
- B. 1. matchstick 2. road 3. push 4. safety rules
5. first aid
- C. 1. T 2. T 3. F 4. F 5. T
- D. X X ✓ ✓ ✓ X
- E.1. Accidents can occur at any time or at any place which can cause injury or damage to our body.

2. Two safety rules that we should follow at home are:
 - a. Do not touch hot utensils and boiled water.
 - b. Stay away from electrical gadgets and switches.
3. Use zebra crossing to cross the road. If there is no zebra crossing, first look to the right, then to the left and then again to your right. If no vehicle is coming, then cross the road.
4. Two safety rules that we should follow at our school are:
 - a. Do not jump over the chairs & tables.
 - b. Do not make a noise or play in the classroom.
5. The immediate help given to an injured person before the doctor's arrival is called first aid.

If your hand gets burnt, keep it under the cold running water until the burning sensation stops. Then apply an antiseptic cream.

HOTS

1. Rahul's father always wears a helmet before he starts driving his scooter due to safety precautions.
2. We should never touch an electrical appliance with wet hands because water conducts electricity and we can get an electric shock.

Value-Based — Do it yourself

Activity — Do it yourself.

National Cyber Olympiad Question

(c) cold

Chapter - 7 — Housing and Clothing

Let's Explore

- a. Southern India (mostly in Kerala)
- b. Wood
- c. Do it yourself

Research and Discover

1. President of US
2. President of India
3. British Royal Family

Life Skills — Do it yourself

Revisit and Relearn

- A. 1. (a) lighted 2. (b) dirty water
3. (a) cotton 4. (c) cotton 5. (c) Wool
- B. 1. wire nettings 2. dustbin
3. woollen 4. two 5. Nylon

- C.1. A house protects us from the sun, the cold, the wind and the rain. It also protects us from unwanted animals and thieves.
- Windows should have wire netttings to keep the insects and flies away from the house.
 - Like house, clothes also protect us from the sun, the cold, the wind and the rain and this is why we need clothes.
 - The two types of fibres are:
 - Natural fibres
 - Man-made fibres
 - Natural Fibre : Cotton; Jute
Man-made Fibres : Nylon; Polyester
- D. 1. d. Cotton plant 2. c. Sheep
3. e. Jute plant 4. b. Man-made fibre
5. a. Silkworm

HOTS

- It is better to have closed dustbin than an open one because an open dustbin can be a breeding place of mosquitos, flies and many other insects and it can also spread diseases.
- Umbrellas are commonly made of plastic to drain off the water. If there would be an umbrella made of cloth. Then, it will absorb the water and it will drain off on our head.

Value-Based — Do it yourself.

Activity — Do it yourself.

National Cyber Olympiad Question

- (d) all of these
-

Chapter - 8 — Air and Water

Let's Explore — Do it yourself

Research and Discover

When rainwater falls through the air the first shower collects all the dust particles, germs, bacterial and dissolved gases.

Life Skills — Do it yourself

Revisit and Relearn

- A. 1. (c) Both a and b 2. (c) Both a and b
3. (c) Both a and b 4. (a) Condensation
- B. 1. atmosphere 2. oxygen 3. three-fourth 4. germs
5. evaporation

- C. 1. T 2. F 3. T 4. F 5. F
D. 1. wind 2. carbondioxide 3. dust
4. Ice 5. steam

- E.1. Air contains nitrogen, oxygen and carbon dioxide.
2. The layers of air that surrounds us is called atmosphere.
3. When we heat water, it changes into water vapour.
4. When water vapour cools and changes into water, the process is called condensation.
5. The heat of the sun changes water of ponds, lakes, rivers and seas into water vapour. This is called evaporation. This water vapour rises up and reaches at a height where it gets cooled down to form tiny water droplets. These water droplets combine to form clouds. In the clouds, water droplets become large and fall down as rain. This rainwater runs down into the ponds, lakes, rivers again. From where it is again evaporated then condensed and fall down as rain.

HOTS

1. Because all the water present on Earth's surface is not potable i.e, safe for drinking.
2. Factories release a lot of smoke that has a lot of harmful gases which cause air pollution.

Value-Based Questions

1. When we go home from outside we touch a lot of things that might have germs on them. Also there is a lot of air pollution on the roads.
2. Transpiration takes place from plants, which further forms clouds which result into rain. Thus, we can say that cutting down of trees affect rain.

Activity Bonanza — Do it yourself.

National Cyber Olympiad Question

1. (b) It becomes extinct
2. (d) Change variably throughout the boiling process.

Chapter - 9 Weather and Season

Let's Explore

Winter; Summer; Monsoon; Spring

Research & Discover — Do it yourself

Subject Connect — Do it yourself

Life Skills

1. Gangaur, Baisakhi

(30) — Today Science

2. Diwali, Lohri
3. Janamashtami, Ganesh Chaturthi
4. Navratri, Dussehra
5. Holi, Basant Panchmi

Revisit and Relearn

- A. 1. (b) breeze 2. (c) three 3. (b) winter 4. (a) Raincoat
5. (b) winter season
- B. 1. cooler 2. wind 3. loo 4. Monsoon 5. spring
- C. 1. F 2. T 3. T 4. F 5. F
- D. 1. a. 2. c. 3. d. 4. e. 5. b.

- E.1. The condition of air of a place at a particular time is called weather.
2. Morning and evenings are cooler on sunny days than noon because the sun rays are slanting.
 3. In India, we have three main seasons - summer, monsoon and winter.
 4. We like to wear cotton clothes to keep ourselves cool. Cotton clothes absorb sweat.
 5. Autumn season is neither too hot nor too cold. It is dry and windy. Leaves turn yellow and fall from trees, whereas, spring season is the exact opposite of autumn season. The weather is very pleasant in this season. New leaves and flowers grow on trees.

HOTS

1. Icecream melts faster in summer because temperature is too high during summers.
2. The noon is hotter than the evening because the sun is overhead.

Value-Based — Do it yourself.

Activity — Do it yourself.

National Cyber Olympiad Question

1. (a) winter season
2. (b) weather

Chapter - 10 — The Earth

Let's Explore

- Crust
- Mantle
- Core

Research and Discover — Do it yourself.

Life Skills — Do it yourself.

Revisit and Relearn

- A. 1. (c) both a and b 2. (a) blue planet
3. (c) Orange 4. (c) west to east 5. (c) $365\frac{1}{4}$
- B. 1. sun 2. poles 3. day and night
4. orbit 5. 24
- C. 1. F 2. T 3. T 4. F 5. T
- D. 1. ATMOSPHERE 2. ROUND 3. ROTATION
4. REVOLUTION 5. AXIS
- E.1. The earth is also known as a Blue Planet because three-fourths of its surface is covered with water.
2. Photographs taken by astronauts from space prove that the earth is round in shape, but it is slightly flat at the top and bottom which looks like an orange. The flat parts of earth are called poles (North pole and South pole).
3. The spinning of the Earth on its own axis is called rotation. Earth completes one rotation in 24 hours.
4. The rotation of the Earth cause day and night. When the earth rotates on its axis half of the earth that faces the sun has day. The other half of the earth which is away from the sun has night.
5. The movement of the Earth around the sun is called revolution.

Value-Based — Do it yourself.

HOTS

1. If the earth stops spinning, the day and night will not occur.
2. Earth is not flat but appears to be so because we cannot see the full earth at a time, we can only see a part of it.

Activity Bonanza — Do it yourself.

National Cyber Olympiad Question

1. (b) table tennis ball
(c) We can see only a part of the earth

Chapter - 11 — Soil and Rocks

Let's Explore — Do it yourself

Activity Bonanza — Do it yourself

Research and Discover

Clayey soil

Subject Connect — Do it yourself

Life Skills — Do it yourself

Revisit and Relearn

- A. 1. (b) soil 2. (a) gravel 3. (c) both a and b
4. (b) Loamy soil
- B. 1. soil 2. sandy soil 3. clayey soil 4. Diamond
5. Chalk
- C. 1. T 2. T 3. F 4. T 5. T
- D. 1. soil 2. gravel 3. sand 4. clayey soil
5. Humus
- E.1. The uppermost layer of the earth is called the soil. It is essential for all forms of life on the earth directly or indirectly.
2. The process of soil formation takes place over hundreds of years. It undergoes the following steps:
1. There are hard rocks on the surface of the earth.
 2. The sun heats up these rocks. Then the rain and wind cool them down.
 3. The cracks are developed in the rocks due to the continuous heating and cooling.
 4. The rocks start breaking down into small pieces.
 5. Wind and water carry away these pieces of rocks.
 6. These pieces of rocks rub against each other and break into very tiny particles.
 7. These particles get mixed with decaying plants and animals called humus to form soil.
3. The bottom layer of the soil contains small stones called gravel. Above it is a layer of large particles called sand. Above sand is a layer of small particles. These particles are so small that you cannot see the particles separately. This is a layer of clay. On the top, small parts of dead leaves and insects can be seen floating on water. This layer is called humus.
4. There are three types of soil: Sandy soil, Clayey soil and Loamy soil.
5. Soil is important for all of us in many ways:
- (i) Soil gives water and minerals for the growth of plants.
 - (ii) Soil is a natural home to a number of animals like earthworm, moles and snakes.
 - (iii) Cement, bricks and iron are obtained from the soil. They are used in the construction of buildings.

HOTS

1. Gardeners like loamy soil because of its ability to balance water retention, aeration and nutrient availability.
2. Do it yourself.

Value-Based

1. The roots of trees hold the soil together so if we cut trees it will lead to soil erosion.
2. Do it yourself.

National Cyber Olympiad Question

1. (d) all of these

Chapter - 12 — Light, Sound and Force

Let's Explore

1. LIGHT
2. SOUND

Research and Discover

Moon shines because it gets light from the sun

Activity Bonanza — Do it yourself

Research and Discover

Because it has elastic force.

Life Skills — Do it yourself

Subject Connect — Do it yourself

Revisit and Relearn

- A. 1. Candle 2. Book 3. Opposite
4. Twittering of birds 5. Force
- B. 1. sun 2. non-luminous 3. straight
4. noise 5. friction
- C. 1. F 2. T 3. T 4. T 5. T
- D.1. Luminous objects emit light while non-luminous do not emit light.
2. A shadow is formed when light coming from a source is blocked by an object.
 3. Push or pull is a force.
 4. Force helps us to do many things such as:
 - To move an object
 - To stop a moving object
 - To change the shape and size of the object.
 5. The force that slows down or stops the movement of an object is called friction.

HOTS

1. It is an unpleasant sound because loud music is harmful for our ears.
2. The frictional force is less.

Value-Based — Do it yourself

Activity — Do it yourself.

National Cyber Olympiad Question

- (a) They reflect light falling on them.

Chapter - 13 — Measurement

Let's Explore — Do it yourself

Research & Discover — Do it yourself

Life Skills — Do it yourself

Revisit and Relearn

- A. 1. (a) Metre 2. (b) weighing machine 3. (a) litres
4. (b) minutes 5. (c) 37°C
- B. 1. Cubit 2. Kilogram 3. litres 4. hours
4. thermometer
- C. 1. T 2. T 3. F 4. T 5. T
- D. 1. (c) 2. (d) 3. (e) 4. (a) 5. (b)
- E.1. Measurement is the process of finding out size and quantity of something.
2. We use rulers, measuring tapes and metre rods to measure length.
3. Mass of an object tells us how light or heavy an object is.
4. The short hand shows hours.
The long hand shows minutes.
The thin hand shows seconds.
5. Temperature is the measure of how cold or hot an object is.
It is measured in degree celsius (°C) or degree Fahrenheit (°F).

HOTS

1. No, it is not normal because normal body temperature is 98.6°f. This condition is called fever.
2. Do it Yourself

Value-Based — Do it yourself

National Cyber Olympiad Question

- (b) 1500 cm³

Activity — Do it yourself



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