



# Today SCIENCE

(Teacher Manual)

**Class-2**



# Today Science Class - 2

## Chapter - 1 — Types of Plant

**Let's Explore** — Do it yourself

### Revisit and Relearn

- A. 1. (b) Trees    2. (b) Herbs    3. (c) Pea Plant    4. (c) Root  
5. (c) Fruit
- B. 1. trunk    2. trees    3. vegetables    4. creepers    5. leaf
- C. 1. T    2. F    3. F    4. T    5. F
- D 1. Difference between Trees and Shrubs

	Trees	Shrubs
1	Trees are big plants	Shrubs are smaller than trees.
2	They have hard and strong stem.	They have thin and woody stem.
3	Examples - Apple tree, Mango tree	Explore - Cotton and Rose plant

2. Creepers are the plants that creep along the ground.
3. Herbs: - Mint, Tulsi  
Shrubs: - Cotton, Rose
4. Climbers are the plants that cannot stand straight. They need a support of other object to grow.
5. Different parts of plants are:  
Flower    Leaf    Fruit    Root    Stem

### HOTS

Peas are not ready to be picked so he is unable to pluck them.

**Activity** — Do it yourself

### Problem Solving

1. (d) Herbs    2. (a) Flat green parts    3. (b) Creepers  
4. (c) Tree

**Value-Based** — Do it yourself

**National Cyber Olympiad Question :** Coconut and Papaya

## Chapter - 2 — Useful Plants

**Let's Explore** — Do it yourself

**Research and Discover :** Gloves    Eraser    Tyre

## Track Your Progress

1. Seeds
2. Cereals and pulses
3. Spices
4. Sugar
5. Aloe vera

## Revisit and Relearn

- A. 1. (b) stem      2. (c) cereals      3. (c) oil      4. (b) bamboo  
B. 1. fruit      2. flower      3. bark      4. paper  
C. 1. F      2. T      3. F      4. T  
D. 1. Cereals and pulses are food grains.

Examples – Rice and Moong.

2. We eat stems, roots, leaf, flower and fruit as vegetables.
3. We get fibres from cotton and jute plant.
4. Bamboo gives us paper.  
Gum is made of acacia tree.  
Rubber is made from juice of rubber tree.

**HOTS** — Do it yourself.

**Value-Based** — Do it yourself.

## National Cyber Olympiad Question

1. (a) Acacia tree
2. (d) All of these

## Activity

1. Tulsi  
Herb  
Medicinal uses  
Do it yourself
2. Do it yourself

# Chapter - 3 — Domestic Animals

**Let's Explore :** horse, hen, cow, sheep

**Research and Discover** — Do it yourself

## Track Your Progress

1. Wool
2. Milk
3. Milk
4. Eggs

## Revisit and Relearn

- A. 1. (c) shed      2. (b) pet animal      3. (c) eggs      4. (c) candles  
B. 1. farms      2. pen      3. honey      4. silk  
C. 1. T      2. F      3. T      4. F  
D. 1. Cow      Goat  
2. Hen      Duck  
3. Chicken      Fish  
4. Snake      Crocodile

- E.1. Domestic animals that are kept in homes, they are called pet animals.  
Such as: dog  
Animals that are kept in farms are called farm animals.
- Cheese, Curd, Ghee
  - We get leather from dead buffalo, camel, snake and crocodile
  - Animals that carry things for us are called beasts of burden.  
Such as: camel and ox

## HOTS

We get bread from plants and cheese from animals.

## Value Based Questions

We should not kill animals. This is not right as they are also living beings and have right to live.

## National Cyber Olympiad Question

- (d) Zebra
- (d) All of these

## Activity

- Honey
  - Eggs
  - Wool
  - Milk
- Do it yourself.

# Chapter - 4 — Wild Animals

## Let's Explore

Deer                      Elephant                      Goat                      Horse                      Lion

## Research and Discover

- Elephant
- Giraffe
- Deer
- Zebra

## Enhance your Life Skills

Animals need home to protect themselves from heat, cold and rain.

## Revisit and Relearn

- A. 1. (b) cave                      2. (b) birds                      3. (c) in water                      4. (a) plants  
 B. 1. lion                      2. burrow                      3. trees                      4. animals  
 C. 1. F                      2. T                      3. F                      4. F  
 D. 1. dog                      2. zebra                      3. snake                      4. deer  
 E.1. Animals that live in forest are called wild animals.

For example : lion, tiger

- Monkey and birds live on trees
- Animals that live both on land and in water are called amphibians.
- Jackal, Hyena, Vulture eat the flesh of dead animals.

## HOTS

Giraffe's long neck helps it to eat leaves of tall trees.

## Value-Based Question — Do it yourself.

**Activity** — Do it yourself.

## Chapter - 5 — Bones and Muscles

**Let's Explore** — Do it yourself

**Research and Discover** — Do it yourself

**Revisit and Relearn**

- A. 1. (a) bones      2. (b) 206      3. (c) brain      4. (c) both a & b  
B. 1. bones      2. ribs      3. joint      4. straight  
C. 1. T      2. F      3. F      4. T  
D. 1. muscles      2. skeleton      3. joint      4. posture  
E 1. All the bones join together to form framework called skeleton. It gives shape and support to our body.  
2. Our bones and muscles help us to work, run, play and do many other activities.  
3. A place where two bones join together is called joint.  
4. Exercising regularly and eating healthy food make our bones and muscles strong.  
5. The position in which we hold our body when we sit, stand or more is called posture. It gives proper shape to our body.

**HOTS**

Regular exercise makes our bones and muscles strong so it is important.

**Value-Based** — Do it yourself.

**Activity Bonanza** — Do it yourself.

**National Cyber Olympiad Question**

1. (b) skeleton      2. (b) 300

## Chapter - 6 — Healthy Food

**Let's Explore** — Do it yourself.

**Research and Discover**

The fruit which is cut for a long time is not healthy so he fell sick.

**Revisit and Relearn**

- A. 1. (a) milk      2. (c) Sugar      3. (c) protective  
4. (a) breakfast      5. (c) both a and b  
B. 1. body building      2. diseases      3. lunch      4. hands  
C. 1. (c) Eggs      2. (e) Breakfast      3. (d) Fruits      4. (b) Dinner  
5. (a) Rice and wheat

- D.1. Food items like milk, fish, eggs etc. help us to grow. They also build our bones and muscles. They are called body - building food.
2. Energy giving food gives us energy. For examples: oil, sugar, rice etc.
  3. Protective food protect us from diseases.
  4. We eat food at different times in a day.  
They are called meals.  
Our meals are: Breakfast    Lunch    Dinner

**HOTS**

Fruits and vegetable are eaten by vegetarians whereas fish and meat are eaten by non-vegetarians.

**Value-Based**

We should avoid eating junk food because they have fat in large amount which makes us obese.

**Activity** — Do it yourself.

**National Cyber Olympiad Question**

1. (d) Honey
2. (c) staple food

**Chapter - 7 — Safety Rules**

**Let's Explore**

- ✓                      ✓                      ✗                      ✗

**Research and Discover**

Our carelessness is the cause of accidents on road.

**Revisit and Relearn**

- A. 1. (c) both a and b                      2. (c) footpath  
3. (b) in the park
- B. 1. F                      2. T                      3. T                      4. T
- C.1. Knife is a sharp object and it may hurt us.
2. Before crossing the road we should look to right, then to left and then to right again.
  3. a. We should not run up and down the stairs.  
b. We should not make noise in the classroom.
  4. a. We should not push or pull while playing.  
b. We should not play near lakes or ponds.

**HOTS**

We should burn fire crackers under the guidance of adult because it ensures safety by having someone experienced to handle them.

**Value-Based** — Do it yourself.

**Activity** — Do it yourself.

**National Cyber Olympiad Question**

- (a) His concentration can break and accident can happen.

## Chapter - 8 — Housing and Clothing

**Let's Explore**

- Kitchen
- Washroom
- Bedroom

**Research and Discover**

Yes, summer uniform is made of cotton which keeps us cool and winter uniform is made of wool which keep us warm.

**Life Skills** — Do it yourself

**Revisit and Relearn**

- A. 1. (b) kuchcha houses                      2. (a) tent                      3. (a) flat  
4. (b) woollen clothes                      5. (c) monsoon
- B. 1. (b) permanent houses                      2. (d) winters                      3. (a) bamboo  
4. (c) summers
- C. 1. Permanent    2. Sloping                      3. Wheels                      4. Cotton
- D.1. When people live in same house for years, it is called a permanent house.

When people keep moving from one place to other. They live in temporary houses.

2. Types of temporary houses are :  
Tent                      Houseboat                      Caravan                      Stilt house
3. Houses built on mountains have sloping roof while houses built in plains have flat roof.
4. We wear cotton clothes in summer.
5. We wear woollen clothes in winters.

**HOTS**

If houses in mountains have flat roofs snow will collect on the roof.

**Value-Based Questions**

- x                      ✓                      ✓                      x

**Activity** — Do it yourself.

**National Cyber Olympiad Question**

- (a) Woollen fibre

## Chapter - 9 — Air Around Us

**Let's Explore** — Do it yourself

### Research and Discover

We should always cover our mouth while sneezing or coughing because it spreads germs in the air which may cause the same disease to others.

### Revisit and Relearn

- A. 1. (b) smoke    2. (a) breeze    3. (c) plants    4. (b) wind  
B. 1. air    2. dirty    3. storm    4. clean  
C. 1. F    2. T    3. T    4. T  
D. 1. (b) oxygen and carbon dioxide  
2. (d) vehicles and factories  
3. (a) plants  
4. (c) dust and germs  
E. 1. Air contains water vapour, gases, smoke, dust and germs.  
2. Dust, germs and smoke make air dirty.  
3. When the wind blows gently it is called breeze.  
When the wind blows strongly it is called storm.  
4. 1. Air moves a sailboat.  
2. Wind turns the blades of windmill.  
3. Air is needed for burning.

### HOTS

A book lying on a table has weight so gentle air cannot make it move.

### Value-Based

✗    ✓    ✗    ✓

**Activity** — Do it yourself.

### National Cyber Olympiad Question

- b. 2 and 3

## Chapter - 10 — Water

**Let's Explore**

1. Drinking    2. Bathing    3. Colouring    4. Washing

**Research and Discover** — Do it yourself.

### Revisit and Relearn

- A. 1. (b) River    2. (c) Well    3. (c) None of these  
4. (b) Three-fourth

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- B. 1. ground      2. boil      3. germs      4. sick
- C.1. Water comes from rain. It is the main source of water.
2. We draw groundwater by digging wells, tube wells and hand pumps.
  3. We get water from lakes and rivers to our homes through pipelines and taps.
  4. Boiling water kills germs.
  5. We can save water by:
    - a. Not keeping the tap unnecessarily open.
    - b. Repairing leaking taps.
    - c. Not wasting water while bathing or washing

### HOTS

He should build a hand pump to draw underground water or he should go to nearby well.

### Value-Based

x      x      ✓      ✓

**Activity** — Do it yourself.

### National Cyber Olympiad Question

D. a, b, c and d.

## Chapter - 11 — Forms of Water

### Let's Explore

✓      ✓      x      ✓

### Research and Discover

Wet clothes don't dry easily on a rainy day because the humidity level in the atmosphere is high which makes it difficult for moisture in clothes to change into vapour.

### Life Skills

When you breathe into a mirror in cold weather, the water vapour in your breath condenses into tiny droplets. This process is called condensation.

### Revisit and Relearn

- A. 1. (a) Ice      2. (c) water vapour      3. (b) Cloud
- B. 1. three      2. ice      3. freezes      4. cooled
- C. 1. T      2. T      3. F      4. T
- D. 1. It evaporates
2. Tiny droplets of water can be seen on the lid
  3. Water changes into ice.

- E. 1. Three different forms of water are:  
(i) Solid (Ice)    (ii) Liquid (Water)    (iii) Gas (Water Vapour)
2. Droplets of water combine to form clouds.
  3. Rainwater seeps into the ponds, lakes, river and seas.
  4. The heat of the sun changes water in ponds, lakes, seas and rivers into water vapour. These water vapour rise up in the air. Up in the sky, water vapour cools down to turn into tiny water droplets to form clouds. When clouds become heavy they fall down as rain. Rainwater seeps into ponds, lakes, rivers & seas again. This is called water cycle.

## HOTS

If we won't keep an icecream in the freezer, it will melt.

## Value-Based

Because the lid has hot water droplets on it and the lid itself is very hot.

## National Cyber Olympiad Question

1. (b) B and D
2. (d) sunlight and cool breeze

**Activity** — Do it yourself.

# Chapter - 12 — Sun, Light and Shadow

## Let's Explore

Lion

Ox

Elephant

Rhinoceros

## Research & Discover

In older days, people used Sundials to know the time.

**Life Skills** — Do it yourself.

## Revisit and Relearn

- |                |              |               |                   |
|----------------|--------------|---------------|-------------------|
| A. 1. (a) east | 2. (b) light | 3. (c) shadow | 4. (c) both a & b |
| B. 1. Sun      | 2. Earth     | 3. Dark       | 4. Shorter        |
| C. 1. T        | 2. F         | 3. T          | 4. T              |

D.1. Sun gives us heat and light.

2. We can see little in the light of the moon. We also use bulbs, tube light, table lamps etc.
3. Shadow is a dark patch on the ground. When light cannot pass through an object, it forms a shadow.
4. Shadow is formed when light cannot pass through an object.

## HOTS

Shadow is always black, no matter what colour clothes we wear.

## Value-Based

- (a) Yes                      (b) Yes                      (c) Yes

## National Cyber Olympiad Question

- (c) Shadows

**Activity** — Do it yourself.

# Chapter - 13 — Rocks and Minerals

**Research & Discover** — Do it yourself

## Life Skills

1. Diamond      2. Talc                      3. Coal                      4. Chalk  
5. Ruby              6. Emerald

**Let's Explore** — Do it yourself

## Revisit and Relearn

- A. 1. (a) hard rock      2. (b) white      3. (b) chalk              4. (b) Quartz  
B. 1. rocks              2. sandstone      3. slate                      4. Graphite  
C. 1. T                      2. T                      3. F                      4. T                      5. T  
D. 1. Sandstone              Marble  
2. Chalk                      Slate  
3. Quartz                      Graphite  
4. Sapphire                      Ruby

- E.1. Our earth is made up of hard substance called rocks.  
2. Rocks are found everywhere like on mountains, on hills, in valleys and at the bottom of rivers and seas.  
3. Rocks are made up of minerals. They are of different colours, shapes and sizes.  
4. 1. We use silica to make mirror and glasses.  
2. Talc is used in making talcum powder.

## HOTS

No, because chalk is a soft rock whereas graphite is hard. Moreover, it is not easy to write with chalk on a sheet of paper.

**Value-Based** — Do it yourself

## National Cyber Olympiad Question

- (d) Pumice              Chalk

**Activity** — Do it yourself.



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