

## **Talent Science World Answer Sheet (Class-I)**

### **Unit 1 – Our World**

#### **Chapter – 1 Things : Living and Non-living (Exercise)**

##### **Formative Assessment – I**

- 1- (a) Human beings      (b) Cow      (c) Dog      (d) Car      (e) Satellite  
2- (a) iv      (b) iii      (c) I

##### **Summative Assessment – I**

- 1- (a)  
i. Non-living things cannot breathe.  
ii. Non-living things cannot grow.  
iii. Non-living things do not need air, water and food to live.  
iv. Non-living things cannot move.  
v. Non-living things cannot feel.  
vi. Non-living things cannot reproduce.  
(b) i. Living things can breathe.  
ii. Living things can grow.  
iii. Living things need air, water and food to live.  
iv. Living things can move on their own.  
v. Living things can feel.  
vi. Living things can produce more of their kind.  
(c) The sun, the moon and water.  
(d) i. Natural Things : Non-living things like the sun, the moon, rocks, water etc which are not made by man, are called natural things.  
ii. Man-made things : Some non-living things like rubber, pencil, book, clothes etc, which are made by man, are called man-made things.
- 2- (a) many      (b) man-made      (c) living      (d) sun      (e) life  
3- (a) F      (b) T      (c) F  
4- (a) Stone - (iii) non-living thing  
(b) Snake - (i) living thing  
(c) Brick - (c) man made  
(d) River - (d) natural

##### **Formative Assessment – II**

#### **Activity Time :**

1. Do yourself      (2) Do yourself

#### **Hots :**

1. A pet needs food because it breathes and grows. A toy does not need food because it neither breathes nor grows.  
2. A tree cannot move from one place to another but it is called living thing because it breathes and grows. On the other hand, a stone cannot move from one place to another because it neither breathes nor grows.

#### **Project work : Do yourself.**

### **Unit – 2 : The World of Plants**

#### **Chapter – 2 Classification of Plants (Exercise)**

##### **Formative Assessment – I**

1. (a) Jasmine      (b) Cucumber      (c) Grapevine      (d) Coriander      (e) Ashoka tree  
2. (a) – iv      (b) – iii      (c) – iii      (d) – ii

##### **Summative Assessment**

1. (a) The herbs are called the seasonal plants because they grow in some particular seasons only. They live for three-four months.  
(b) Trees are big and tall plants. Trees are of different shapes, sizes and heights. Trees are the source of wood and oxygen.  
Trees have hard and strong woody stems called trunks, some trees have branches but some others do not have. Trees live for many years. For example – banyan, mango etc.  
(c) Creepers are plants with weak, soft and thin skins. They grow and spread on the ground. Some ripen creepers are eaten raw. Some creepers are used in cooking. For example : Cucumber, Pumpkin, Watermelon etc.

(d) Herbs are weak and small plants. For examples – mint, coriander etc. They die after producing seeds. They are used in cooking, medicines and for drinking. Most of the herbs grow in some particular seasons. So, these are also called seasonal plants. They live for three-four months.

2. (a) small and weak      (b) support      (c) hard and woody      (d) cactus      (e) creepers
3. (a) T      (b) F      (c) T      (d) F
4. (a) Ashoka tree      -      (vi) branchless tree  
     (b) China rose      -      (iii) shrub  
     (c) Pumpkin      -      (ii) creeper  
     (d) Mango      -      (i) tree  
     (e) Thorny plant      -      (iv) cactus

### **Formative Assessment – II**

**Activity time :** Do yourself

**Hots :**

1. Plants are necessary for us because they inhale carbon dioxide which is exhaled by us and they exhale oxygen which is inhaled by us. Thus, they maintain balance of nature.
2. Because money plant is climber which is a weak plant and it needs support to grow and stand erect. It cannot grow straight at its own.

**Project work**

1. Do yourself
2. Do yourself
3. Do yourself

### **Chapter – 3 Parts of A Plant (Exercise)**

#### **Formative Assessment – I**

1. (a) stem      (b) leaf      (c) root      (d) seed      (e) seed
2. (a) – iii      (b) – iii      (c) – I      (d) – I

**Summative Assessment**

1. (a) Root, stem, leaf, flower and fruit are the different parts of a plant. Each one of these parts helps the plant in different parts.  
     (b) Roots of a plant mostly grow under the soil. They hold the plant in the soil. It takes water and other things needed by the plants. We eat roots of some plants as food i.e. carrot, radish, turnip etc.  
     (c) The leaves of a plant grow on the stem or the branches. They make food for the plant. The food helps the plant to grow strong and healthy. The leaves of some plants are eaten as food i.e. spinach, mint, cabbage etc.
2. (a) leaves      (b) root      (c) fruit
3. (a) F      (b) F      (c) T      (d) F      (e) F
4. (a) Rice      -      (iii) grass  
     (b) Sunflower      -      (iv) oil  
     (c) Cabbage      -      (i) leaf  
     (d) Radish      -      (ii) root

### **Formative Assessment – II**

**Activity Time :**

If we drop a bean seed in soil it will grow into beautiful new plants.

**Hots :**

Leaf part of the spinach (palak) is used to eat.

**Project Work :**

- 1- Do yourself      2- Do yourself

### **Formative Assessment – I**

#### **(Based on Chapters 1 to 3)**

1. (a) seed      (b) shrubs      (c) grains
2. (a) – i      (b) – i      (c) – i
3. Because money plant is a climber which is a weak plant and it needs support to grow and stand erect. It cannot grow straight at its own.

### **Chapter – 4 Plants (Exercise)**

#### **Formative Assessment – I**

1. (a) Cotton plant      (b) Sugarcane      (c) Mustard plant  
     (d) Wood      (e) Tea plant
2. (a) – iii      (b) – ii      (c) – i      (d) – iii

### **Summative Assessment**

- (a) Plants provide us different kinds of food like fruits, vegetables, food grains, spices, edible oils etc. They give us shelter. They provide us wood to make our homes and other useful products. They provide medicines. Plants give us oxygen to breathe.  
(b) Mango, Cabbage, Wheat.  
(c) Spices add taste and flavour to our food.  
(d) We get edible oils from plants. Edible oils are the extract of mustard, groundnut, coconut, sunflower etc.
- (a) Fruits (b) Oxygen (c) Grains (d) Shelter
- (a) T (b) T (c) T (d) F
- (a) Wheat - (v) food grain  
(b) Red chilli - (iii) spices  
(c) Brinjal - (i) vegetable  
(d) Wood - (ii) table  
(e) Coconut oil - (iv) edible oil

### **Formative Assessment – II**

#### **Activity Time :**

1. Do yourself
2. Do yourself

#### **Hots :**

1. Do yourself
2. Do yourself

#### **Project work : Do yourself**

### **Unit – 3 : The world of Animals**

#### **Chapter – 5 Classification of Animals (Exercise)**

##### **Formative Assessment – I**

- (a) ostrich (b) octopus (c) insects
- (a) iii (b) iii (c) I (d) i

##### **Summative Assessment**

- (a) Animals that live in forests are called wild animals. For example : tiger, elephant etc.  
(b) Animals that live in water are called aquatic animals. For example : whale, starfish etc.  
(c) Animals that live both on land water are called amphibians, for example : frog, crocodile etc.  
(d) Insects are very small in size. These creatures have six legs. Maximum insects have wings; they can fly with the help of these wings. For example : grasshopper, cockroach etc.
- (a) two (b) wings (c) no (d) amphibians
- (a) F (b) T (c) F (d) F (e) F
- (a) Octopus - (iii) aquatic  
(b) Honey bee - (iv) insect  
(c) Crab - (i) amphibian  
(d) Bear - (v) wild  
(e) Ostrich - (ii) cannot fly

##### **Formative Assessment – II**

#### **Activity Time : Do yourself**

#### **Hots :**

1. Lion is the 'King of Jungle' and it belongs to the group of wild animals.
2. Housefly is not a bird but it can fly because it comes under the category of insects. It is very small in size. It has six legs. It has wings to fly.

#### **Project work : Do yourself**

### **Chapter – 6 Animals : Food and Shelter (Exercise)**

##### **Formative Assessment – I**

- (a) omnivorous (b) stable (c) hole (d) burrow
- (a) iv (b) I (c) ii (d) iii

##### **Summative Assessment**

- (a) Grass-eating animals, grain-eating animals, fruit and nut eating animals are called herbivorous animals, for example : cow, rat, monkey etc  
(b) We keep fish in an aquarium in our home.  
(c) The place where human beings and animals live is called shelter.
- (a) nest (b) shed (c) pen (d) deer (e) lizard
- (a) T (b) T (c) T (d) T
- (a) Spider - (v) web

- |            |   |              |
|------------|---|--------------|
| (b) Dog    | - | (iii) kennel |
| (c) Lion   | - | (i) den      |
| (d) Monkey | - | (ii) tree    |
| (e) cow    | - | (iv) shed    |

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :** Both

**Project Work :**

1. Do yourself
2. Do yourself

**Formative Assessment – II**

**(Based on chapter 4 to 6)**

1. (a) wings (b) den (c) hygienic food
2. (a) iii (b) iii (c) i
3. Tiger – It belongs to the group of wild animals.

**Summative Assessment – I**

**(Based on chapter 1 to 6)**

1. (a) Living things need home (shelter) to live.  
(b) Creepers are plants with weak, soft and thin stems. For example : cucumber, pumpkin etc. They grow and spread on the ground.  
(c) Root, Stem, Leaf, Flower and Fruit are different parts of plant.  
(d)
 

Living things	Non-living things
i. Living things can breathe.	Non living things cannot breathe.
ii. Living things can grow.	Non-living things cannot grow.
iii. Living things need air, water and food to live.	Non-living things do not need air, water and food to live.
iv. Living things can move on their own.	Non-living things cannot move.
v. Living things can feel.	Non-living things cannot feel.
vi. Living things can produce more of their kind.	Non-living things cannot reproduce.
2. (a) house (b) living things (c) herbs (d) domestic animals  
(e) web
3. (a) F (b) T (c) F (d) T (e) T
4. (a) Lotus - (iii) water plant  
(b) Chair - (i) non-living thing  
(c) Watermelon - (ii) seed  
(d) Tiger - (v) flesh-eating animal  
(e) Crab - (vi) amphibian  
(f) Turmeric - (iv) spices

**Unit – 4 : Our Body and Its Needs**

**Chapter – 7 Human Body (Exercise)**

**Formative Assessment – I**

1. (a) skin (b) eyes (c) tongue (d) nose
2. (a) iii (b) iii (c) iii (d) iii (e) i

**Summative Assessment**

1. (a) Eyes, ears, nose, tongue and skin, all are called sense organs.  
(b) We see different things around us with the help of our eyes.  
(c) The tongue helps us to taste sweet, salty, bitter and sour things.  
(d) Skin is the largest organ in our body.
2. (a) two (b) one (c) skin (d) bitter gourd (e) jalebi
3. (a) T (b) F (c) F (d) F
4. (a) Eyes - (iv) see  
(b) Ears - (iii) hear  
(c) Tongue - (ii) taste  
(d) Nose - (i) smell

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Two hands, two legs, two nostrils, two lungs, two kidneys.
2. She is right.

**Project Work :**

1. Do yourself
2. Do yourself
3. Do yourself

### **Chapter – 8 Our Basic Needs (Exercise)**

#### **Formative Assessment – I**

1. (a) milk (b) junk food (c) cotton clothes (d) woolen clothes
2. (a) iv (b) iii (c) i

#### **Summative Assessment**

1. (a) We need air, water, food, clothes and house to stay alive.  
(b) We should not take stale food because it may fall us sick.  
(c) Toffees, chocolates, burger, cold drinks and chips are known as junk food. We should not eat junk food.  
(d) We wear woolen clothes when it is cold.
2. (a) fresh (b) milk (c) precious
3. (a) F (b) T (c) F (d) T (e) T
4. (a) House - (v) to live in  
(b) Winter - (iv) woolens  
(c) Milk - (ii) complete food  
(d) Protection - (iii) to keep safe  
(e) House - (i) protection from cold

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. No
2. Woolen clothes. Because it protects our body from cold.

**Project Work :** Do yourself

### **Chapter – 9 Developing Good Habits (Exercise)**

#### **Formative Assessment – I**

1. (a) food (b) wash hands (c) good habits (d) waste materials
2. (a) iii (b) ii (c) i

#### **Summative Assessment**

1. (a) i. We should wash our hands before and after meal.  
ii. We should have meals at proper time.  
(b) i. Keep your school and class neat and clean.  
ii. Throw all waste papers into dustbin.  
iii. Do not write on the walls of the school and class.
2. (a) hands (b) follow (c) turn off (d) clean (e) month
3. (a) T (b) T (c) T (d) F (e) T (f) F
4. (a) We should not - (iii) talk while eating.  
(b) Good habits help us - (iv) grow into a good persons.  
(c) Don't throw the rubbish - (v) on the road.  
(d) Switch off the - (i) lights and fans while leaving the room.  
(e) Respect your - (ii) teachers and elders.

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Do yourself
2. Do yourself

**Project Work :** Do yourself

#### **Formative Assessment – III**

#### **(Based on Chapters 7 to 9)**

1. (a) Habit (b) Clothes (c) Ears
2. (a) iv (b) ii (c) i
3. Do yourself

## **Chapter – 10 Health and Hygiene (Exercise)**

### **Formative Assessment – I**

- (a) eight hours (b) early (c) teeth (d) twice
- (a) I (b) ii (c) ii (d) ii

### **Summative Assessment**

- (a) Cleanliness is next to godliness.  
(b) To maintain good health, we need to sleep at least eight hours.  
(c) If we do not exercise, we can't keep ourselves healthy. If we do not take rest we get tired.
- (a) eight (b) ill (c) twice (d) fit
- (a) F (b) F (c) F (d) T (e) F
- (a) Hair - (ii) comb well  
(b) Exercise - (iii) healthy  
(c) Sleep - (iv) 8 hours  
(d) Brush teeth - (i) twice a day

### **Formative Assessment – II**

#### **Activity Time :**

- Do yourself
- Do yourself

#### **Hots : No**

#### **Project Work :**

- Do yourself
- Do yourself

## **Chapter – 11 Safety Rules (Exercise)**

### **Formative Assessment – I**

- (a) zebra crossing (b) teacher (c) electrical appliances (d) left  
(e) in a queue (f) green (g) road
- (a) ii (b) ii (c) iii (d) iii  
(e) i (f) iii

### **Summative Assessment**

- We should follow certain safety rules to keep ourselves and others safe.
  - We should use zebra crossing while crossing the road.
  - i. Do not play on the road or near the road.  
ii. Always play in a playground.  
iii. Do not play on terrace.
  - i. Do not play with switches and plugs.  
ii. Do not play with matchsticks and stay away from fire.  
iii. Do not play with knife or sharp tools.
  - Safety means to stay away from harm.
  - i. Always walk in a queue.  
ii. Do not push others while using stairs.
- (a) safety (b) play (c) zebra (d) lion  
(e) desks (f) footpath (g) queue
  - (a) T (b) F (c) T (d) F (e) F (g) T
  - (a) Blade - (iii) dangerous to play with  
(b) Traffic lines - (iv) avoid accidents  
(c) Waiting for bus - (ii) stand in a queue  
(d) Cross the road - (i) zebra crossing

### **Formative Assessment – II**

#### **Activity Time : Do yourself**

#### **Hots :**

- We would stand at the zebra crossing and would wait for red traffic signal.
- Kapil should inform to his parents or elders.
- No

#### **Project Work :**

- Do yourself
- Do yourself

### **Formative Assessment – IV**

### **(Based on chapters 10 to 11)**

- (a) Hygiene (b) parents (c) green
- (a) I (b) ii (c) iii

3. I would call an older person to avoid any accidents.

**Summative Assessment – II**  
**(Based on Chapters 7 to 11)**

1. (a) Bathing, washing, drinking  
(b) Bathing  
(c) Exercise  
(d) Move in queue, don't push others, don't climb on desks etc  
(e) Parents or elders.
2. (a) feel                      (b) junk food              (c) cough                      (d) exercise                      (e) lean
3. (a) F                      (b) F                      (c) T                      (d) T                      (e) T
4. (a) Nose                      -                      (ii) smell  
(b) Woolen clothes              -                      (iii) winter  
(c) Waste                      -                      (i) useless  
(d) Brush                      -                      (v) twice a day  
(e) Give signals for              -                      (iv) traffic lights  
    coming and going of  
    vehicles

**(Class – 2)**  
**Talent Science World**  
**Unit – 1 : The world of Plants**  
**Chapter – 1 Types of Plants (Exercise)**

**Formative Assessment – I**

- |                |           |             |            |
|----------------|-----------|-------------|------------|
| 1. (a) Brinjal | (b) water | (c) jasmine | (d) cactus |
| 2. (a) ii      | (b) iii   | (c) ii      | (d) i      |

**Summative Assessment**

- a. Photosynthesis is a process of making food by plants using sunlight, water and carbon dioxide.  
b. Trees have hard woody plants called trunk.  
c. Herbs are called seasonal plants because they live for three-four months. For example – brinjal, spinach etc.  
d. Plants which are smaller than trees are called shrubs. They have thin and weak stems. They do not live for many years.  
e. Plants with weak and soft stems are called cucumbers. They cannot stand on their own. They need support to grow upwards. For example : money plant, grapevine etc.  
f. Plants with very weak and soft stems are called creepers. They spread on the ground, for example – pumpkin, watermelon etc.
- (a) branches (b) climber (c) shrubs (d) creeper  
(e) cactus (f) food grains
- (a) T (b) T (c) F (d) F (e) T
- Do yourself (figurative)

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- Trees, because they provide shelter to birds and animals and live for many years.
- Do yourself

**Project Work :** Do yourself

**Chapter – 2 Uses of Plants (Exercise)**

**Formative Assessment – I**

- |              |             |           |        |
|--------------|-------------|-----------|--------|
| 1. (a) latex | (b) shelter | (c) paper |        |
| 2. (a) ii    | (b) I       | (c) I     | (d) ii |

**Summative Assessment**

- (a) Plants are very useful to us. Most of the food that we eat comes from plants. They keep the air, fresh and clean. They give us oxygen to breathe. Wood for our chair, table or bed comes from plants. The paper we write on comes from plants.  
(b) Beetroot, tomato, cabbage, mango, banana, walnut etc.  
(c) Tulsi, neem, mint, eucalyptus, amla, turmeric, aloe vera etc are some of the medicinal plants.  
(d) Cotton plants give us fibres to make cotton cloth. We also get jute fibres from rare plants. Different clothes and items like sacks, jute mat, ropes, bags etc are made from jute.
- (a) medicinal (b) fruits (c) cotton (d) gun (e) bamboo
- (a) T (b) F (c) T (d) T (e) F
- (a) Pulse - (iii) moong  
(b) paper - (iv) bamboo  
(c) Gun - (i) acacia  
(d) Fibre - (v) jute  
(e) vegetable - (ii) radish

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- Do yourself
- Do yourself

**Project Work :** Do yourself

**Unit 3 : The World of Animals**  
**Chapter – 3 Domestic Animals (Exercise)**

**Formative Assessment – I**

- |              |              |           |           |
|--------------|--------------|-----------|-----------|
| 1. (a) camel | (b) silkworm | (c) sheep | (d) honey |
| 2. (a) I     | (b) iii      | (c) ii    |           |



### Summative Assessment

- (a) Animals found in our homes, nearby our homes or on a farm are called domestic animals.  
(b) Some domestic animals are called pet animals because people keep them at their homes. For example – Cat, Dog, Parrot etc. These are friendly animals  
(c) Some animals like oxen, help the farmers to draw water from wells and work in the fields.
- (a) honey (b) fish (c) donkey (d) sheep
- (a) T (b) F (c) T (d) T
- (a) Sheep - (i) wool  
(b) Cow - (iii) milk  
(c) Hen - (v) egg  
(d) Honeybee - (ii) honey  
(e) Silkworm - (iv) silk

### Formative Assessment – II

**Activity Time :** Do yourself

**Hots :** Lizard

**Project Work :** Do yourself

### Formative Assessment – I

- (a) Climber (b) Cabbage (c) Cow (d) Cotton plant (e) Photosynthesis
- (a) I (b) I (c) I (d) I (e) ii
- Do yourself

### **Chapter – 4 Wild Animals (Exercise)**

#### Formative Assessment – I

- (a) Elephant (b) Lion (c) Vulture (d) Rats
- (a) ii (b) iii (c) iii (d) I (e) i

#### Summative Assessment – I

- (a) Wild animals live in deep and thick forests. For example : lion, fox etc.  
(b) Aquatic animals have boat shaped body and breathe through gills.  
(c) Amphibians live both on land and in water.  
(d) Some animals live in herd in search of food and water by wandering from one place to another.
- (a) fox (b) amphibian (c) animals (d) vulture
- (a) F (b) F (c) T (d) F
- (a) Flesh eating animal - (iii) tiger  
(b) Omnivores - (ii) bear  
(c) Tortoise - (iv) amphibian  
(d) Scavengers - (i) Jackal

#### Formative Assessment – II

**Activity Time :** Do yourself

**Hots :**

Rhinoceros is considered an endangered animal because it is killed by human beings for selfish motives.

**Project Work :** Do yourself

### **Unit – 3 : Human Body**

#### **Chapter – 5 Our Body : A Wonderful Machine (Exercise)**

#### Formative Assessment – I

- (a) 206 (b) 600 (c) bones (d) joint
- (a) I (b) iv (c) iv (d) i

#### Summative Assessment

- (a) The position in which we hold our body when we stand, sit or move is called posture. A posture makes our body fit and smart. Correct posture gives proper shape to our muscles and bones.  
(b) i. It helps the bones to grow well.  
ii. It makes our backbone strong.  
iii. It makes our body work properly.  
(c) The skeleton protects the soft inner parts of our body such as the heart and the brain.
- (a) Bones; muscles (b) shoulders (c) shape; support
- (a) F (b) F (c) F
- (a) Good posture - (iii) makes our body work properly  
(b) Stand - (i) with your back straight  
(c) Walk - (ii) with your head upright

### Formative Assessment – II

**Activity Time :** Do yourself

**Hots**

No, Because Ravi should walk with his chest out and shoulders properly. He should hold his head upright.

**Project Work :** Do yourself

### **Chapter – 6 Food (Exercise)**

#### Formative Assessment – I

- (a) milk (b) water (c) grapes (d) protective food
- (a) iii (b) iv (c) i

#### Summative Assessment

- (a) Food helps our body to grow. It keeps us healthy and strong. It gives us energy to work and play.  
(b) Body-building food helps us to grow big and strong. They make our teeth and bones strong. For example : milk, eggs, pulses, meat and grains.  
(c) Fruits, vegetables and nuts.  
(d) i. Wash your hands before and after eating a meal.  
ii. Always eat fresh and well cooked food.  
(f) Fruits and vegetables are important to eat because they help us to fight diseases. These are called protective food.
- (a) energy giving (b) protective (c) mouth (d) cover
- (a) F (b) T (c) F (d) T
- (a) Peas, Beans, Fish, Eggs and Milk - (iii) food for growth  
(b) Bread, Rice, Sugar and Sweets - (iv) food for energy  
(c) Oil, ghee, butter and cheese - (i) fats  
(d) Fruits and vegetables - (ii) protective food

#### Formative Assessment – II

**Activity Time :** Do yourself

**Hots :**

- Sneha's mom is serving healthy food because vegetable and chapatti are respectively protective and energy giving food while maggi is a junk food which is unhygienic food.
- Rajat should prefer energy giving food.

**Project Work :** Do yourself

#### Formative Assessment – II

#### (Based on chapters 4 to 6)

- (a) scavenger (b) posture (c) rice (d) thigh bone (e) amphibian
- (a) ii (b) I (c) ii (d) iii (e) ii
- Do yourself

#### Summative Assessment – I

#### (Based on chapters 1 to 6)

- (a) Herbs have thin and weak stem.  
(b) Paper is made from the pulp of trees like bamboo.  
(c) We get milk and meat from animals.  
(d) There are domestic and wild animals according to their habitats.  
(e) Bones give support and shape to our body because they are hard and strong.  
(f) Sugar, rice and potato.  
(g) Fibres are useful in making different kinds of clothes and items like sacks, jute, mat, ropes, bags, cloth etc.
- (a) branchless (b) nuts (c) carriage (d) wild  
(e) upright (f) food (g) right
- (a) F (b) T (c) T (d) F  
(e) T (f) F (g) T
- (a) Hydrilla - (iii) aquatic plants  
(b) Mustard oil - (iv) edible oil  
(c) Dog - (vi) pet animal  
(d) Crow - (ii) omnivores  
(e) Bones - (i) 206  
(f) Fruits and vegetables - (v) protective food  
(g) Pulses - (vii) body building food

### **Chapter – 7 Safety Habits (Exercise)**

**Formative Assessment – I**

1. (a) Safety rules                      (b) sharp edged                      (c) sunlight
2. (a) iv                      (b) iii                      (c) iii
3. (a) First aid is the treatment given to the injured before the doctor arrives.  
(b) We should not leave things on the floor because we may trip over them and fall.  
(c) We should get into the bus only when our turn comes.  
(d) Before crossing the road we should first look to our left, then to our right and then again to our left.
2. (a) footpath                      (b) Zebra                      (c) accidents                      (d) ear
3. (a) T                      (b) F                      (c) F                      (d) T
4. (a) Green signal                      -                      (ii) go  
(b) yellow signal                      -                      (i) get ready  
(c) Red signal                      -                      (iii) stop

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Do yourself
2. No. Because while playing on footpath beside the road he can meet accidents.

**Project work :**

1. Do yourself                      2. Do yourself

**Unit – 4 : Our Universe**  
**Chapter – 8 Air Around us (Exercise)**

**Formative Assessment – I**

1. (a) smoke                      (b) breeze                      (c) storm
2. (a) iii                      (b) ii                      (c) iii

**Summative Assessment**

1. (a) Weight and space are the properties of air.  
(b) Air contains water vapours, germs, smoke etc.  
(c) Storms damage houses, crops, trees and animals. It can uproot the trees and blow everything such as roofs of the Kutch houses.  
(d) Wind moves windfall to produce energy.
2. (a) health                      (b) germs                      (c) dust                      (d) weight                      (e) plants
3. (a) T                      (b) T                      (c) F                      (d) F                      (e) F
4. (a) Gentle wind                      -                      (v) breeze  
(b) Strong wind                      -                      (iv) storm  
(c) Fresh air                      -                      (i) keeps healthy  
(d) Wind mill                      -                      (ii) wind direction  
(e) Air occupies                      -                      (iii) space

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Yes. Because slow moving air is called breeze which is very hygienic for health.
2. Anil also got fever due to Ajay's sneezing without keeping handkerchief over his mouth and nose because air contains germs and these germs are released into the air and enter into our bodies through air.

**Project Work :** Do yourself

**Chapter – 9 Sources of Water (Exercise)**

**Formative Assessment – I**

1. (a) well                      (b) salty                      (c) ocean                      (d) rain
2. (a) iii                      (b) iii                      (c) I                      (d) i

**Summative Assessment**

1. (a) The sea water is not used for drinking because it is salty in taste.  
(b) All water is not safe for drinking because many impurities and germs may be present in it.  
(c) Water from wells, tube-wells and hand pumps is called ground water.  
(d) In cities, the municipality stores water in big underground tanks. It supplies water from these tanks to people through pipes.  
(e) We boil and filter water before use because it removes impurities and germs present in it.
2. (a) rain                      (b) salty                      (c) boil; filter                      (d) germs  
(e) well                      (f) water treatment plant

- |                         |       |                               |       |
|-------------------------|-------|-------------------------------|-------|
| 3. (a) T                | (b) F | (c) T                         | (d) F |
| 4. (a) Sea water        | -     | (iv) salty                    |       |
| (b) Cloud               | -     | (iii) rain                    |       |
| (c) Ground Water        | -     | (ii) well                     |       |
| (d) Safe drinking water | -     | (v) filtered and boiled water |       |
| (e) Water vapour        | -     | (i) gaseous form              |       |

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. No, because water taken from the well for drinking may contain germs and impurities in it.

**Project Work :** Do yourself

**Formative Assessment – III**

**(Based on chapters 7 to 9)**

- |                |           |                            |           |
|----------------|-----------|----------------------------|-----------|
| 1. (a) driver  | (b) storm | (c) water treatment plants | (d) smoke |
| 2. (a) iii     | (b) ii    | (c) I                      | (d) I     |
| 3. Do yourself |           |                            | (e) i     |

**Chapter – 10 Forms of water (Exercise)**

**Formative Assessment – I**

- |                |                  |         |               |
|----------------|------------------|---------|---------------|
| 1. (a) melting | (b) condensation | (c) ice | (d) reservoir |
| 2. (a) I       | (b) iii          | (c) iii |               |

**Summative Assessment**

1. (a) i. Fill an ice tray with water, keep it in the freezer of a fridge. After some time, it will change into ice. This process of conversion of water into ice is called freezing.  
 ii. Take the ice-tray out of the freezer and again leave it for some time. The warm atmosphere changes the solid ice cubes into water. This process of conversion of solid ice into water is called melting.  
 iii. Boil this water into a container. The water changes into water vapours or steam. This process of conversion of water into water vapour is called evaporation.

Thus, three forms of water are solid, liquid and gas.

(b) The process of conversion of water into water vapour is called evaporation.

(c) Water is always on the move in a never ending cycle, which is called water cycle.

- |                                  |           |   |            |
|----------------------------------|-----------|---|------------|
| 2. (a) rain                      | (b) solid | (c) steam                                     | (d) vapour |
| 3. (a) F                         | (b) F     | (c) T   | (d) F      |
| 4. (a) Underground water goes in | -         | (ii) wells and tube wells                     |            |
| (b) Rain water                   | -         | (i) gets collected in ponds, lakes and rivers |            |
| (c) Pond water                   | -         | (iv) has germs in it                          |            |
| (d) Water is filtered            | -         | (ii) to remove dirt and germs from it         |            |

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :** Do yourself

**Project work :** Do yourself

**Chapter – 11 Our Earth (Exercise)**

**Formative Assessment – I**

- |              |          |              |            |
|--------------|----------|--------------|------------|
| 1. (a) Globe | (b) Coal | (c) Graphite | (d) Desert |
| 2. (a) i     | (b) i    | (c) ii       | (d) i      |

**Summative Assessment**

1. (a) If we begin our journey from one point, after certain period of time if we keep on going straight we shall reach the same point from where we had started.  
 (b) Useful substances are called minerals from which rocks are made of.  
 (c) Marble sandstone.  
 (d) Some parts of the earth are covered with sand. These lands are called deserts.
2. (a) Honey
3. (a) T
4. (a) Places covered with sand are called - (iii) deserts  
 (b) The earth is surrounded by - (iv) atmosphere  
 (c) The model of the earth is called - (i) globe  
 (d) A very high raised land is called - (ii) mountain

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :** Because it is very soft in nature and breaks down easily.

**Project Work :**

1. The Mount Everest
2. The Arctic  
Do yourself

### Chapter – 12 Rocks and Minerals (Exercise)

#### Formative Assessment – I

1. (a) coal (b) white marble (c) gypsum (d) rocks
2. (a) ii (b) iii (c) iv (d) iii

#### Summative Assessment

1. (a) A material of which all rocks are made.  
(b) Gemstones are very hard minerals. These are cut into various shapes and polished. When they are polished, these gemstones look very attractive and beautiful and are used in jewellery.  
(c) Talc is used for making talcum powder.  
(d) Gravity marble sandstone.
2. (a) rocks (b) granite (c) hard (d) gemstone (e) tungsten
3. (a) T (b) T (c) T (d) F (e) T
4. (a) The Earth - (iv) rocks and minerals  
(b) Taj Mahal - (iii) white marble  
(c) Red fort - (ii) red stone  
(d) Flower vases - (i) china Clay

#### Formative Assessment – II

**Activity Time :** Do yourself

**Hots :**

1. States
2. Do yourself

**Project Work :** Do yourself

### Chapter – 13 The Sun and its Shadow (Exercise)

#### Formative Assessment – I

1. (a) East (b) Sun (c) might (d) west
2. (a) i (b) i (c) i (d) i (e) ii

#### Summative Assessment

1. (a) The sun is important for living things because it is the biggest source of light and energy.  
(b) The shadows are longer in morning and evening because the rising and setting sun is at a lower level in the sky.  
(c) The direction of light affect shadows because the shadows are formed in the opposite direction to the source of light.  
(d) A shadow is formed when the source of light is blocked by an opaque object.
2. (a) hot (b) sun (c) west (d) shadow (e) opposite
3. (a) F (b) T (c) T (d) F (e) F
4. (a) Sun - (ii) light  
(b) Shadow - (i) dark patch  
(c) Long shadow - (iv) day time  
(d) sunlight - (iii) photosynthesis

#### Formative Assessment – II

**Activity Time :** Do yourself

**Hots :**

1. Our clothes dry faster on a sunny day than a rainy day because water soaked in clothes changes into vapour due to heat of sun.
2. Dark colour absorbs maximum sunlight and light colour absorbs minimum sunlight.

**Project Work :** Do yourself

#### Formative Assessment – IV

#### (Based on chapters 10 to 13)

1. (a) reservoir (b) round (c) marble (d) sunrise (e) plains
2. (a) iii (b) i (c) iii (d) i (e) iii
3. Do yourself

#### Summative Assessment – II

**(Based on chapters 7 to 13)**

1. (a) We should walk on the left side of the road on footpath.  
(b) Chimney of houses and factories, smoke pipes of buses, cars and other mobile vehicles give out smoke into air and pollute it.  
(c) Ice changes into water due to melting process.  
(d) The atmosphere is the surroundings of mixture of various gases around the Earth.  
(e) Rocks are found on the mountains, hills and in valleys. They are also found under seas and rivers.  
(f) We cannot see shadows in the dark because shadow is formed when the source of light is blocked by an opaque object.  
(g) All rocks are made of minerals. Minerals are of different colours, shapes and sizes.
2. (a) Rules            (b) sleeping            (c) water            (d) environment  
(e) graphite            (f) opposite            (g) soil
3. (a) F            (b) T            (c) F            (d) F  
(e) F            (f) T            (g) T
4. (a) Coal            -            (vi) rock  
(b) Small model of earth            -            (v) globe  
(c) Talc            -            (iv) talcum powder  
(d) Source of light            -            (i) sun  
(e) A wall built across a river            -            (iii) dam  
(f) Purest form of water            -            (ii) rain  
(g) China clay            -            (vii) flower vases

**Class- 3 Science World – 3**  
**Answer Sheet**  
**Unit 1 : Our World**  
**Chapter – 1 Living and Non-Living Things (Exercise)**

**Formative Assessment – I**

1. (a) Car                      (b) Eggs                      (c) Carbon dioxide
2. (a) i                        (b) i                        (c) i

**Summative Assessment**

1. (a) Breath'y food, move.  
(b) Animals move from place to place in search of food and shelter.  
(c) Human beings breathe through nose.  
(d) Plants prepare their own food with the help of air, water and sunlight. Roots of plants absorb minerals and water from soil.
2. (a) Sense organs              (b) eggs                      (c) food                      (d) stomata              (e) sunlight
3. (a) T                      (b) F                      (c) F                      (d) T                      (e) T
4. (a) Man                      -                      (ii) a young boy  
(b) Lion                      -                      (iv) cub  
(c) Cat                      -                      (v) kitten  
(d) Butterfly                      -                      (i) caterpillar  
(e) Frog                      -                      (iii) tadpole

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :** No

**Project Work**

- At Home – Computer, T.V., mirror
- At School – Chair, desk, blackboard
- In market – Vegetables, fruits, vendors
- In a park – Swing, see-saw, sliding board

**Chapter – 2 Animals Differ from Plants (Exercise)**

**Formative Assessment – I**

1. (a) photosynthesis              (b) carbon dioxide              (c) carbon dioxide  
(d) human beings              (e) venus flytrap
2. (a) ii                      (b) i                      (c) iii

**Summative Assessment**

1. (a) Both plants and animals are living things. But they differ from each other in many things.
  - i. Movement is the main difference between animals and plants.
  - ii. Plants can make their own food but animals cannot make their own food.
  - iii. Plants cannot move from one place to other place but animals can walk and move for food.
  - iv. Plants cannot reproduce as human beings or animals. They reproduce in the form of seeds.(b) Though animals and plants are different from each other, they depend upon each other to live. The interdependence of plants and animals makes a balance in nature through the exchange of gases. This is called balance in nature.  
(c) Plants make their own food with the help of air, water and sunlight. This process is known as photosynthesis.  
(d) Animals either give birth to their young ones or lay eggs from which babies come out.
2. (a) movement              (b) stamata              (c) food                      (d) plants                      (e) leaves
3. (a) F                      (b) T                      (c) T                      (d) F                      (e) F
4. (a) Egg                      -                      (iii) the babies come out of them.  
(b) Locomation -                      (ii) the movement of animals  
(c) Blue whale -                      (i) largest living animal

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. A fish out of water dies because it breathes through its gills which function in water only and not in air.
2. Because the plants reproduce in the form of seeds.

**Project Work :** Do yourself

**Chapter – 3 Feeding and Eating Habits of Animals (Exercise)**

### **Formative Assessment – I**

1. (a) frog                      (b) vulture                      (c) bear                      (d) dog
2. (a) ii                      (b) i                      (c) iii

### **Summative Assessment**

1. (a) Animals that depend on both plants as well as animals are called omnivorous animals. They have sharp teeth and flat grinding teeth. Man is also an omnivorous animal. Animals like bear, crow are omnivorous animals.  
(b) Animals that eat grass, small plants, twigs, branches of trees, fruits and vegetables are called herbivores or herbivorous animals. These animals have strong and flat grinding teeth at the back which help them in chewing the grass and leaves. Animals like buffalo, cows, horses, elephants, giraffes are herbivorous animals.  
(c) Animals which serve us by doing work for us are called domestic animals. Therefore, We should take good care of them and look after them. Animals like cows, camels, oxen, dogs etc are domestic animals and needs to be always remain kind to them.  
(d) Some animals like cows, buffaloes, goats, horses etc. swallow their food without chewing it. After some time, they bring it back into their mouth and then chew it well. This is called chewing the cud.
2. (a) carnivores    (b) swallow    (c) leech                      (d) food                      (e) scavengers
3. (a) T                      (b) T                      (c) F                      (d) T                      (e) T
4. (a) Swallow as a whole                      -                      (ii) snake  
(b) Gnawing teeth                      -                      (iii) squirerd  
(c) Tearing teeth                      -                      (i) tiger  
(d) Trunk                      -                      (v) trunk  
(e) Sucking tubes                      -                      (vi) sucking tubes  
(f) Long neck                      -                      (iv) giraffe

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. All food chains start from plants because plants are the only living things amongst all which prepare its own food at its own.
2. All animals are not able to live in the same kind of habitat because of their different food habits i.e. herbivores, carnivores and omnivores.

**Project Work :** Do yourself

## **Chapter – 4 Parts of A Plant (Exercise)**

### **Formative Assessment – I**

1. (a) stem                      (b) leaves                      (c) roots                      (d) stem                      (e) flower
2. (a) iii                      (b) i                      (c) ii                      (d) iii

### **Summative Assessment**

1. (a) Main parts of the plant are roots, stem, leaves, flowers, fruits (seeds).  
(b) i. Roots hold the plant firmly in the soil.  
ii. Roots absorb water and nutrients like nitrogen, calcium etc from the soil.  
(c) The leaf is called the kitchen of the plant because it prepares food for plants.
2. (a) fixes                      (b) fibrous                      (c) woody                      (d) kitchen                      (e) flower
3. (a) T                      (b) T                      (c) F                      (d) T                      (e) F
4. (a) Roots                      -                      (iii) grow below the ground  
(b) Stem                      -                      (v) is the woody part of the plant  
(c) Fruits                      -                      (i) protect seed inside them  
(d) Leaves                      -                      (ii) are called the kitchen of the plant  
(e) Flower                      -                      (iv) are the beautiful parts of a plant.

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Roots are not given in colour because they grow inside the soil.
2. Baby plant is protected inside the seed.

**Project Work :** Do yourself

## **Chapter – 5 Types of Birds (Exercise)**

### **Formative Assessment**

1. (a) down feathers                      (b) to stick tiny insects                      (c) living habits
2. (a) iv                      (b) iv                      (c) iv                      (d) iv



### **Summative Assessment**

- (a) Hollow and light bones, wings (flight muscles), down feathers, flight feathers.  
(b) i. Down feathers are small and fluffy and cover the full body of a bird, keeping it warm.  
ii. Flight feathers are flat, long and sturdy and are attached to wings to help them fly.  
(c) Parrot possesses curved beak which helps into crack nuts and hard fruits. This curved beak also helps it to climb trees.  
(d) The birds like ducks have broad and flat beaks. Such beaks help them to dig in soft mud near pond to find worms for their food. Their beaks have fine holes along the edge. Water and mud go out through these holes and insects remain in the mouth.
- (a) talous      (b) webbed      (c) chisel      (d) scratching      (e) curved
- (a) T      (b) T      (c) F      (d) T      (e) F
- (a) Crane      -      (ii) wading bird  
(b) Hen      -      (iii) scratching feet  
(c) Duck      -      (iv) webbed feet  
(d) Woodpecker      -      (i) climbing bird  
(e) sparrow      -      (v) perching bird

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- Ostrich cannot fly because of heavy weight of its body.
- Cuckoo (Koel) does not make nest. It lays eggs in a crow's nest. The mother crow hatches them as her own eggs.

**Project Work :** Do yourself

### **Chapter – 6 Birds and Their Nests (Exercise)**

#### **Formative Assessment – I**

- (a) nest      (b) cuckoo      (c) weaver bird
- (a) iv      (b) iii      (c) ii      (d) ii      (e) i

**Summative Assessment**

- (a) Birds use different things to build their nests like dry twigs, feathers, grass, wool, mud, cotton, pebbles etc. Different birds build nests at different places.  
(b) Bird lay eggs in the nests and hatch them into young ones. They build their nests in safe places where enemies cannot reach them.  
(c) They build nest to save their young ones from heat, cold, rain, enemy and wind.  
(d) Birds usually build their nests at various places. Most of the birds build their nests on the branches of trees, in the corner of walls, old buildings and ventilators.  
(e) The name weaver bird itself suggest that it behaves like a weaver in making its nest. A weaver bird weaves its nest with fine strips of palm and banana leaves, grass etc. The nest hangs down from the branch of a tree. It has an entrance at the bottom through which the birds enter and goes out of the nest.
- (a) hollows      (b) crow's      (c) ducks      (d) hole
- (a) T      (b) T      (c) T      (d) F
- (a) Penguin's nest      -      (iv) pebbles and bones  
(b) Cuckoo      -      (i) does not build its nest  
(c) Bulbull's nest      -      (v) hedges and bushes  
(d) Parrot      -      (ii) hollow of the trunk  
(e) Sparrow      -      (iii) houses and old buildings

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- The birds build new nest every time because the mother bird has to lay eggs in it. Both the parent birds take care for the eggs. They build their nests in safe places where enemies cannot reach them. They also build nest to save their young ones from heat, cold, rain, enemy and wind. The parent birds feed them with the food containing a lot of moisture.
- i. Nest of weaver bird :** The name weaver bird itself suggests that it behaves like a weaver in making its nest. A weaver birds weaves its nest with fine strips of palm and banana leaves, grass etc. The nest hangs down from down the branch of a tree. It has the entrance at the bottom through which the bird enters and goes out of the nest. The weaver bird lays its eggs on a soft platform made inside the nest. Its nest is in retort shape.

**ii. Nest of Tailor Bird :** A tailor bird makes its nest out of two or three large leaves with its sharp beak. It sews the nest with cotton thread or wool. The nest is lined with cotton, grass, wool and dried grass to keep it warm. This kind of sewing helps to keep the nest cosy and comfortable.

**Project Work :** Do yourself

**Unit – 2 : Human Body**  
**Chapter – 7 Our Body (Exercise)**

**Formative Assessment – I**

1. (a) rice                      (b) milk                      (c) kidneys
2. (a) i                          (b) ii                          (c) ii                          (d) ii

**Summative Assessment**

1. (a) Our excretory system cleans our body by throwing out body wastes like urine, stools, sweat etc.  
(b) We should do exercise regularly because our body is just like a machine. When machines are not used for a long time, they don't work properly. Similarly, our body becomes unfit if we don't do exercise. Exercise helps us to keep our body fit and healthy.  
(c) Muscles are useful for us because muscles along with bones help us to move about to do different kinds of work. All our muscles together form muscular system. There are more than 600 muscles in our body. Digestive system helps us to digest our food. This is a complicated process. The organs that help us to perform to digestive process are as following –  
Mouth : We take in food through our mouth.  
Food pipe : Food passes through the food pipe.  
Stomach : It is a sac- like organ where the food gets mixed thoroughly.  
Intestines : The intestines take in or absorb what is needed from the food.  
Anus : The undigested food is thrown out through the arms.
2. (a) Cells                      (b) Organ                      (c) Digestive                      (d) Heart                      (e) Milk
3. (a) T                          (b) T                          (c) T                          (d) F                          (e) F
4. (a) Number of sense organs                      -                      (iii) five  
(b) Number of bones                      -                      (i) 206  
(c) Fitness                      -                      (ii) regular exercise  
(d) Vitamins                      -                      (v) fruits and vegetables  
(e) Fats                      -                      (iv) ghee and oil

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. In terms of number of bones, kids are more flexible than adults because they are in the initial stage of growing process.

**Project Work :** Do yourself

**Formative Assessment – II**  
**(Based on chapters 5 to 7)**

1. (a) Flight feathers                      (b) Woodpecker                      (c) Yogasana  
(d) Heart                      (e) Tissue
2. (a) ii                          (b) ii                          (c) ii                          (d) i                          (e) ii
3. Do yourself

**Summative Assessment – I**  
**(Based on chapters 1 to 7)**

1. (a) Some bird migrate in search of their food and habitats.  
(b) Though animals and plants are different from each other, they depend on each other to live. The interdependence of plants and animals makes a balance in nature through the exchange of gases. This is called balance in nature. We should not interfere with the balance of nature by cutting down trees or by killing animals. So we should protect animals. We should also grow more trees.  
(c) Snake, frog  
(d) i. Leaves prepare food for the plant.  
ii. It helps in breathing of a plant through stomata.  
(e) Flesh-eating birds are called the birds of prey. Some flesh-eating birds like hawks and eagles have sharp, strong and curved claws called talous which are used to grip small animals like rat, toad etc.  
(f) Birds make their nests just before the start of summer and rainy season. This occurs usually in the months of February and March.

(g) Minerals and Vitamins are called protective food, fruits, vegetables and nuts help us to protect from diseases. These food items are known as protective food. Minerals and vitamins are such food which we get from vegetables and fruits. We get calcium from milk and iron from green vegetables. These two minerals are very important for our body.

2. (a) sunlight (b) locomotion (c) tear (d) tap  
(e) smallest (f) protection (g) five
3. (a) T (b) T (c) T (d) T  
(e) T (f) F (g) F
4. (a) Lifeless - (vii) without life  
(b) Habits - (vi) regular ways of behaving  
(c) Stem - (v) main support of the plant  
(d) Cory - (iv) warm  
(e) Milk - (i) complete food  
(f) Ostrich - (iii) biggest bird  
(g) Leaves - (ii) food factories

### Chapter – 9 Safety and First-Aid (Exercise)

#### Formative Assessment – I

1. (a) fracture (b) red (c) zebra crossing (d) dettol
2. (a) i (b) iii (c) ii (d) ii (e) iii

#### Summative Assessment

1. (a) If anyone gets a fracture in an accident we need to judge it with the swollen part. We should not put the fractured part hang down. We would tie it with some long cloth and give support to it. Hereafter, we should consult a doctor.  
(b) First-aid is the provision of initial care for an injury.  
(c) Before crossing a busy road we would see the red signal.  
(d) i. We should learn and obey the rules of the game first.  
ii. We should not play near thorny hedges or barbed wires.  
(e) Blade, scissors, electrical appliances, knives, switches.
2. (a) left (b) zebra crossing (c) safety rules (d) electric-shock
3. (a) F (b) F (c) F (d) F
4. (a) Never drink cold water - (iv) just after playing or if you are sweating.  
(b) You can slip - (iii) if you leave the soap on the bathroom floor.  
(c) Wash the wound - (i) with dettol and cold water.  
(d) Accidents - (v) can occur anywhere.  
(e) Prevention is better than - (ii) cure.

#### Formative Assessment – II

#### Activity Time : Do Yourself

#### Hots :

1. It is advised not to crowd around the injured person because it interrupts let in the fresh air and generates suffocation.
2. If a person is bleeding, we should not let the wound bleed. We should tie a clean hanky or bandage. If anyone has fractured his leg we should judge it with the swollen part. We should not put the fractured part hang down. We should tie it with some long cloth and give support to it before consulting a doctor.

#### Project Work :

1. Do yourself
2. If we touch a very hot vessel it will burn. We should apply burnol or silverex on the burn. To cure a burn we can also cool it with cold running water or ice.

### Unit 3 : Matter

#### Chapter – 9 States of Matter (Exercise)

#### Formative Assessment – I

1. (a) graphite (b) mercury (c) water (d) plants
2. (a) iii (b) iv (c) i

#### Summative Assessment

1. (a) i. **Solid** : Solid thing has a definite shape and size. Solids do not change their shape easily. They are hard. For example – table, chair, pen, floor etc.  
ii. **Liquid** : Liquid has no fixed shape and size. It can flow easily and take the shape of the vessel into which it is kept. For example – milk, water, juice etc.

(b) The shape of materials can be changed by heating, cooling, pressing and moulding. The common example is of water. We can change liquid form of water by cooling it into solid (ice). Solid (ice) can again be changed into liquid by heating. The iron rods can be bent by heating. We can get different things of several shapes by pressing clay or soil.

We can change the shape of paper by folding and pressing it. Plastics can be moulded in various shapes and sizes.

(c) We get wool, skin, fur, silk etc. from animals. These things are used for making different things.

2. (a) coal and petroleum (b) freezing (c) food (d) properties (e) plastics
3. (a) T (b) F (c) F (d) T (e) T
4. (a) Wood - (vi) tree  
 (b) Pencil - (v) graphite  
 (c) Tyre - (iv) rubber  
 (d) Wool - (iii) sheep  
 (e) Vegetables - (ii) plants  
 (f) Sand - (i) rock

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :** She can do it by heating frozen juice.

**Project Work :** Do yourself

### **Chapter – 10 Soil (Exercise)**

#### **Formative Assessment – I**

1. (a) Loam soil (b) Loam soil (c) Humus
2. (a) iv (b) iii (c) iv (d) iv

#### **Summative Assessment**

1. (a) Soil is the upper most layer of the Earth. The earth is made of different kinds of rocks. By the action of sun, the wind and the rain, these rocks broke into small piece, which further broke until they became tiny particles of soil.

It consists of small stones, gravel, leaves, humus stick, sand and some other very small particles. Different kinds of soil are found at different places.

(b) Soil and plants help each other in the following way – They are the habitats of many organisms, these are base of agriculture and the useful products.

(c) The minerals that come from plant and animal remains are called humus.

2. (a) Inorganic (b) Plants and animals (c) Loam (d) Clay (e) Sandy
3. (a) T (b) F (c) T (d) F (e) F
4. (a) Clay - (v) bricks, pots and toys  
 (b) Snails - (iv) fertile the soil  
 (c) Rat and rabbit - (i) make burrows in soil  
 (d) Roots - (iii) enter deep into the soil and supports the plant  
 (e) Origin of soil - (ii) rocks

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Do yourself
2. Do yourself

**Project Work :** Do yourself

### **Unit – 4 : Our Universe**

### **Chapter – 11 Air, Water and Weather (Exercise)**

#### **Formative Assessment – I**

1. (a) Air (b) Oxygen (c) Autumn (d) Spring
2. (a) i (b) iii (c) ii (d) i

#### **Summative Assessment**

1. (a) Weather describes how hot or cold, wet or dry, calm or stormy a place is at a particular time. It keeps on changing every day. Changes in weather are caused by the sun, wind and water vapours present in the air. Weather differs from place to place. Extreme hot weather can be seen at places near the equator.  
 (b) The sun heats up the water from rivers, lakes, oceans and seas. This water evaporates into the air as water vapour. Warm air is lighter than cold air. It moves upwards towards the sky. Air contains water vapours which we cannot see. When warm air meets the cold air, the water vapours turn into tiny drops of

water. This is condensation, when many such little drops come together, they form a cloud. When a cloud gets full, water drops fall back to earth as rain. This process is called rain cycle.

(c) Air is a mixture of various invisible gases. It contains nitrogen, oxygen, argon, carbon dioxide and other gases.

- |                  |          |   |             |
|------------------|----------|---|-------------|
| 2. (a) gas       | (b) blow | (c) water vapours   | (d) cyclone |
| 3. (a) T         | (b) F    | (c) F   | (d) T (e) F |
| 4. (a) Air       | -        | (ii) mixture of gases   |             |
| (b) Condensation | -        | (iv) turning of vapours into drops of water                   |             |
| (c) Breeze       | -        | (v) cold wind   |             |
| (d) Cyclone      | -        | (iii) a strong wind with lighting, thunder and rain           |             |
| (e) Water cycle  | -        | (i) forms of water in the form of liquid, gas and solid (ice) |             |

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Rainbow is seen only in east or west directions because it comes out only in the opposite direction of sun.
2. Cloudy days are not very hot but cloudy nights are warmer because on cloudy days, the clouds block the sunshine. Clouds also show signs of a storm with heavy rain and strong winds, sometimes storms are accompanied by lightening and thunder.

**Project Work :** Do yourself

#### **Formative Assessment** **(Based on chapters 8 to 11)**

1. (a) red (b) motor vehicles (c) soil (d) carbon dioxide (e) mercury
2. (a) i (b) ii (c) iii (d) i (e) i
3. After keeping an ice-cube in fridge it melts after sometime because it is warmed in it.

#### **Chapter – 12 Our Earth (Exercise)**

#### **Formative Assessment – I**

1. (a) Astronauts (b) Rotation (c) Round
2. (a) i (b) iv (c) iii

#### **Summative Assessment**

1. (a) If you see ship sailing, you will notice that when a ship sail away from the shore, the lower part first disappears from the sight, last of all, the top of the most disappears. This happens because the Earth is round like a ball.  
(b) Revolution means when the earth spins on its axis it goes round the sun in fixed path. This fixed path is called orbit. The movement of the Earth around the sun in a fixed path is called revolution. The earth takes about 365¼ days to complete one revolution. Revolution of the Earth causes changes in seasons.  
(c) Rotation of the Earth causes days and nights. The earth takes about 24 hours to spin on its axis once.
2. (a) third (b) spherical (c) axis (d) 24 hours (e) orbit
3. (a) T (b) F (c) T (d) T (e) F
4. (a) Date - (iv) rotation  
(b) Seasons - (v) revolution  
(c) The Earth - (i) round  
(d) Environment - (ii) should be kept clean  
(e) Axis - (iii) imaginary live

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

No, because air and water are the prime conditions for the existence of life which is not present on mercury and it is nearer to sun also which makes it hotter in comparison to Earth.

**Project Work :** Do yourself

#### **Chapter – 13 The Solar System (Exercise)**

#### **Formative Assessment – I**

1. (a) Plain glass (b) Satellites (c) Moon
2. (a) i (b) i (c) i

#### **Summative Assessment**

1. (a) The moon does not produce its own light like the sun does. It shines because it reflects sunlight from its surface. As it goes round the Earth, various parts of it are illuminated by the sun. We can see only that part

which gets light. It seems to us that the moon changes its shapes daily. This change of shape is called the “phases of the moon”.

Some days we cannot see the moon at all. It is called a new moon day. Slowly and day by day, we can see small portions of the moon appearing on the sky. This is the crescent moon. After seven days, we can see half of the moon. This is half moon. After two weeks we can see the full face of the moon. This is full moon.

(b) Eclipse is a shadow also, which is formed in the space. Due to eclipse, we cannot see the sun or moon for same time.

(c) Some stars form a group that seems to form a pattern or shape in the sky. Such patterns or groups of stars are called constellations. The stars in the sky are divided into 88 constellations. Some of the constellations are – Urza major, the Great bear orion (the Hunter), Leo (the Lion) and scorpious (the Scorpion)

2. (a) Planets (b) fire (c) 28 (d) milky way; Andromeda  
(e) Solar system
3. (a) T (b) F (c) F (d) T (e) T
4. (a) Comets - (ii) mass of ice  
(b) The moon - (iv) satellite of planet  
(c) Galaxy - (i) milky way and Andromeda  
(d) The sun - (iii) centre of the solar system

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Pluto has been removed from the planet list because it does not fulfil the set parameters of other revolving planets

**Project Work :** Do yourself

**Unit – 5 : Daily Life Concepts**

**Chapter – 14 : Light, Sound and Force (Exercise)**

#### **Formative Assessment – I**

1. (a) water (b) non-luminous (c) air (d) force (e) frequency
2. (a) ii (b) iv (c) i (d) iii

#### **Summative Assessment**

1. (a) Light helps us in seeing things around. Light is a form of energy. One of the properties of light is that it gets reflected back from shiny surfaces. The speed of light is 2 lakh km per second. Light can move in vacuum also. The light of sun moves in all directions.

(b) There are mainly three types of substances – transparent, translucent and opaque.

The substance that allow light to pass through them are called transparent substances. For example : glass, water, acrylic sheets, cellophane paper, air etc.

There also exist some objects which partially allow the light to pass through them. They are called translucent objects. For example : butter paper.

All those substances which do not allow light to pass through are called the opaque substances. For example : wood, cardboard, metal, rock, stones etc.

(c) A pull or push is known as force, it is also expressed as “the cause for the movement of an object”. Force is necessary to push or to pull an object in different ways. Movement is the prime condition of force.

There are four types of forces. When we push, pull or lift something we apply muscular force.

When any work is done by tools or machines it is called mechanical force. For example – stretching of arrow from the bow is called mechanical force.

The force by which the earth pulls the objects forwards it is called gravitational force.

The force that slows down or stops a moving body is known as frictional force.

2. (a) energy (b) heavenly (c) vacuum (d) 3 lac km per second (e) medium
3. (a) F (b) F (c) F (d) T
4. (a) The sun - (v) luminous body  
(b) The Earth - (i) non-luminous body  
(c) Tube light - (ii) cold source of light  
(d) Push or pull - (iii) force  
(e) Light - (iv) energy

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Our shadow becomes longest in the morning or the evening because sun rays fall in a slanting manner and shadow becomes shortest in noon because sun rays fall directly over head.
2. We hear different sounds while playing Jalatarong because sound is carried by air in different directions. Sound needs a medium to travel as it does not move in any direction on its own. Air is the medium of sound.

**Project Work :** Do yourself

**Formative Assessment – IV**  
**(Based on chapters 12 to 14)**

1. (a) Earth            (b) Translucent    (c) Luminous        (d) Axis            (e) Rakesh Sharma
2. (a) i                (b) ii                (c) i                (d) i                (e) ii
3. Do yourself

**Summative Assessment – II**  
**(Based on chapters 8 to 14)**

1. (a) Carelessness can lead to accidents.  
(b) The shape of materials can be changed by heating, cooling, pressing and moulding.  
(c) Three types of inorganic matter are ; sand, loam and clay.  
(d) Solid, liquid and gas are the three forms of water.  
(e) We can protect our environment by planting more and more trees, by checking population and by checking urbanisation and by checking discharge of untreated water in the rivers and oceans.  
(f) Stars are big balls of fire that spread out heat and light in space. The flames of fire that come out of the stars make them twinkle.  
(g) The force by which the earth pulls the objects towards it is called gravitational force.
2. (a) accidents        (b) solid            (c) sand            (d) light  
(e) fixed path        (f) moon            (g) frequency
3. (a) T                (b) F                (c) F                (d) T  
(e) F                (f) F                (g) F
4. (a) Accident        -            (iv) mishappening  
(b) Volume        -            (v) space occupied by a material  
(c) Clay            -            (i) backbone of ceramic and brick industry  
(d) Wind            -            (vii) fast moving air  
(e) Earth            -            (ii) wonderful planet  
(f) Sun              -            (iii) big star  
(g) Hertz            -            (vi) unit of frequency

**Class – 4 Science World – 4 : Answer Sheet**  
**Unit – 1 : The World of Plants**  
**Chapter – 1 : Food making in Plants (Exercise)**

**Formative Assessment – I**

1. (a) Green            (b) Leaf blade    (c) Starch
2. (a) ii                (b) iii              (c) ii

**Summative Assessment**

1. (a) The process by which green leaves prepare their food in the presence of sunlight by using chlorophyll, carbon dioxide, water and minerals is called photosynthesis. (photo means light and synthesis means to put together)  
(b) The inside of a leaf shows many layers of cells. We can see these layers by viewing a section of a leaf under a microscope. These cells contain chlorophyll which is a green pigment. Chlorophyll makes the leaf look green. The lower layer of a leaf has tiny pores called stomata. The stomata are guarded by the guard cells. They help in the exchange of gases and water vapours between the leaf and the surrounding air.  
(c) The food prepared by plant is in the form of simple sugar. It is used in a number of ways by the plants.
  - They use it for their growth.
  - They use it to build new cells.
  - They use it to repair worn out cells.Extra food is stored in various parts of plant, such as the leaves, stems and roots. This stored food is called starch.  
(d) Plants and animals depend on each other for their survival. Animals depend on these plants for food. We know that the oxygen that animals breathe in, also comes from plants. Oxygen is released by the plants during the process of photosynthesis. We, human beings also depend on plants for our food. Animals breathe out carbon dioxide. This carbon dioxide is used by the plants to make their food, this is how plants and animals depend on each other.
2. (a) starch            (b) photosynthesis    (c) chlorophyll    (d) leaf blade  
(e) stomata          (f) glucose
3. (a) F                (b) T                  (c) T                  (d) T
4. (a) moulds          -                    (ii) unusual plants  
(b) stomata          -                    (iv) tiny pores  
(c) leaf blade        -                    (i) flat and green part  
(d) chlorophyll      -                    (iii) green pigment

**Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. We shall find stomata on the upper surface so that water does not block the pores.

**Project Work**

1. Do yourself                      2. Do yourself                      3. Do yourself

**Chapter – 2 : Adaptation in Plants (Exercise)**

**Formative Assessment – I**

1. (a) marshy area    (b) terrestrial plants    (c) Kendelia plant
2. (a) i                (b) i                      (c) ii                    (d) ii

**Summative Assessment**

1. (a) We find vast variety of plants in different natural surroundings. These plants develop special features to adopt themselves to their surroundings. This process is called adaptation. Plants are generally found on land or in water.  
(b) i. Free-floating plants. Example – water lettuce.  
ii. Underwater plants. Example – pondweed.  
iii. Fixed plants. Example – lotus  
iv. Emergent plants. Example - cattail  
(c) All plants growing on land are called terrestrial plants. They are of different types depending upon the type of soil and climate they grow in. For example – mangrove trees, evergreen trees, deciduous tree, desert plants.  
(d) Coniferous trees are usually found in cold and hilly places. They have needle like leaves and have cones instead of flowers. Examples of such trees are pine, spruce, fir and cedar. Their (conical) slim and slanting shape makes snow slide off easily. As they do not shed their leaves in winter, they are also called evergreen trees.



2. (a) terrestrial (b) aquatic (c) coniferous (d) mangrove (e) deciduous
3. (a) T (b) F (c) F (d) (e) F
4. (a) Coniferous trees - (ii) evergreen  
 (b) Mangroves - (iii) marshy areas  
 (c) Cactus - (i) deserts  
 (d) Coconut tree - (iv) coastal areas  
 (e) Insectivorous plants - (v) soil poor in minerals

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :** A paddy can't grow in deserts because it needs plenty of water and sunlight.

**Project Work :** 1, 2, 3, Do yourself

### **Unit – 2 : The World of Animals**

#### **Chapter – 3 : Reproduction in Animals (Exercise)**

##### **Formative Assessment – I**

1. (a) metamorph (b) baby cockroach (c) cow
2. (a) i (b) iii (c) iii

##### **Summative Assessment**

1. (a) The process by which the living beings produce young ones of their own kind is called reproduction.  
 (b) Animals reproduce for the continuation of their generations and that the life on earth keeps on going.  
 (c) Animals reproduce in two ways :  
 i. Some animals give birth to their young ones.  
 ii. While some others lay eggs from which the young ones hatch out.  
 (d) A bird's egg has a hard, outer shell to protect the chick growing inside. The mother keeps the egg warm by sitting on it. This is called incubation. The embryo or the growing chick lies in the yellow part of the egg called yolk. The embryo feeds on the yolk as it grows. The watery white part is called albumen. It protects the embryo. The air sack contains air which the developing chick breathes in while it is inside the egg. When the baby bird gets fully developed, the egg hatches and the baby bird or chick comes out of it. This is called hatching. The chicks do not have feathers and their eyes are closed. The parent bird feeds and look after them till they start moving.  
 Students need to draw its diagram themselves.  
 (e) Frog lay eggs in a safe place in the water. They also lay hundreds of eggs at a time. Their eggs are covered with jelly. The life cycle of a frog has four stages. The eggs hatch into tadpoles. Tadpoles look like little fish. Tadpoles have tails that help them to swim in water and eat water plants. After a few days, they start growing legs. This is called metamorph. A metamorph grows into a young frog which looks more like its parent. The adult frog does not have a tail. It lives on land and reproduces in water. The process of change of a tadpole into an adult is called metamorphosis.

2. (a) Mammals (b) Bat (c) Birds (d) Spawn (e) Tadpole
3. (a) T (b) T (c) F (d) T (e) F
4. (a) Nymph - (ii) grasshopper  
 (b) Eggs - (iii) first stage  
 (c) Watery white part - (i) albumen  
 (d) Metamorph - (iv) third stage

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. The chicks follow their mother hen because they do not have feathers and their eyes are closed. The parent bird feeds and look after them till they start moving.
2. The baby frogs cannot live on land because they need to eat water plants.

**Project Work :** Do yourself

### **Chapter – 4 : Adaptation in Animals (Exercise)**

##### **Formative Assessment – I**

1. (a) Habitat (b) Cheetah (c) Leech (d) Camel
2. (a) i (b) iii (c) iii

##### **Summative Assessment**

1. (a) Like plants, animals have also developed certain features which help them to survive in their environment. Human beings also adapt to the environment they live in or get used to live in that

environment. This process of living in a particular environment in order to get the demands of food, living places and protection is called adaptation.

(b) All animals are adapted to live in a certain place. Adapted means to fit into its habitat where its needs are met. The natural home of an animal is called its habitat. A habitat can be on land, in water, in air or on trees. All animals can be classified on the basis of their habitat.

Animals like horses, lions, camels live on land. They are called terrestrial animals. Terrestrial animals can be categorized into polar animals, desert animals, grassland animals and forest animals. For example – polar bear, musk, camel, zebra, deer etc.

(c) Animals protect themselves by adapting themselves to their surroundings. Those that cannot adapt, die.

(d) These cannot bear extreme cold weather. So, they undergo for a sleeping period in winter which is called hibernation.

(e) Frogs can live both on land and in water and called amphibian. These animals have distinct features that help them to live both on land and in water. They have limbs to move and swim. They have moist skin to breathe in water.

2. (a) arboreal (b) gills; lungs (c) water; land (d) sleep (e) shells
3. (a) T (b) T (c) T (d) T (e) T
4. (a) Terrestrial - (ii) lion, elephant, rabbit, ants  
(b) Polar - (i) monkeys, tree frogs, birds  
(c) Aquatic - (iv) fish, whale, dolphin, octopus  
(d) Camouflage - (iii) leopard, tiger, chameleon, leaf insect

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Do yourself
2. Aboreal animals usually have long tails and long arms for climbing and hanging on trees.

**Project Work :**

1. Do yourself
2. Do yourself

#### **Formative Assessment – I**

#### **(Based on chapters 1 to 4)**

1. (a) Photosynthesis (b) Aquatic (c) Bat (d) Amphibian (e) Terrestrial
2. (a) ii (b) i (c) ii (d) i (e) i
3. Most reptiles do not care for their babies or eggs because their eggs are protected by shells which are like thick leather. As a result, these eggs do not break when laid down on the ground. The eggs are warmed by the heat of sun. The baby comes out breaking the egg shell using a special egg tooth.

### **Unit – 3 : Needs and care of Human Body**

#### **Chapter – 5 : Food and Digestion (Exercise)**

#### **Formative Assessment – I**

1. (a) Rice (b) Milk (c) Process of digestion (d) Stomach
2. (a) iii (b) iii (c) iii (d) i

#### **Summative Assessment**

1. (a) Digestion is the process of breaking down food into simpler forms so that it can be used by the body. The food that we eat is not directly used to provide energy. It has to be changed into a simple and usable form.  
(b) Water is very essential for our body to function properly. Almost two-thirds of our body is made of water. We use a lot of water in the form of sweat or through urine from our body. If the amount of water in our body becomes less, we feel thirsty. Water helps our body to work well and maintains our body temperature. We should drink at least 8-10 glasses of water everyday.  
(c) From the mouth the food passes through the food pipe into stomach. The stomach plays an important role in digestion. It is a hollow, muscular bag. The strong muscles of the stomach use digestive juices to digest the food. It changes the mashed food into a semi-solid form.  
Food remains in the stomach from one to four hours. This is why we feel full in the evening after a very heavy afternoon meal. When the stomach finishes its stomach opens. The liquid food now moves to the small intestine.  
(d) i. Balanced diet : A diet the contains right amount of all the nutrients, i.e. carbohydrates, proteins, fats, minerals, salts, vitamins, roughage and water is called a balanced diet.  
ii. Roughage or Fibre : Roughage is the fibre present in our food. It helps our body to get rid of wastes. So roughage is very important. For example : apple, guava, pear etc contain a lot of fibre.

(e) When the stomach finishes its work, muscles at the lower end of the stomach open. The liquid food now moves to the small intestine. Digestion is completed in the small intestine. The liver, gall bladder and the pancreas help the small intestine to complete the digestion of food. The liver secretes bile which helps to digest fats.

The food is now into a simple form. It passes through the walls of the small intestine into the blood. The blood carries it to all parts of the body.

The undigested food and water in the small intestine pass into the large intestine.

2. (a) small (b) liver, gall bladder, pancreas (c) rectum (d) bile; fats (e) mouth
3. (a) F (b) F (c) T (d) T (e) F
4. (a) Body building food - (ii) proteins  
 (b) Energy giving food - (iii) carbohydrates  
 (c) Making food to last longer - (iv) preservation  
 (d) The digestive liquid in the mouth - (i) saliva

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :** Do yourself

**Project Work :** Do yourself

### **Chapter – 6 : Our Teeth (Exercise)**

#### **Formative Assessment – I**

1. (a) teeth (b) incisors (c) brushing teeth
2. (a) i (b) i (c) i (d) i

#### **Summative Assessment**

1. (a) Milk teeth are called temporary teeth because they are in growing stage. There are twenty teeth in temporary set of teeth.  
 (b) i. Incisors : The four front teeth in each jaw are incisors. These are shovel-shaped teeth at the front of the mouth. These are used for cutting and biting our food. They are also called cutting teeth.  
 ii. Canines : There are two canines in each jaw. They are present on either side of the incisors in each jaw. Canines are sharp and are used for gripping and tearing food by flesh eating animals. That's why, they are long and pointed.  
 iii. Premolars : There are four premolars in each jaw. These are broad and flat teeth, next to the canines. Premolars help to crack food and chew it.  
 iv. Molars : There are six molars in each jaw. They are next to the premolars. They are bigger, fatter and broader teeth, with a broader upper surface to chew and grind the food well.  
 Plant eating animals have well-developed premolars and molars, since they need to chew and grind their food a lot.  
 (c) Though, we have different kinds of teeth, all our teeth have the same basic structure. We have three parts of a tooth : the crown, the neck and the root.  
 The crown is the part we see, while the root is the part inside the gums. The gums hold the teeth in their places. The region between the crown and the root is called neck.  
 The outside white covering of the tooth is called enamel. It protects the teeth from the wear and tear of chewing. Below the enamel lies the hard dentin. Dentin is yellow bone-like material which supports the enamel. Inside the dentin is pulp. The pulp is very soft and has blood and nerves vessels. The pulp forms the central part of the tooth.

2. (a) incisors (b) twelve (c) enamel (d) calcium
3. (a) F (b) F (c) T (d) F
4. (a) Enamel - (v) the outer part of the teeth  
 (b) Dentin - (ii) the layer below the enamel  
 (c) Gums - (iii) hold the teeth in place  
 (d) Nerves - (iv) make us feel the toothache  
 (e) Milk teeth - (i) temporary teeth

#### **Summative Assessment**

**Activity Time :** Do yourself

**Hots :**

1. We all are born without teeth. After six to seven months, a baby cuts the first tooth.
2. Do yourself

**Project Work :** Do yourself

### **Chapter – 7 : Safety and First Aid (Exercise)**

### **Formative Assessment – I**

- (a) cold water    (b) fire    (c) Zebra crossing
- (a) iii    (b) ii    (c) iii    (d) iii

### **Summative Assessment**

- Do not go near gas stove wearing synthetic clothes. They might catch fire.
  - Do not touch electrical sockets with wet hands.
  - Do not play with sharp objects like scissors, blades, razor etc because they can cause cuts on your fingers on hands.
  - Do not spill detergents or shampoos on the floor. The floor gets slippery or you may fall down.

(b) Fire does not give us any warning before it starts. It may start from something as small as lighted matchstick that is carelessly thrown away. It can start from a candle burning near a curtain.

(c) While crossing a road, we should not run or play on the road. We should not walk on the wrong side or centre of the road. We should always use pavement for walking. We should cross the road only at the Zebra crossing or use subway or overbridge.

If there is no Zebra crossing, we must find the safest place to cross the road. We should always look at our right, then left and then again right, then cross the road.

We should always cross the road when traffic light is red. We should also keep on watching the coming traffic while crossing the road. We should never cross the road while talking to people, listening to music or talking on phones.

(d) The immediate help given to an injured person before the doctor's arrival is called first aid. While giving first aid, it is important to stay calm and act fast.

To soothe the burn pain, we should –

  - Remove the source of heat.
  - Put out flames or remove clothing.
  - For minor burns, dip the part in cold water or hold the burnt part under running water for some time. We must do it at once. This cools the wound and avoids a severe burn.
  - Minor burns heal on their own.
  - In case of more serious burn, consult a burn specialist, if necessary.

(e) In case of insect bite, we should try to remove the sting politely with a sharp object. We should never pinch it as more of the poison may enter our body.

We may wash the area thoroughly with water. We may put a part of baking soda and cold cream. We can also apply calamine lotion if there is itching.
- (a) Do not    (b) tetanus    (c) footpath    (d) Prevention    (e) minor
- (a) T    (b) F    (c) T    (d) T    (e) F
- |                   |   |  |
|-------------------|---|--|
| (a) Nose bleeding | - | (iii) occurs in summer                 |
| (b) Prevention    | - | (iv) is better than cure               |
| (c) First aid     | - | (i) immediate and correct medical help |
| (d) Never play    | - | (ii) on the road                       |

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- For minor burn, I will dip the part in cold water or hold the burnt part under running water for some time. This will cool the wound and avoid a severe burn.

**Project Work :**

- Do yourself
- Do yourself

### **Formative Assessment – II**

#### **(Based on chapters 5 to 7)**

- (a) fats    (b) canines    (c) bandage    (d) saliva    (e) proteins
- (a) ii    (b) iii    (c) i    (d) iii    (e) i
- Do yourself

### **Summative Assessment – I**

#### **(Based on chapters 1 to 7)**

- (a) Extra food is stored in various parts of the plant, like the leaves, stems and roots. This stored food is called starch.

(b) Insectivorous plants grow in soil which are poor in minerals. So, they eat insects to get enough nutrition. The leaves of the venus fly trap are like a trap. They can snap shut when an insect sits on them.

The hollow leaves of the pitcher plant are filled with nectar. When insects come to drink this, the lid closes and they are eaten by the plant.

(c) Animals that give birth to their young ones and feed them with their own milk are called mammals. These animals are the most highly developed among all animals. Their body is covered with hair.

These animals carry the young ones within their bodies till they are fully developed to be born. Mammals care for them and protect them till they learn to look after themselves. For example : tigers, elephants, horses, dogs and cats are mammals.

(d) Adaptation is necessary because it enables all the animals to adapt themselves to their surroundings. Those that cannot adapt, die.

(e) We wash all raw foodstuff well before cooking so as to free them from dust and germs.

(f) Calcium is very important for healthy and strong teeth. We get it mainly from milk, curd, cheese and other milk products.

Poisoning is also a common kind of accident at home. We have invented many things like certain sprays, nail paints, wall paints and detergents that have harmful chemicals. These can prove poisonous if we smell or swallow them. All such things must be kept away in a safe place. It is also important to wash our hands after using any of these things.

In case of poisoning, read and follow the instructions on the container. Rush the person to a doctor. Also carry the source that caused the poisoning with you. This will help the doctor to take right action.

2. (a) stomata (b) aquatic (c) frog (d) porcupines  
(e) roughage (f) six (g) accidents
3. (a) T (b) T (c) F (d) T  
(e) T (f) T (g) T
4. (a) Moulds - (vii) non-green plants  
(b) Dried grasses - (vi) packing material  
(c) Larva of a housefly - (v) maggot  
(d) Bat - (iv) aerial  
(e) Banana - (iii) carbohydrates  
(f) Incisors - (ii) cutting teeth  
(g) Electric spark - (i) shock of current

#### **Unit – 4 : Matter**

#### **Chapter – 8 : Soil Erosion and Conservation (Exercise)**

##### **Formative Assessment – I**

1. (a) Gravel soil (b) Atmospheric nitrogen (c) Dams
2. (a) iii (b) i (c) iii (d) iv

##### **Summative Assessment**

1. (a) Soil is considered as a natural resource as air and water for our survival. Soil is composed of organic and inorganic matter. The organic matter consists of decayed plants and animals. The inorganic matter consists of particles of rocks and mineral salts.

Soil is formed when big pieces of rocks are broken into very small pieces. Rocks get heated up by the sun. They get cooled at night. Repeated heating and cooling break them into small pieces. Flowing water causes these rock pieces to bang against each other. This further breaks the rocks into much smaller pieces. These tiny pieces of rock get carried away to far off places by water or wind. Gradually, they turn into powder-like substance called soil.

This powder, together with the remains of dead animals and plants, make up the soil that we have today.

(b) Sandy soil is light and dry and contains a little quantity of organic matter. It holds very little water. It gets carried away by the wind. It is mixed with cement and used for making buildings.

(c) Loamy soil is a composition of clay, sand and humus. It can hold enough air and water. Humus makes the best soil for the growth of plants.

(d) The uppermost layer of the soil is made of fine sand and humus. At times, strong winds blow away these fine particles. Flood also carry away the topsoil. This process of the topsoil getting carried away by wind and water is called soil erosion. Deforestation is cutting down and clearing away forest on a very large scale. It also results in soil erosion.

(e) As we know that the topsoil is rich in minerals and is therefore most suitable for growing crops. If this fertile topsoil is blown away, the growth of plants gets affected.

The protection of topsoil from erosion is called conservation of soil. Therefore, conservation of soil is important since it takes hundreds of years for the formation of the topsoil.

2. (a) Soil (b) Loamy (c) Sandy (d) Deforestation

- (e) Soil Conservation
3. (a) T (b) T (c) F (d) F (e) F
4. (a) Soil - (iii) mixture of organic and inorganic matter  
 (b) Bedrock - (v) the hard rocky layer of the soil  
 (c) Gravel soil - (iv) useful for laying roads  
 (d) Loamy soil - (ii) good for growing crops  
 (e) Dams - (i) control the force of flood waters

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- To make a small garden in my house, I would use loamy soil because it is a composition of clay, sand and humus. It can hold enough air and water. Humus makes the best soil for the growth of plants.
- Money plants grow faster when rooted in soil instead of a bottle filled with water because soil consists of humus which makes soil the best for the growth of plants.

**Project Work :** Do yourself

## **Chapter – 9 : Matter (Exercise)**

### **Formative Assessment – I**

1. (a) matter (b) solid (c) codine (d) oxygen (e) sugar
2. (a) iv (b) iv (c) iii (d) i

### **Summative Assessment**

- (a) Any matter that has weight and occupies space is called matter. Everything around us is made of water.  
 (b) Mass, volume and weight are the common properties of matter.  
 (c) Molecules in solids are usually hard and have a fixed shape. In this state, matter has molecules that are very close to each other. For example : book, chair, pencil and marbles.  
 (d) Water is a liquid and it does not have definite shape but they take up a definite amount of shape. In this state, there is a little space between the molecules. These molecules are able to slide past each other. This makes the water flow.
- (a) atoms (b) space; weight (c) molecule (d) solid; liquid; gas
- (a) F (b) F (c) T (d) T (e) F
- (a) Water - (v) loosely packed molecules  
 (b) condensation - (ii) boiled to form steam  
 (c) Milk plus water - (iv) liquid in liquid solution  
 (d) Solution - (i) sugar in water  
 (e) Soda water - (iii) gas in liquid solution

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- The smell of a perfume spreads very quickly from one corner of the room to the other because it is a form of gas and gases do not have a definite shape and they do not take up a definite amount of space.
- Yes, we can store a gas in a container. In a gas, the molecules are much farther apart than in a solid or liquid. The molecules of a gas can easily spread through all the space in a container.

**Project Work :** Do yourself

## **Unit – 5 : Our Universe**

### **Chapter – 10 : Air, Water and Weather (Exercise)**

### **Formative Assessment – I**

1. (a) Chlorination (b) dew (c) wind
2. (a) i (b) ii (c) iii (d) iii

### **Summative Assessment**

- (a) Days and nights are formed due to rotation of Earth on its axis.  
 (b) Revolution of Earth around the sun makes a change of season.  
 (c) The sun heats the air near the land. The hot air spreads and becomes lighter. The light hot air rises up. Cooler air (which is heavier) then comes in to take its place. This movement of air causes winds.  
 (d) Ice, water and water vapour are the three forms of water. These states are interchangeable. The water on the surface of the earth changes into water vapour by the heat of the sun by a process, called evaporation.  
 (e) Adding chlorine tablets to water kill germs and makes the water pure. This process is called chlorination.
- (a) Earth (b) Rotation (c) Humidity (d) Water (e) Breeze (f) Germs

- |  |       |                                    |       |       |
|--|-------|------------------------------------|-------|-------|
| 3. (a) F   | (b) T | (c) F                              | (d) T | (e) T |
| 4. (a) Air                                       | -     | (ii) is a mixture of various gases |       |       |
| (b) Moving air                                   | -     | (iii) is called wind               |       |       |
| (c) A gentle wind                                | -     | (i) is called a breeze             |       |       |
| (d) Storm accompanied with thunder and lightning | -     | (v) is called thunder storm        |       |       |
| (e) Strong wind                                  | -     | (iv) is called wind storm          |       |       |

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

- The weather in coastal areas is not as cold as in other regions in winters because the sun heats the air near the land. The hot air spreads and becomes lighter. The light hot air rises up. Cooler air (which is heavier) then comes in to take its place.
- After a cold night, we see dew drops on the ground and other surfaces because water vapour known as humidity, rises up and condenses on dust particles in the air into tiny droplets of water. As more water vapours are formed, they combined together to form clouds. These tiny droplets of water then combine together to form bigger droplets of water.

**Project Work :** Do yourself

### **Formative Assessment – III**

#### **(based on chapters 8 to 10)**

- |                      |            |                |            |                 |
|----------------------|------------|----------------|------------|-----------------|
| 1. (a) deforestation | (b) matter | (c) filtration | (d) iodine | (e) gravel soil |
| 2. (a) i             | (b) i      | (c) i          | (d) i      | (e) i           |
| 3. Do yourself       |            |                |            |                 |

### **Chapter – 11 : Pollution (Exercise)**

#### **Formative Assessment – I**

- |                         |           |                  |
|-------------------------|-----------|------------------|
| 1. (a) Greenhouse gases | (b) Ozone | (c) Saudi Arabia |
| 2. (a) iv               | (b) iv    | (c) iii (d) iii  |

#### **Summative Assessment**

- (a) Pollution is the contamination of the environment with harmful substances. Pollution is the result of our failure to balance our needs and wants with that of nature.

(b) i. Air Pollution : Air is a mixture of several gases and dust particles. It gets polluted when there is a change in its composition. When harmful substances like gases, dust particles and smoke mix with air, it causes air pollution. Gases like carbon monoxide, nitrogen oxide, hydrocarbons etc that are released from automobiles cause air pollution, smoke released from burning fuels in automobiles or in factories and burning coal and wood at homes also pollute air. Forest fires pollute the air in the same way air pollution can cause cough, breathing problems and burning eyes.

ii. Water Pollution : The addition of harmful substances into water bodies like lakes, rivers, oceans is known as water pollution. Water pollution is caused when garbage from house, industrial wastes, agricultural wastes, chemicals from factories, fertilizers and insecticides are charged directly or indirectly into water bodies. Heat also pollutes water. Industries release warm water into nearby lakes and rivers without minding the harmful effects of it.

Water pollution affects drinking water, rivers, lakes and oceans all over the world. Drinking polluted water can cause many water born diseases like diarrhea, cholera, dysentery etc. Polluted water also affects aquatic animals and plants.

iii. Soil Pollution : Mixing of harmful substances with soil is called soil pollution. Soil pollution is caused when from various sources is not disposed of properly. It occurs when domestic wastes, industrial wastes, chemicals used in pesticides, fertilizers and insecticides are thrown directly into soil.

Soil pollution reduces the fertility of soil. It causes soil erosion which indirectly affects all forms of life on the Earth surface. Chemicals destroy the crop quality and productivity.

(c) Global warming : Greenhouse gases in the atmosphere trap the heat of the sun and there is a rise in temperature on the earth. This is called global warming.

The rise in temperature of the Earth is melting the ice at the North and South poles. There is now less snow covering the mountain ranges. Countries like Bangladesh and islands like Tuvalu and Marshall fear floods. All these mean that there will be less and less land for a growing population to live in.

(d) Climatic changes : The effects of climate change are visible. Unexpected weather changes have taken place all over the world. It has snowed for the first time in Saudi Arabia. In cold Siberia, summer has come three months earlier.

There has been widespread floods in Europe and very heavy snowfall in Kashmir. Predicting weather conditions has become quite difficult.

(e) i. Never throw any wastes, chemicals, soaps or toxins down into lakes and rivers where fish, birds and other animals will suffer. Instead, dispose of them properly and safely.

ii. Do not use polythene bags or plastic bags as they do not decompose themselves. Always use cloth bags. Compost is the best method of preventing pollution and making your garden soil rich in nutrients. Dispose of vegetable peelings, fruit rinds, egg shells, leftover food products in a compost pit and leave it for some days. After some days, they get decomposed and mixed with soil.

2. (a) Green house effect (b) Harmful gases (c) Ozone (d) Air (e) Landfills
3. (a) F (b) T (c) F (d) T (e) F
4. (a) Industrial chemicals - (v) pollutes water  
 (b) Dust in air - (iii) reduces our vision  
 (c) Mount Everest - (iv) full of garbage  
 (d) Forest fire - (i) pollutes air  
 (e) Clean fuel - (ii) CNG

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. i. Do not throw scrap food, polythene bags, empty water bottle or food wraps anywhere on the road. Always throw in trash bin.  
 ii. Walk or use bicycle whenever you can, as it does not create any pollution. It will also be good for your body as regular exercise will keep you fit and healthy. Use buses and trains instead of cars.  
 iii. Never throw any wastes, chemicals, soaps or toxins down into lakes and rivers where fish, birds and other animals will suffer, instead dispose of them properly and safely.  
 iv. Do not waste paper. Many trees have been cut down to make these papers.  
 v. Do not use polythene bags or plastic bags as they do not compose themselves. Always use cloth bags.
2. Yes, because recycle makes your wastes into reusable form. Wastes like papers, plastics, glasses, aluminium cans etc can be recycled and turned into new products.

**Project Work :**

1. Do yourself
2. Do yourself

### **Chapter – 12 : Sun, Planets and Stars (Exercise)**

#### **Formative Assessment – I**

1. (a) Sun (b) Sun (c) Moon (d) Venus
2. (a) i (b) i (c) ii (d) ii (e) iii

**Summative Assessment**

1. (a) Heavenly bodies revolving around a planet is called a satellite. They do not possess light of their own. They reflect the light from the sun. The moon is the natural satellite of the Earth. The satellites of planets are called moons.  
 (b) There are some stars which are thousand times bigger than the sun. The stars are grouped by our ancestors under different names. These groups of stars are called constellations.  
 (c) The sun and the eight planets revolving around it along with their satellites constitute the solar system. All the planets in the solar system resolve around the sun in their own orbits but in different directions.
2. (a) Sputnik – I (b) constellations (c) sun (d) orbit (e) morning star
3. (a) T (b) F (c) T (d) F (e) T
4. (a) Big Dipper - (iii) a constellation  
 (b) The sun - (ii) big ball of fire  
 (c) Mercury - (v) the hottest planet  
 (d) Mars - (iv) the red planet  
 (e) Jupiter - (i) the largest planet in the solar system.

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Because it was midnight in America, as sun throws its light only on half the portion of the Earth at a time.

**Project Work :** Do yourself

### **Unit 6 : Daily Life concepts**

### **Chapter – 13 : Work, Force and Energy (Exercise)**

#### **Formative Assessment – I**



1. (a) Gravitational force (b) Friction (c) Lever (d) Sun (e) Force
2. (a) i (b) iv (c) I (d) iii

#### **Formative Assessment-I**

1. (a) A pull or push acting on an object is called force. Force is necessary because it may cause an object to stop or start moving, to change its position or direction or to increase or decrease its speed.  
(b) Wind Energy : Energy from the wind is called wind energy. Any object that is moving has energy in it. Energy of the wind can turn windmills which in turn can move other machines are called turbines. Turbines then help to produce electrical energy.  
(c) Force of Friction : Friction is a force that tries to stop a moving object. Friction between car tyre and road makes the car to move on road. Friction produces when two objects come in contact with each other. Take a toy train and move it on a smooth floor. Note how much distance it will cover. Now bring a toy train in a garden. Try to move it on a grass.  
Again Note how much distance it will cover. Does the toy cover long distance than it did on a smooth surface? No! This is because a smooth surface has less friction and a rough surface has more friction.  
(d) According to science, if you pull or push with force an object (let table) then it means on the basis of its movement work is being done. If you are pushing a wall even with a greater force and wall is not showing any movement then it is not a work.
3. (a) force (b) more (c) machines (d) lever (e) wind
4. (a) F (b) T (c) T (d) T (e) T
5. (a) Moving air - (ii) wind  
(b) The sun - (v) main source of energy  
(c) Car - (iii) wheel and axle  
(d) Knife - (iv) wedge  
(e) Crane - (i) lifting load

#### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Do yourself
2. Do yourself

**Project Work :**

1. Do yourself
2. Do yourself

#### **Formative Assessment – IV**

1. (a) Compost (b) Valentina Tereshkova (c) Wind mill  
(d) Artificial satellites (e) Ozone layer
2. (a) iii (b) iii (c) i (d) iii (e) i
3. Do yourself

#### **Summative Assessment – II**

#### **(Based on chapters 8 to 13)**

1. (a) There are three different layers in the soil, these are – (i) Topsoil (ii) Subsoil and (iii) Bedrock  
Topsoil is the uppermost layer of the soil. It is a dark coloured layer at the top of the soil. It is fertile and suitable for plants to grow. It mainly contains humus and fine particles of soil.  
Just below the topsoil, there is a layer of light coloured soil called subsoil. It is not suitable for growing plants.  
The bottom layer of the soil is called bedrock. It consists of hard solid rocks.  
(b) Sublimation : When iodine is heated, the purple coloured fumes of iodine are observed. This means that Iodine which is a solid directly turns into the gaseous form on heating. This process is called sublimation.  
(c) Boiling is the simplest method to make the water the purest liquid. In this method water is boiled for at least 10-15 minutes. Germs present in water are killed by boiling the water. Boiling water should be stored in clean and covered pots or bottles.  
(d) Acid Rain : Acid rain is the result of air pollution. It harms wildlife, building surfaces and soil. The pollutant gases react with the tiny droplets of water in clouds to form sulphuric and nitric acids. The rain from these clouds then falls as very weak-acid. Hence, it is known as “Acid-rain”.  
(e) Big Bang – Scientists believe that the universe began with a vast explosion called big bang about 15 million years ago. Minutes after the explosion, atomic particles combined together to make the gases helium and hydrogen. Over millions of years, these gases formed the universe and all the stars and galaxies within it. Even parts of the universe are still forming.  
(f) Gravity : The force by which the earth pulls the objects towards it is called gravity or gravitational force. What happens when you throw a ball up into the air? The ball goes up into the air and then falls back down.

It falls back down because the Earth has special attraction force called gravity which pulls it down towards the Earth.

(g) The ability to do work is called energy. We need energy to do any kind of work right from the basic things like walking, reading and talking, do the difficult tasks like lifting, carrying and climbing.

2. (a) topsoils (b) soluble (c) water (d) Ozone (e) Rockets  
(f) Friction (g) Energy
3. (a) F (b) T (c) T (d) F (e) T  
(f) F (g) F
4. (a) Clayey soil - (vii) it is used for making pots, toys  
(b) Volume - (vi) space occupied by matter  
(c) Air - (v) protective blanket  
(d) Garbage - (iv) garbage  
(e) Rohini - (iii) artificial Satellite  
(f) Sun - (ii) main source of energy  
(g) Explosion - (i) a sudden bursting

### Chapter – 13 : Volcano, Earth Quake and Tidal Waves (Exercise)

#### Formative Assessment – I

1. (a) Tidal Wave (b) Dormant or Extinct (c) Magma (ed) Lava
2. (a) i (b) iii (c) iii (d) i

#### Summative Assessment

1. (a) According to the nature of their eruption, there are three types of volcanoes, i.e. active, dormant and extinct

Active volcanoes are those that may erupt at any time or have erupted in the recent years. But we should remember that in geology, 'recent' can mean thousands of years. Many active volcanoes are found around the Pacific Ocean, giving rise to the name "Pacific Ring of Fire".

Mount Vesuvius, Mount Fuji and Mount Erebus are some well known active volcanoes.

(b) The point inside the Earth where an Earthquake begins is called focus and the corresponding spot on the surface is called epicentre.

After the first big quake, smaller quakes or tremors may happen. These are called after shocks. This occurs when rocks that have been moved out of their place, start falling back into the place.

During the Gujarat earthquake of 2001, Bhuj was the epicenter. In Kashmir, after the earthquake of 2005, the aftershocks were felt for many days.

(c) Effects of an Earthquake :

i. Earthquakes of high intensity always cause huge destruction. Buildings may develop cracks or even fall down. Roads and bridges get damaged. Trees get uprooted. Many lose their lives too by getting trapped under heavy slabs, roots etc that have fallen.

ii. An earthquake, especially an undersea one, can cause other disasters like tidal waves.

iii. Earthquakes can also cause landslides and fires.

(d) Tidal waves : Tsunamis are popularly known as tidal waves. Tsunami is a Japanese word meaning "harbor wave". Tidal waves are caused by undersea earthquakes, volcanic eruptions, landslides etc. In a tidal wave, large amount of water move. The water moves at a great speed and as the waves reach the land, they swell up into gigantic waves. If one happens to look at the sea when a tsunami is approaching, one feels as if the sea level has risen a lot.

2. (a) cracks (b) extinct (c) epicenter (d) Richter scale (e) Tidal wave
3. (a) F (b) F (c) T (d) T (e) T
4. (a) Active Volcano - (iii) Mount Erebus  
(b) Tidal waves - (iv) due to earthquakes in oceans  
(c) Hot magma on the Earth - (ii) lava  
(d) Olympus means - (v) biggest crater in the solar system  
(e) Intensity of earthquake - (i) Richter scale

#### Formative Assessment – II

**Activity Time :** Do yourself

**Hots :**

1. Do yourself
2. Do yourself

**Project Work :** Do yourself

### **Formative Assessment – I**

1. (a) Economical use      (b) Hydroelectric energy      (c) sound energy
2. (a) i      (b) i      (c) i      (d) ii

### **Summative Assessment**

1. (a) We need energy to do any work. The capacity to do any work is called energy. Energy is consumed whenever any work is done. We need energy for doing different works. Without energy, we cannot do any work. For example : machines get energy from the fuel they consume or use some other forms of energy for doing work.  
(b) i. Chemical Energy : Chemical energy is a form of potential energy and it is possessed by things such as food, fuels and batteries. Food stored inside the body is a form of chemical energy. In humans, chemical energy is changed into muscular energy to do work.  
ii. Mechanical Energy : Energy that an object has because of its position or its movement is called mechanical energy.  
(c) Hydroelectricity : The power of running water is used to generate electricity. A dam is built to trap running water.  
(d) Renewable sources of Energy : Those sources which are available in a large amount in nature and are in fact inexhaustible are renewable sources. Examples of such sources are renewable sources. Example of such sources are wind energy, solar energy, hydro power energy, biogas energy etc. These sources of energy are also called alternative sources of energy.  
i. Solar Energy : Energy from the sun is called solar energy. The sun is the most important source of heat energy. Solar energy is one of the most useful forms of energy.  
ii. Hydroelectric energy : The power of running water is used to generate electricity. A dam is built to trap running water.  
iii. Biogas / Gobar Gas : Biogas / gobar gas is a form of bio-energy made from organic waste matter after it is decomposed. Biogas is smokeless and does not cause pollution.  
(e) Conservation of Energy : The economical use of sources of energy is called energy conservation. Energy can neither be created nor destroyed. Energy can be converted from one form to another (i.e. potential energy can be converted to kinetic energy) but the total energy within the domain remains fixed.
2. (a) atomic      (b) renewable      (c) non-renewable      (d) thermal      (e) water
3. (a) T      (b) F      (c) T      (d) T      (e) T
4. (a) Sun      -      (iv) solar energy  
(b) Gobar      -      (iii) biogas energy  
(c) Petroleum      -      (ii) non-renewable resources  
(d) Wind energy      -      (v) free of cost  
(e) Uranium      -      (i) atomic energy

### **Formative Assessment – II**

**Activity Time :** Do yourself

**Hots :**

1. Do yourself
2. Solar Energy : The sun is the most vital source of energy. Energy from the sun is called solar energy. Food can be cooked in solar cookers by using heat from the sun. Light from the sun can be changed into electricity through special kind of cells.  
Heat energy : The motion of atoms and molecules creates a form of energy called heat or thermal energy. Burning fuels like coal, LPG and kerosene release heat energy.

**Project Work :** Do yourself

## **Chapter – 15 : Simple Machines (Exercise)**

### **Formative Assessment – I**

1. (a) Pulley      (b) Complex machines      (c) Wedge      (d) Drill machine
2. (a) ii      (b) iii      (c) ii      (d) ii      (e) i

### **Summative Assessment**

1. (a) In science, the word machine means any device that helps us to do work very rapidly, not simply those which run on fuel or electricity.  
A simple machine is a machine which makes our work easier and faster. It does not increase or decrease the amount of work but makes it easier by :-  
\* Changing the directions of force  
\* Increasing the distance and minimizing the amount of force needed.

Thus, a heavy box becomes easy to load into a truck if we use a plank. A steep climb is less tiring if there are steps. Thus, the plank and the steep are also simple machines.

(b) lever-hammer, pulley – shoe laces, inclined plane – staircase, screw – ceiling fan, wheel and axle – car, wedge – knife.

(c) Lever – A lever is a simple machine which turns around a fixed point. A lever can transfer and increase the force applied to one end of it. There are three parts of a lever. The turning point or the point of support is called a fulcrum, the object to be moved is called a load and the force that is applied to the object is called effort.

(d) Levers can be classified on the basis of states of the fulcrum, load and effort.

i. First class lever : In a first class lever, fulcrum is kept between the load and effort. Examples are scissors, claw, hammer, pliers etc.

ii. Second class lever : In a second class lever, the load is put between the fulcrum and the effort. Examples are wheel barrow, bottle opener, nut cracker etc.

iii. Third class lever : In a third class lever, the effort is put between the fulcrum and the load. Examples are ice tongs, fishing rod, forceps etc.

The closer the fulcrum and the load, the lesser is the effort. That is why, a tall narrow door swings open more quickly than a wide garden gate.

(e) Complex machines : The machines that we use are made of many parts. If you open up a clock, a car, an aeroplane or a kitchen grinder, you will find more than one simple machine in it. Such machines are called complex machines. For example – scissors, drill machine, sewing machine, washing machine etc.