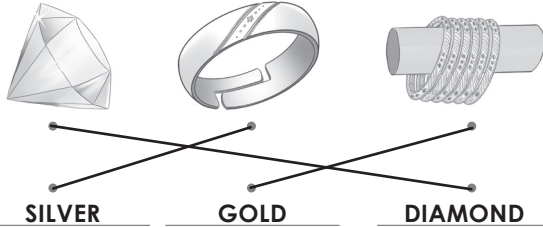


# Answers

## Theme 1: What Makes Our Land Chapter 1: Rocks and Minerals

### Main Coursebook

#### I am ready



#### Icebreaker:

Gold

#### In-text Question

1. Sedimentary rocks
2. Metamorphic rocks

#### In-text Question

1. Gold
2. Coal

#### I am a learner

- A. 1. b    2. a    3. c    4. b    5. a
- B. 1. True    2. False    3. False  
4. True    5. False
- C. 1. Minerals are natural non-living substances present in different quantities, qualities and arrangements within rocks.
2. Diamond
  3. The minerals from which metals can be profitably obtained are called ores.
- D. 1. The differences between igneous, sedimentary and metamorphic rocks are as follows:

**Igneous rocks:** These rocks are formed by the cooling and hardening of hot liquid rock material, called magma.

Example: granite

**Sedimentary rocks:** These rocks are formed from pebbles, sand, mud, rocks or clay, deposited in the ocean and brought to the shore by flowing water or floating ice.

Example: shale

**Metamorphic rocks:** These rocks are formed by transformation of already existing rocks through a process called metamorphism.

Example: marble

2. The differences between metallic and non-metallic minerals are as follows:

Metallic minerals	Non-metallic minerals
These are used to obtain metals. Examples include gold, platinum, iron and zinc.	These include fossil fuels or other valuable resources that are found underground. Examples include coal and petroleum.

#### I am a thinker

Accept all relevant responses.

#### I am an all-rounder

##### A. English:

1. work
2. silver fork

##### B. Maths: DCCXVII

##### C. Social Studies: Plateaus

### Students' Worksheets

#### Worksheet 1

- A. 1. minerals    2. non-living    3. landforms  
4. Igneous    5. magma
- B. 1. →b    2. →c    3. →d  
4. →a    5. →e
- C. 1. False    2. False    3. True  
4. True    5. True

#### Worksheet 2

- A. 1. Limestone    2. Sedimentary  
3. Conglomerate    4. shells  
5. pile up
- B. 1. GRANITE  
2. IGNEOUS  
3. OBSIDIAN  
4. SEDIMENTARY  
5. METAMORPHIC
- C. 1. True    2. True    3. False  
4. True    5. True

#### Worksheet 3

- A. 1. Rocks are made up of minerals. These may be made up of one or more minerals.
2. Magma is a hot liquid rock material that hardens and cools to form igneous rocks.
  3. Minerals are natural non-living substances present in different

quantities, qualities and arrangements within rocks.

- Igneous rocks, sedimentary rocks and metamorphic rocks.
- Metamorphic rocks form by transformation of already existing rocks through a process called metamorphism.

- B. 1. →c      2. →a      3. →e  
4. →b      5. →d
- C. 1. False      2. True      3. True  
4. True      5. True

#### Worksheet 4

- A. 1. mines      2. black gold  
3. metals      4. precious  
5. Fossil fuels
- B. 1. COAL      2. METALLIC  
3. PETROLEUM      4. HAEMATITE  
5. NON-METALLIC
- C. 1. No      2. Yes  
3. No      4. Yes  
5. No

### Teachers' Worksheets

#### Worksheet 1

- Igneous rocks are formed by the cooling and hardening of hot liquid rock material, called magma. This magma is pushed upwards by the pressure of other rocks around it.
- We should use coal, oil and petrol wisely. We can substitute them with inexhaustible natural resources, such as water, air and the Sun.
- Slate is commonly used for flooring, roofing and wall cladding.
- Sedimentary rocks are formed from pebbles, sand, mud, rocks or clay, deposited in the ocean and brought to the shore by flowing water or floating ice.
- Metamorphic rocks form by transformation of already existing rocks through a process called metamorphism.

#### Worksheet 2

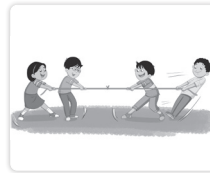
- A. 1. →b      2. →d      3. →e  
4. →c      5. →a
- B. 1. It is used for making bricks and tiles.  
2. It is used for flooring, ornamental stones or gravestones.

- It is used for making cutting tools.
- It is used for filling materials in roads and construction.
- It is used for teeth polishing by dentists.

## Theme 1: What Makes Our Land Chapter 2: Force and Energy

### Main Coursebook

#### I am ready



PULL



PUSH



PUSH

#### Icebreaker: STATIONARY

#### In-text Question

- Muscular force
- Buoyant force

#### In-text Question

- True
- True

#### I am a learner

- A. 1. b      2. a      3. b      4. c      5. a  
B. 1. True      2. False      3. False  
4. True      5. True
- C. 1. It is a push or pull when applied on any object tends to change the state, speed, direction and shape of the object.  
2. Pull  
3. It is the energy that is stored in batteries.
- D. 1. **Gravitational force:** Every object in this universe attracts other objects with a force known as gravitational force. When two bodies with some mass come closer to each other, they pull and attract each other. Gravitational force is always an attractive force. We are able to stand, walk, sit and be on the Earth's surface due to the gravitational force exerted by the Earth on our body.

**Buoyant force:** When any object floating on water is pushed down, the water exerts an upward push on the object. This upward push is called upthrust. Human beings experience this force while entering a swimming pool.

2. **Mechanical energy:** It is the energy attained by the bodies on which work is being done.

**Solar energy:** It is the form of energy obtained from the Sun. It is a renewable source of energy and does not cause any pollution to the environment.

**Geothermal energy:** It is the energy that is derived from within the Earth.

**Wind energy:** It is the energy produced by moving air or wind. The kinetic energy of wind is converted into mechanical energy using wind turbines. The mechanical energy can further be transformed into electricity with the help of generators.

**Chemical energy:** It is produced when different substances react with each other to form new substances.

**Electrochemical energy:** It is the energy that is stored in batteries.

**Heat** is an energy that is transferred from one body to another due to difference in temperature of the two bodies.

**Light** is another form of energy that travels in straight lines pointed away from the source towards the viewer.

**Sound** is also a form of energy produced due to the vibrations of different bodies.

**Electrical energy** is generated due to the movement of electrical charges.

### I am a doer

Accept all relevant responses.

### I am an all-rounder

#### A. English:

1. homework                      2. artwork

#### B. Maths: ₹1,36,103

#### C. Social Studies: Due to less frictional force on plains.

## Students' Worksheets

### Worksheet 1

- A. 1. force                                      2. Muscular  
3. contact                                      4. gravitational  
5. attractive
- B. 1. False                      2. True                      3. False  
4. True                      5. False
- C. 1. →b    2. →e    3. →c    4. →d    5. →a

### Worksheet 2

- A. 1. Frictional                      2. mechanical  
3. buoyant                      4. Energy  
5. Work

- B. 1. MUSCULAR                      2. GRAVITATIONAL  
3. FRICTIONAL                      4. MECHANICAL  
5. UPTHURST
- C. 1. →e    2. →a    3. →b    4. →c    5. →e

### Worksheet 3



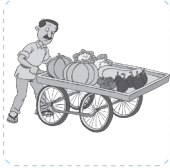
- A. 1. It is the force that comes into play when we use muscles of our body to push or pull something.  
2. It is the force of attraction between every two objects in the universe.  
3. It is the force that opposes the motion of an object moving on a surface.  
4. It is a contact force that acts between two bodies.  
5. It is an upward push exerted by water on any object when it is pushed down in water.
- B. 1. gravitational force    2. muscular force  
3. buoyant force    4. frictional force  
5. mechanical force
- C. 1. Yes    2. No    3. Yes    4. No    5. Yes

### Worksheet 4

- A. two; Kinetic; stationary position; solar; renewable
- B. 1. SOLAR                                      2. GEOTHERMAL  
3. CHEMICAL                                      4. ELECTROCHEMICAL  
5. ELECTRICAL
- C. 1. kinetic energy                      2. potential energy  
3. wind energy                      4. geothermal energy  
5. chemical energy

## Teachers' Worksheets

### Worksheet 1

- A.
- |   |  |   |  |
|---|--|---|--|
|  | Pushing<br><input checked="" type="checkbox"/> |  | Pushing<br><input type="checkbox"/>            |
|   | Pulling<br><input type="checkbox"/>            |   | Pulling<br><input checked="" type="checkbox"/> |
|  | Pushing<br><input checked="" type="checkbox"/> |   |  |
|   | Pulling<br><input type="checkbox"/>            |   |  |
- B. 1. movement                      2. kinetic  
3. stationary                      4. Chemical

### Worksheet 2

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

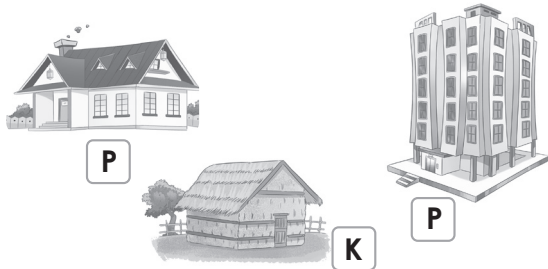
- B.
1. When any object floating on water is pushed down, the water exerts an upward push on the object. This upward push is called upthrust.
  2. Wind energy is the energy produced by moving air or wind. The kinetic energy of wind is converted into mechanical energy using wind turbines. The mechanical energy can further be transformed into electricity with the help of generators.
  3. Every object in this universe attracts other objects with a force known as gravitational force. When two bodies with some mass come closer to each other, they pull and attract each other. Gravitational force is always an attractive force.

## Theme 2: What Helps Us Survive

### Chapter 3: Houses Around Us

#### Main Coursebook

I am ready



Icebreaker: HOUSE

In-text Question

1. Yes
2. No

In-text Question

1. False
2. True

I am a learner

- A. 1. b    2. b    3. c    4. c    5. b
- B. 1. True    2. False    3. False  
4. True    5. False
- C. 1. Houses that have flat roofs and thick walls are found here.  
2. To keep the houses safe from floods and heavy rainfall.  
3. Concrete, glass and iron.
- D. 1. Houses in areas with hot climates are built with bricks and stones. Houses in hilly areas are made up of bamboo and

wood. Places that are more likely to experience earthquakes have wooden houses. Huts are made up of muds, bamboo and palm leaves.

2. Before constructing a house, we should decide the money or the budget. We should consider space and needs of people. We should hire an architect to plan the house accordingly.

After constructing a house, regular cleaning and maintenance, periodic painting of the house and proper cleaning of the area surrounding the house should be done.

I am a thinker

Accept all relevant responses.

I am an all-rounder

A. English

1. love, happiness; abstract nouns
2. a troop of monkeys; collective noun

B. Maths: 1, 2

C. Social Studies: Wooden

#### Students' Worksheets

Worksheet 1

- A. 1. hot    2. thick    3. damp  
4. stilts    5. ground
- B. 1. False    2. True    3. False  
4. True    5. True
- C. 1. →b    2. →a    3. →d    4. →c    5. →e

Worksheet 2

- A. 1. stones    2. hilly  
3. earthquakes    4. Kuccha  
5. Huts
- B. 1. FLAT ROOFS    2. DAMP CLIMATE  
3. SLOPING ROOF    4. RAINFALL  
5. FIREPLACE
- C. 1. C    2. I    3. C    4. C    5. I

Worksheet 3

- A. 1. design    2. temporary  
3. big    4. budget  
5. architect
- B. 1. BRICKS    2. STONES    3. BAMBOO  
4. WOOD    5. PALM LEAVES
- C. 1. True    2. False    3. False  
4. True    5. True

Worksheet 4

- A. 1. Flat    2. Thick    3. Sloping

4. Fireplace 5. Brick
- B. needs, plan, drainage, sunlight, well-plastered
- C. 1. BUDGET 2. DRAINAGE  
3. VENTILATION 4. ARCHITECT  
5. MAINTENANCE

## Teachers' Worksheets

### Worksheet 1

- A. 1. FIREPLACE 2. SLOPING  
3. EARTHQUAKE 4. TEMPORARY  
5. ARCHITECT
- B. 1. Climate, building material and budget.  
2. Houses in hilly areas are made up of bamboo and wood as these materials are easily available there.  
3. Regular cleaning, periodic painting and maintenance.

### Worksheet 2

- A. 1. hot 2. earthquake  
3. palm 4. well-plastered  
5. periodic
- B. 1. F 2. F 3. F 4. T 5. F

## Theme 2: What Helps Us Survive

### Chapter 4: Communicable and Non-communicable Diseases

## Main Coursebook

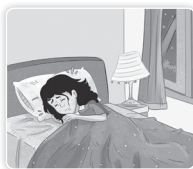
### I am ready



S



H



S

Icebreaker: Fever

### In-text Question

1. True 2. True

### In-text Question

1. Yes 2. No

### I am a learner

- A. 1. b 2. a 3. a 4. a 5. a  
B. 1. False 2. True 3. False

4. False 5. True

- C. 1. It is a condition when our body is not able to function properly.  
2. Communicable disease.  
3. Night blindness and scurvy.
- D. 1.

**Communicable diseases:** These diseases are transmitted from one person to another.

These diseases are not passed from one person to another.

These diseases are also known as infectious or transmissible diseases.

Examples include cold, polio and measles.

**Non-communicable diseases:** These diseases are also known as chronic diseases.

Examples include cancer, goitre and rickets.

2. Communicable diseases are transmitted through the following ways:

- i. **Through direct contact:** Diseases that are caused by hand-to-hand contact with the infected person or by using the items contaminated by the infected person. Examples are scarlet fever and common cold.
- ii. **Through infected food and water:** Insects, such as cockroaches and flies, carry germs and result in the contamination of food and water, as and when they come in contact with it. Examples are cholera and typhoid.
- iii. **Through the air we breathe:** Diseases, such as whooping cough, scarlet fever and influenza, spread when germs get transmitted from the infected person to another person via air.
- iv. **Through insects:** Yellow fever, malaria, dengue and plague spread through bugs, mosquitoes and sandflies.
- v. **Through carriers:** Some diseases are spread through completely healthy individuals. In such cases, the carriers do not show any symptoms or are affected in any way by the germs present inside their bodies. One such example is AIDS caused by the HIV.

### I am a doer

Accept all relevant responses.

### I am an all-rounder

A. **English:**





- A. 1. It is the outermost covering of the seed.  
 2. It is a tissue present inside the seeds that provides nourishment to the young seedling.  
 3. It is the nutrition-providing part for growing embryo that is found within the seed.  
 4. Air, water and sunlight.  
 5. These are various natural factors that disperse the seeds away from the parent plant.
- B. 1. PEA  
 2. HIPTAGE  
 3. COCONUT  
 4. TAMARIND  
 5. DANDELION
- C. 1. True            2. True            3. False  
 4. False            5. False

#### Worksheet 4

- A. 1. Seed coat  
 2. Embryo  
 3. Endosperm  
 4. Cotyledon  
 5. Sunlight
- B. 1. AGENT                            2. WIND  
 3. WATER                            4. ANIMAL  
 5. EXPLOSION
- C. 1. No            2. Yes            3. No  
 4. Yes            5. No

### Teachers' Worksheets

#### Worksheet 1

- A. 1. T            2. T            3. F            4. T  
 5. T            6. T            7. F            8. F
- B. 1. b            2. d            3. a            4. c

#### Worksheet 2

- A. 1. Seed coat  
 2. Endosperm  
 3. Cotyledon  
 4. Germination  
 5. Leaves
- B. 1. The seeds require oxygen from air, water, sunlight or warmth to germinate.  
 2. Plants are stationary and unable to move on their own. As a result, all the seeds produced by the plant fall near the parent plant and cannot find sufficient space and other conditions

to grow.

3. Coconut has fibrous outer covering that can float on water. Lotus has spongy parts and hence, their seeds get dispersed through water.

## Theme 3: Different Yet Alike

### Chapter 6: Animals Around Us

#### Main Coursebook

#### I am ready



Aquatic



Terrestrial



Both

Terrestrial animals	Aquatic animals	Terrestrial as well as aquatic animals
Cow	Fish	Newts
Giraffe	Crab	Salamander

**Icebreaker:** Herbivore

#### In-text Question

1. False            2. True

#### In-text Question

1. Yes            2. No

#### I am a learner

- A. 1. c            2. c            3. c            4. a            5. c
- B. 1. False            2. True            3. False  
 4. True            5. False
- C. 1. These are the air holes present on the bodies on the insects and are used for breathing.  
 2. Forelimbs.  
 3. Emu, rhea and ostrich.
- D. 1. Microscopic organisms, such as *Paramecium* and *Amoeba* breathe through their body surface. Insects breathe through air holes, known as spiracles, present on their bodies. Animals, such as earthworms, breathe through their thin and moist skin. Some aquatic animals, such as fish, prawns and oysters, breathe through their gills. Amphibians, such as frogs, breathe through both their gills and lungs. A tadpole breathes through gills, whereas an adult frog breathes through lungs on land and through its moist skin in water.  
 2. The seasonal movement of animals from one place to another is called migration.



Eels migrate from river to sea and lay eggs there. After hatching of the eggs, the parent eels die and the baby eels travel back to the rivers.

**I am a doer:**

Accept all relevant responses.

**I am an all-rounder:**

**A. English:**

1. The forelimbs of birds are present in the form of wings that help them fly.
2. Every third animal in India lives in water.

**B. Maths:** Fifty-two point five zero

**C. Social Studies:** Polar bears and musk ox.

**Students' Worksheets**

**Worksheet 1**

- A. 1. breathing                      2. water  
3. *Paramecium*                      4. Insects  
5. gills
- B. 1. False                      2. False                      3. True  
4. False                      5. True
- C. 1. →e    2. →d    3. →c    4. →a    5. →b

**Worksheet 2**

- A. 1. four                      2. forelimbs    3. hindlimbs  
4. paddle-like    5. webbed
- B. 1. Almost all mammals have four limbs.  
2. Birds have wings to fly.  
3. Emu is a flightless bird.  
4. Humans use their lower limbs to walk.  
5. Animals migrate due to food, weather, shelter and water.
- C. 1. I                      2. I                      3. C                      4. I                      5. C

**Worksheet 3**

- A. 1. wings                      2. feathers    3. hindlimbs  
4. flightless    5. plates
- B. 1. AQUATIC    2. INSECTS    3. BIRDS  
4. REPTILES    5. HUMANS
- C. 1. True                      2. True                      3. False  
4. True                      5. False

**Worksheet 4**

- A. 1. Fish                      2. Turtle                      3. Cockroach  
4. Tortoise    5. Snake
- B. 1. LIMBS                      2. FINS                      3. WINGS  
4. PLATES                      5. SCALES
- C. 1. Yes    2. No    3. Yes    4. Yes    5. Yes

**Teachers' Worksheets**

**Worksheet 1**

- A. 1. Amoeba    2. gills                      3. Insects  
4. Amphibians    5. Fishes
- B. 1. Microscopic organisms breathe through body surface.  
2. Turtles have paddle-like limbs that help push water in the backward direction.  
3. The forelimbs of birds are present in the form of wings that help them fly.  
4. Earthworms breathe through their thin and moist skin.  
5. Almost all mammals have four limbs.

**Worksheet 2**

- A. 1. Microscopic animals breathe through their body surface.  
2. Aquatic animals are the animals that live in water. Fishes and turtles are examples of aquatic animals.  
3. A tadpole breathes through gills and an adult frog breathes through lungs on land and through its moist skin in water.  
4. The hindlimbs of birds are used for walking, hopping, perching and running.
- B. 1. Fishes—Fishes have fins that enable them to swim.

Birds—The forelimbs of birds are present in the form of wings that help them fly. The forelimbs of birds are used for walking, hopping, perching and running.

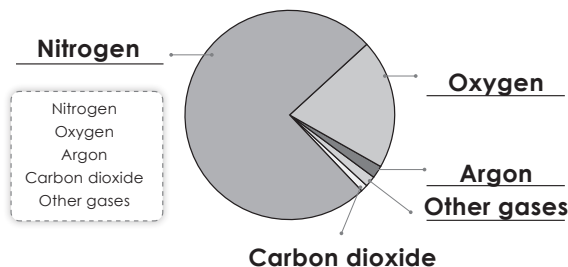
2. An insect breathes through air holes, known as spiracles, present on their bodies. A fish breathes through their gills.  
3. The seasonal movement of animals from one place to another is termed as migration. Migratory fish, such as eels, migrate from river to sea and lay eggs there. After hatching of the eggs, the parent eels die and the baby eels travel back to the rivers. Some migratory insects, such as locusts, cause severe damage to crops, sometimes resulting in famine and starvation.

## Theme 4: Living With Changes

### Chapter 7: Changes in Our Environment

#### Main Coursebook

I am ready



**Icebreaker:** smoke

#### In-text Question

1. No                      2. Yes

#### In-text Question

1. False                      2. True

#### I am a learner

A. 1. c    2. b    3. b    4. c    5. c

B. 1. True    2. False    3. True  
4. False    5. True

C. 1. These are the gases that prevent the escape of heat from our atmosphere, back into the space.

2. Global warming.  
3. Carbon dioxide, methane and ozone.

D. 1. The contribution of different greenhouse gases to the greenhouse effect are as follows:

i. **Carbon dioxide:** If the amount of carbon dioxide keeps increasing at the same rate, in the coming years, the Earth's temperature will increase to such levels that it will become inhabitable.

ii. **Methane:** It is produced by the decay of organic material and released in the atmosphere. It is also given out by the animals after they digest their food.

iii. **Water vapour:** This acts as the Earth's most abundant greenhouse gas. This contributes about 35–75 per cent to the greenhouse effect.

iv. **Ozone:** In the upper regions of the stratosphere, ozone helps absorb the ultraviolet rays from the Sun. But in

the regions near the ground, it acts as a greenhouse gas and a pollutant.

v. **CFCs:** These are non-toxic chemicals, consisting of chlorine, fluorine and carbon atoms. CFCs destroy the ozone layer and trap heat in the lower parts of the atmosphere, thereby causing the warming of the Earth's surface.

2. The gradual rise in the temperature of the Earth is known as global warming. Following are some steps to control global warming:

- i. Careful use of electricity
- ii. Reducing the use of fossil fuels
- iii. Planting more and more trees
- iv. Using public transport in place of private ones

#### I am a thinker

Accept all relevant responses.

#### Holistic Box

##### A. English:

1. Aloe vera is good for human skin and prevent wrinkles.
2. Reshma threw the empty shoe box in the dustbin.

##### B. Maths: C: O, U

S: E, N, V, I, M, T  
B: R

C. **Social Studies:** It results in global warming.

#### Students' Worksheets

##### Worksheet 1

- A. 1. glasshouse                      2. Sun  
3. greenhouse                      4. warming  
5. carbon dioxide
- B. 1. False                      2. False                      3. True  
4. True                      5. False
- C. 1. →c    2. →d    3. →e    4. →b    5. →a

##### Worksheet 2

- A. 1. global warming                      2. rising  
3. reduce                      4. planting  
5. public
- B. 1. TEMPERATURE                      2. DROUGHT  
3. FLOODS                      4. ICE CAPS  
5. ENVIRONMENT
- C. 1. False                      2. True                      3. True  
4. False                      5. False



blown away.

- ii. **On hill slopes:** Cutting down the hill slopes into steps or terraces prevent soil erosion. This is because steps slow down the water flow, causing soil from one step to be left on the next step.
- iii. **On fields near rivers:** During monsoon, many rivers overflow and flood the fields. To prevent this, embankments are built along the rivers. The embankment holds the water between the river banks and prevents soil erosion.

### I am a doer

Accept all relevant responses.

### I am an all-rounder

#### A. English:

- 1. I grew apple trees in my garden.
- 2. Ben watered the plants on Saturday.

#### B. Maths: 6

C. **Social Studies:** It prevents soil erosion.

## Students' Worksheets

### Worksheet 1

- A. 1. uppermost 2. solid 3. erosion  
4. human activities; natural forces  
5. fertility
- B. 1. SOIL 2. ROCK  
3. EROSION 4. VEGETATION  
5. NATURAL FORCES
- C. 1. False 2. True 3. False  
4. True 5. True

### Worksheet 2

- A. 1. erosion 2. soil 3. erosion  
4. top 5. soil
- B. 1. DESERT 2. FLOOD  
3. HILL SLOPES 4. CULTIVATION  
5. SOIL EROSION
- C. 1. False 2. True 3. True  
4. False 5. True

### Worksheet 3

- A. 1. Covered land prevents soil erosion.  
2. We cannot hinder the natural forces.  
3. Our responsibility is to prevent the soil erosion.  
4. Soil conservation is the protection of soil against erosion.  
5. Growing trees and afforestation are

effective methods of soil conservation.

- B. 1. CREEPERS 2. PRESERVE  
3. TERRACE 4. HARVESTING  
5. AFFORESTATION
- C. 1. steps slow down the water flow  
2. during monsoon many rivers overflow  
3. embankments are built along the rivers  
4. the winds blow off soil easily from the bare land  
5. the farmers grow some cover crops such as creepers and grasses

### Worksheet 4

- A. 1. afforestation 2. slopes  
3. erosion 4. control  
5. rivers
- B. 1. GRASSES 2. PLOUGHING  
3. DEFORESTATION 4. OVERGRAZING  
5. HUMAN ACTIVITIES
- C. 1. False 2. True 3. False  
4. False 5. True

## Teachers' Worksheets

### Worksheet 1

- A. 1. soil 2. flood  
3. Bihar 4. deforestation
- B. 1. formation 2. Flood  
3. Chambal Valley 4. arid  
5. Protection 6. afforestation  
7. creepers 8. embankments

### Worksheet 2

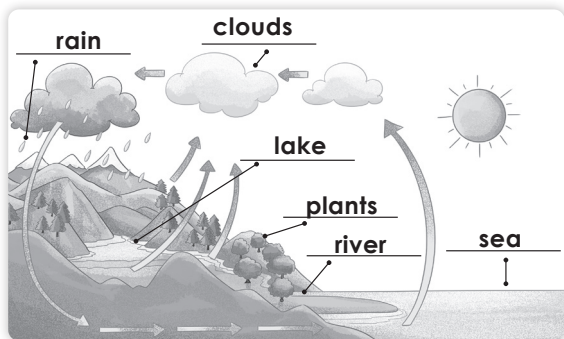
- A. 1. Natural 2. hold  
3. erosion 4. embankments
- B. 1. To hold the soil and prevent it from being blown away.  
2. The steps slow down the water flow, causing soil from one step to be left on the next step.  
3. To hold the water between the river banks and to prevent soil erosion.

## Theme 5: Living Across Ages

### Chapter 9: Our Life Supports

#### Main Coursebook

#### I am ready



**Icebreaker:** car; bike

#### In-text Question

- No
- Yes

#### In-text Question

- False
- True

#### In-text Question

- Yes
- No

#### I am a learner

- A. 1. a    2. a    3. a    4. b    5. b
- B. 1. True    2. False    3. True  
4. False    5. True
- C. 1. Troposphere, stratosphere, mesosphere, thermosphere and exosphere.  
2. Nitrogen  
3. In sedimentation, we allow the impurities to settle down at the bottom of container.
- D. 1. The four properties of air are as follows:
- Air has weight  
Air has some weight, although this weight is comparatively less than that of liquids and solids.
  - Air takes up space  
Air occupies space. An inflated balloon appears bigger in size in comparison to a deflated balloon.
  - Air exerts pressure  
Since air has weight, it, therefore, exerts pressure. The air pressure at the mountains is comparatively less than the air pressure at sea level.
  - Air exerts pressure in all directions.

- Insoluble impurities are the impurities that do not dissolve in water and can be seen. These impurities can be removed by the methods of sedimentation, and decantation and filtration.

Soluble impurities are impurities that dissolve in water and cannot be seen. These impurities can be removed by methods of evaporation and distillation.

#### I am a thinker

Accept all relevant responses.

#### I am an all-rounder

##### A. English:

- Rihan will get up early every day and drink a glass of lukewarm water.
- Rohan will go to a toy shop to fill air in his basketball.

##### B. Maths:

A: 2

W: 2

##### C. Social Studies: Hardeep Singh Puri

#### Students' Worksheets

##### Worksheet 1

- A. 1. different    2. oxygen  
3. outermost    4. troposphere  
5. ultraviolet (UV)
- B. 1. False    2. True    3. True  
4. False    5. False
- C. 1. →e    2. →c    3. →a  
4. →b    5. →d

##### Worksheet 2

- A. 1. pressure    2. inflated    3. 78 per cent  
4. oxygen    5. Humidity
- B. 1. EXOSPHERE    2. MESOSPHERE  
3. TROPOSPHERE    4. STRATOSPHERE  
5. THERMOSPHERE
- C. 1. True    2. False    3. False  
4. False    5. True

##### Worksheet 3

- A. 1. In filtration, we separate impurities from water by using filter paper. In this, the insoluble impurities collect on the filter paper while the water collects in beaker or container kept below the filter, as filtrate.
2. In decantation, we first allow the impurities to settle down at the bottom of container. Then, without disturbing the sediment that is present at the bottom of

the beaker, we drain the clean water on the top into another beaker.

3. In sedimentation, we allow the impurities to settle down at the bottom of container.
4. Soluble impurities are impurities that dissolve in water and cannot be seen.
5. Insoluble impurities are the impurities that do not dissolve in water and can be seen.

B. water; clean; rainwater; impure; purified

C. 1. No 2. Yes 3. Yes 4. Yes 5. Yes

#### Worksheet 4

A. Impure; clean; filtered; purified; three

- B. 1. FILTRATION 2. DISTILLATION
3. CHLORINATION 4. DECANTATION
5. SEDIMENTATION

C. 1. Yes 2. Yes 3. No 4. Yes 5. No

#### Teachers' Worksheets

##### Worksheet 1

1. a 2. b 3. d
4. b 5. b 6. d

##### Worksheet 2

1. Substances, such as dirt, impurities, certain living and dead things, dissolve in water and make it impure.
2. We need water for drinking, cooking, bathing, washing and various other activities. Plants also need water for survival.
3. In distillation, water (or any other liquid), mixed with impurities, is heated till it starts boiling. On boiling, the water evaporates and water vapours enter a condenser. In the condenser, water vapour changes into liquid again and collect in a flask (receiving flask) as distillate.
4. Air is a mixture of different gases. Clean air consists of nearly 78 per cent nitrogen, 21 per cent oxygen and less than 1 per cent of argon, carbon dioxide and other gases. Air also contains dust, smoke and water vapour.
5.
  - i. Nitrogen: Plants get nitrogen from the soil with the help of bacteria.
  - ii. Oxygen: It is used for breathing and burning.
  - iii. Carbon dioxide: Plants use this gas to make their own food.
  - iv. Water vapour: It forms clouds and then condenses to fall as snow.

#### Revision Worksheet

A. 1. c 2. c 3. a 4. a 5. c

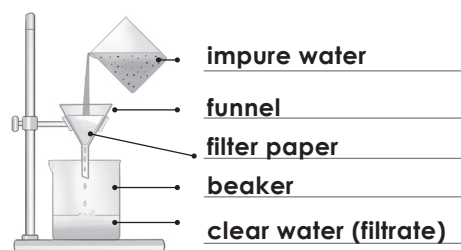
- B. 1. metals
2. public
3. vegetative propagation
4. ultraviolet
5. Soil conservation

C. 1. True 2. False 3. True  
4. False 5. False

- D. 1. Igneous rocks 2. Metallic minerals
3. Rickets 4. Soil erosion
5. Exhaled air

- E. 1. Electrical energy is generated due to the movement of electrical charges.
2. An architect plans the house according to the space and needs of people.
3. The process of transfer of seeds away from the parent plant is called seed dispersal.
4. Reptiles, such as tortoise and lizards crawl, though they do have limbs. But some reptiles such as snakes have plates that are attached to their ribs. While moving, these plates or scales act as feet and the ribs act as legs.
5. Greenhouse gases prevent the escape of heat from our atmosphere, back into the space, thereby making the surface of the Earth warmer.

F.



impure water \_\_\_\_\_

funnel \_\_\_\_\_

filter paper \_\_\_\_\_

beaker \_\_\_\_\_

clear water (filtrate) \_\_\_\_\_