Answers

Theme 1: We the People

Chapter 1: Living and Non-living Things

Main Coursebook

I am ready

Accept all relevant responses.

Icebreaker:

plants, humans, birds

In-text Question:

1. Stars and Clouds (Accept all relevant responses).
2. Building and Roads (Accept all relevant responses).

In-text Question:

1. False
2. False

I am learner

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

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

C. 1. Different animals move by walking.
2. Cloud is a natural thing and car is a man made thing.
3. Living things breathe through lungs, gills or air holes.

D. 1. The characteristics of non-living things are as follows:
- They do not move.
- They do not need food.
- They do not breathe.
- They do not grow.
- They do not feel.
- They do not reproduce.

2. Living things can move, grow, need food, feel, breathe and reproduce. Non-living things do not move, do not grow, do not need food, do not feel, do not breathe and do not reproduce.

I am a thinker

Non-living thing

I am an all-rounder

A. **English:**
1. Accept all relevant responses.
2. Accept all relevant responses.

B. **Maths:**
1. 916, Nine hundred sixteen
2. 513, Five hundred thirteen

C. **Social Studies:**

Wood is obtained from the plant, which is a living thing. However, stones are usually obtained from rocks, which is a non-living thing.

Students' Worksheets

Worksheet 1

A. 1. natural 2. man-made
3. living 4. non-living
5. grow

B. 1. natural things 2. man-made things
3. living things 4. breathing
5. air

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

Worksheet 2

A. 1. M 2. N 3. M 4. N 5. N

B. 1, 2, 4

C. 1. STARS 2. ROCKS 3. PLANTS
4. CLOUDS 5. ANIMAL

Worksheet 3

A. 1. Living 2. Non-living 3. plants
4. Plants 5. lungs

B. 1. N 2. L 3. N 4. N 5. L

C. 1. → e 2. → a 3. → b
4. → d 5. → c

Teacher's Worksheets

Worksheet 1

A. Accept all relevant responses.

Worksheet 2

A. 1. living 2. living
3. non-living 4. non-living
5. living 6. living
7. non-living 8. living
9. non-living 10. living
11. non-living 12. living

B. a. AR b. OAP c. IPE
d. OUNTAIN e. OAD

Theme 2: We Live in Harmony
Chapter 2: Birds

Main Coursebook

I am ready

Crow; Peacock; Sparrow

Icebreaker:

Peacock

In-text Question:

1. Eagle (accept all relevant responses).
2. Duck (accept all relevant responses).

In-text Question:

1. Sparrow (accept all relevant responses).
2. Crane (accept all relevant responses).

In-text Question:

1. No 2. Yes

I am a learner

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

B. 1. curved 2. four 3. Body
4. wings 5. Penguin

C. 1. Sparrows, pigeons and peacocks.
2. Penguin
3. Down feathers, body feathers and flight feathers.

D. 1. Birds have light body and their bones are hollow from inside.
Their body is shaped like a boat. This helps them move easily.
The tail of birds acts like rudder of a boat. It helps them change their direction while flying.
The feathers present on their wings also help them in flying.
2. When the wings of birds move upwards and backwards, this movement is called upstroke. Similarly, when the wings move downwards and forwards, the movement is known as downstroke.

I am a doer

Accept all relevant responses.

I am an all-rounder

A. **English:**
1. A bird's body is covered with feathers.
2. A parakeet's beak helps crack open nuts and hard fruits.

B. **Maths:** 228

C. **Social Studies:** Different birds travel long distances in search of food and habitat.
Some birds even migrate from one continent to another.

Students' Worksheets

Worksheet 1

A. 1. tailor bird 2. woodpecker
3. humming bird 4. duck
5. parakeet

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

C. 1. → c 2. → d 3. → e 4. → a 5. → b

Worksheet 2

A. 1. hawks, eagles
2. hens, chickens
3. cranes, herons
4. upstroke, downstroke
5. sparrows, pigeons

B. 1. different 2. do not have
3. wings 4. beak 5. Baby

C. 1. a 2. b 3. a 4. c 5. c

Worksheet 3

A. 1. Wading 2. eggs 3. feathers
4. Perching 5. weaver

B. 1. Vulture 2. Sparrow
3. Humming bird 4. Hawk
5. Woodpecker

C. 1. short, hard and pointed
2. broad and flat
3. two
4. penguin
5. warm

Worksheet 4

A. 1. Crow 2. Eagle 3. Hen
4. Penguin 5. Duck

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

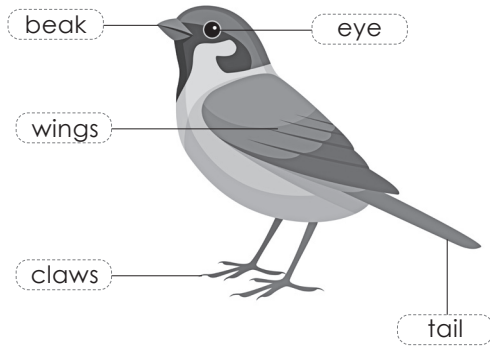
C. 1. → d 2. → a 3. → b
4. → e 5. → c

Teacher's Worksheets

Worksheet 1

A. 1. sparrows crows
2. hawks eagles
3. woodpeckers parakeets
4. ducks geese
5. cranes herons

B.



Worksheet 2

A. 1. In this type of wing movement, the wings of birds move upwards and backwards.
2. In this type of wing movement, the wings of birds move downwards and forwards.
3. Body feathers are slightly bigger than the down feathers. They also cover the bird's body. Body feathers give a definite shape to the bird's body.
4. Down feathers are small and fluffy. They cover the bird's body and keep it warm.
5. Flight feathers are long and flat. They are attached to the wings and tail. These feathers help the bird fly.

B. 1. Birds fly with the help of their wings. They have a light body and hollow bones. The feathers present on their wings also help them in flying.
2. Eagles and owls are called birds of prey as these birds hunt and eat small animals such as mice, frogs and snakes.

Theme 2: We Live in Harmony
Chapter 3: Animals

Main Coursebook

I am ready

live on land; fly in air; swim in water

Icebreaker:

Butterfly

In-text Question:

1. Antennae 2. Wings

In-text Question:

1. Butterfly 2. Honeybee

I am a learner

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

B. 1. wild 2. pets 3. three 4. antennae 5. eggs

C. 1. Head, thorax and abdomen.
2. The waxy outer shell of cockroaches helps to protect their internal organs.
3. Accept all relevant responses.

D. 1. Honeybees have a small body, covered in hair. They have a pair of short antennae and three pairs of legs. They also have two pairs of wings. Honeybees have five eyes– two large eyes and three small eyes. A female bee has a stinger. Honeybees make honey in their hives and live in large colonies.
2. Cockroaches have a flattened, reddish-brown body. They have large eyes, a pair of long antennae and a mouth underside their head. Cockroaches have a waxy outer shell. This shell protects their internal organs. They also have a pair of wings that help them to fly.

I am a thinker

Houseflies and mosquitoes are small insects. Houseflies usually sit on dirty places and transfer the microorganisms from dirty places to the clean places. Mosquitoes bite and transfer diseases from one person to another. This way they can spread diseases like food poisoning, malaria and many others.

I am an all-rounder

A. **English**:
1. animals: P 2. grasshopper: S

B. **Maths:** 110 + 90 = 200

C. **Social Studies:** No. The shape of honeycombs of beehives are hexagonal in shape.

Students' Worksheets

Worksheet 1

A. 2, 4, 5

B. 1 → d 2 → e 3 → a 4 → b 5 → c

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

Worksheet 2

A. 2, 3, 4

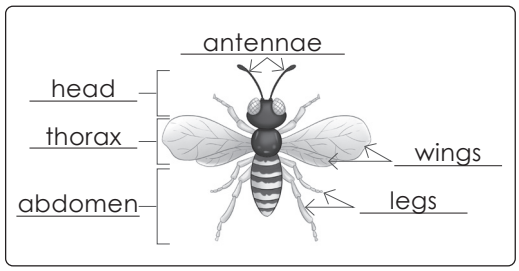
B. 1. Earthworm 2. Cockroach
3. Lizard 4. Spider
5. Ant

C. 1. large 2. three 3. warm
4. small 5. grasshopper

Worksheet 3

A. 1. domestic 2. forests 3. insects
4. thorax 5. eggs

B.

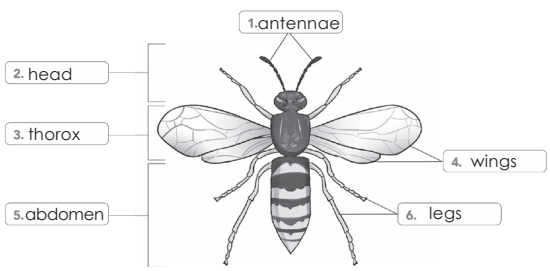


C. 1. False 2. False 3. True
4. False 5. True

Teacher's Worksheets

Worksheet 1

A.



B. 1. T 2. F 3. T 4. T
5. F 6. T 7. T

C. 1. houseflies bees
2. ants bed-bugs

Worksheet 2

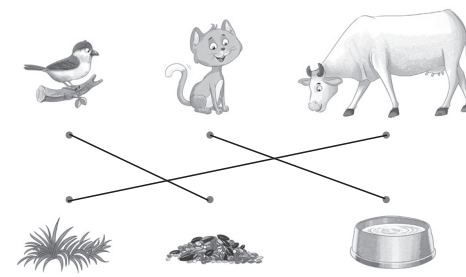
1. Insects reproduce by laying eggs. Baby insects hatch from eggs.
2. Insects have three pairs of legs, that is, a total of six legs.
3. Head, thorax and abdomen.
4. Domestic animals are the animals that live among us. For example, cat and sheep.
5. Cockroaches have a waxy outer shell to protect their internal organs.
6. While digging underground tunnels to live, ants dig out a mound of mud that looks like a small hill. Such hills are known as ant hills.

Theme 3: Where We Live

Chapter 4: Food and Feeding Habits of Animals

Main Coursebook

I am ready



Icebreaker:

Accept all relevant responses.

In-text Question:

1. True 2. False

In-text Question:

1. Snakes and frogs 2. Rabbits and rats

I am a learner

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

B. 1. → d 2. → a 3. → e 4. → c 5. → b

C. 1. Animals need food for energy, growth and to stay healthy.

2. Oilseed cakes are energy-giving and milk-producing foods.

3. Some grass-eating animals, such as cows and buffaloes first swallow the grass without chewing it. Then, bring it back into their mouth and chew it with their grinding teeth. This is called chewing the cud.

D. 1. Herbivores: Animals that eat grass or green plants are called plant-eating animals or herbivores. For example, goats, cows and giraffes are herbivores.

Carnivores: Animals that eat other animals are called carnivores. For example, lions, tigers and leopards are carnivores.

Omnivores: Animals that eat other animals as well as plants. Crows and bears are omnivores.

2. Some flesh-eating animals, such as snakes and frogs, swallow their food whole. Some animals, such as lions, tigers, foxes and dogs, chew flesh and bones. Animals, such as rabbits, rats and squirrels, gnaw their food and have

sharp front teeth. Some grass-eating animals, such as cows and buffaloes, use their biting teeth to cut the grass. Animals, such as cats and dogs, lap milk or water with their tongue.

I am a doer

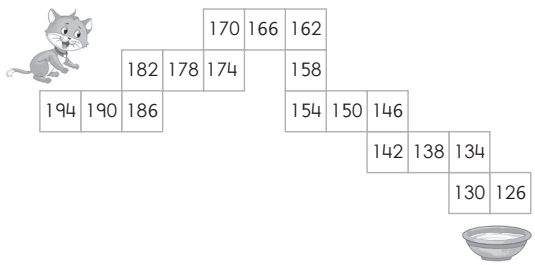
Accept all relevant responses.

I am an all-rounder

A. **English:**

1. earthworm
2. plant-eating

B. **Maths:**



C. **Social Studies:** Suggestion: Asian elephants, loth bears, tigers, Nilgiri tahrs and so on.

Students' Worksheets

Worksheet 1

A. 1, 3

B. 1.  H
2.  H
3.  O
4.  S
5.  O

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

Worksheet 2

A. 2, 3, 5

B. 1. grow 2. herbivores
3. tongue 4. Gnaw
5. lap

C. 1. → a 2. → e 3. → b
4. → c 5. → d

Worksheet 3

A. 1, 2

B. 1. The chain through which food passes from one living thing to another.
2. Animals that eat other animals are called carnivores.
3. Animals that eat dead animals are called scavengers.
4. Grass and oilseed cakes.
5. Lions, tigers, foxes and dogs.

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

Worksheet 4

A. 1. Domestic animals
2. Snakes and frogs
3. Cud is the food that animals bring back up from their stomach into the mouth for chewing again.
4. An earthworm swallows soil that contains bits of dead plants and animals in it.
5. A butterfly uses its long sucking tube to suck nectar from flowers.

B. 4, 5

C. 1. snakes, frogs
2. Accept all relevant responses.
3. Accept all relevant responses.
4. cows, buffaloes
5. cats, dogs

Teacher's Worksheets

Worksheet 1

A. 1. C 2. O 3. H 4. H 5. O
6. H 7. C 8. C 9. H 10. O

B. 1. WOLF; LION
2. BEAR; CROW
3. COW; HORSE

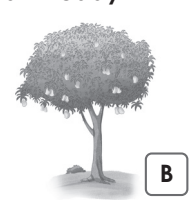
Worksheet 2

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

Theme 4: How We Live
Chapter 5: Plants

Main Coursebook

I am ready

 B

 S

 S

 B

Icebreaker

Flower. Accept all relevant responses.

In-text Question:

1. Tap root
2. leaves

In-text Question:

1. True 2. False

I am a learner

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

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

C. 1. Stem, branches, leaves, buds, flowers and fruits.

2. The leaves make food for the plant by photosynthesis. Therefore, leaf is called the kitchen of the plant.

3. Two functions of stem are as follows.

i. It hold the plant upright.

ii. it transports water from roots to other parts of the plant.

D. 1. The root grows under the ground. There are two types of roots – tap roots and fibrous roots.

A tap root has one thick root. Many smaller roots grow from the main root. Plants, such as carrot, radish, turnip, bean and mustard, have tap roots.

A fibrous root has a number of roots that grow from the end of the stem. It does not have a main root. Plants, such as grass, wheat, rice, onion and banana, have fibrous roots.

2. Leaves of different plants have different shapes, sizes and colours. Some leaves are oval-shaped, while some are heart-shaped. They may have smooth or uneven edges. Lamina of some leaves is waxy, while some other leaves have hairy lamina. This wide variation in appearance of leaves is known as leaf diversity.

I am a thinker

Yes. This statement is true because animals depend on plants. If plants are removed, then all the animals would die.

I am an all-rounder

A. **English:**

1. flour
2. saw

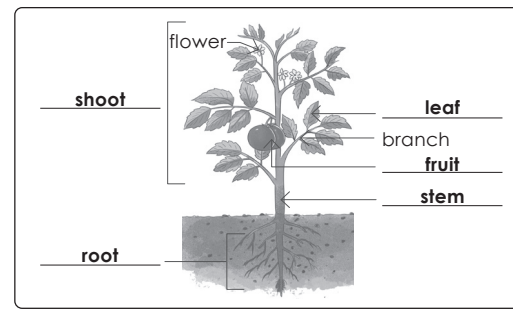
B. **Maths:** 250

C. **Social Studies:** Rice

Students' Worksheets

Worksheet 1

A.

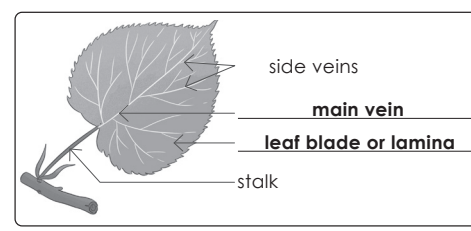


B. 1. shoot 2. root 3. leaves
4. lamina 5. flower

C. 1. ROOT 2. STEM 3. LEAF
4. FLOWER 5. FRUIT

Worksheet 2

A.



B. 1. round-shaped leaf
2. hand-shaped leaf
3. spear-shaped leaf
4. heart-shaped leaf
5. needle-shaped leaf

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

Worksheet 3

A. 1. Tap root and fibrous root.

2. Accept all relevant responses.

3. It is a flat and broad part of the leaf.

4. It is a process by which the plant's green leaves make food with the help of air, water and sunlight.

5. A young flower is called a bud.

B.

plants	animals
1. They can make their own food. 2. They cannot move from one place to another. 3. They breathe through tiny pores on their leaves called stomata. 4. They reproduce by seeds. 5. They do not have sense organs.	1. They eat plants and other animals. 2. They can move from one place to another. 3. They breathe lungs, gills or air holes. 4. They reproduce by laying eggs or giving birth to their young ones. 5. They have sense organs.

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

Worksheet 4

A. The part of the plant that grows above the ground is stem. (Accept all relevant responses.)

Functions of the stem

A stem has the following functions:

- It keeps the plant upright.
- It provides support to the branches.
- It carries water from the roots to the leaves and other parts of the plant.
- In some plants, stems store the extra food. Examples of such plants are potato, ginger and sugarcane.

B. The part of the plant that grows under the ground is roots. (Accept all relevant responses.)

Functions of the root

Roots have the following functions:

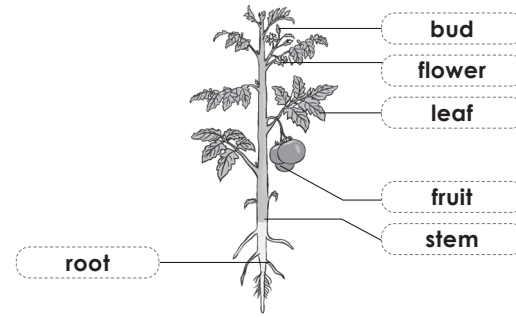
- They fix the plant to the soil.
- They absorb water and nutrients from the soil for the plant.
- Some of these also store food for plants. Examples of such roots are carrots and turnip.

C. 1. Stems 2. Roots 3. Leaves
4. Leaves 5. Stems

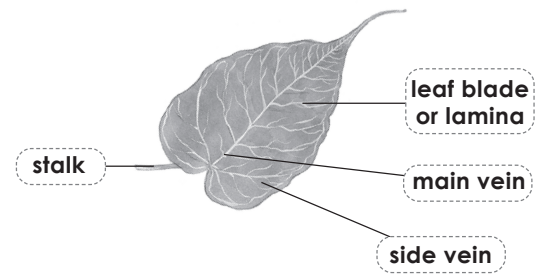
Teacher's Worksheets

Worksheet 1

A.



B.



Worksheet 2

1. The root of a plant grows below the ground. There are two types of roots –tap roots and fibrous roots. But the shoot grows above the ground and it has stems, branches, leaves, buds, flowers and fruits.
2. The stem keeps the plant upright. It provides support to the branches. It carries water from the roots to the leaves and other parts of the plant.
3. When the same type of plant is grown in a large area, it is called a crop. For example, corn, wheat and rice.
4. The green leaves of the plant make food with the help of air, water and sunlight by the process called photosynthesis.
5. Tap root: Carrot, radish and turnip
   Fibrous root: Wheat, rice and onion

Theme 5: Our Solar System

Chapter 6: Pride of India: The Indian Scientist

Main Coursebook

I am ready

National Science Day - 28th February
Earth Day - 22nd April
World Environment Day - 5th June

Icebreaker: EXPERIMENT

In-text Question:

1. Prafulla Chandra Ray
2. Dr Vikram Sarabhai

I am a learner

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

B. a. botanist; physicist b. epilepsy
c. astronomer d. chemistry
e. India

C. 1. Prafulla Chandra Ray is known as the Father of Indian chemistry. He founded India's first chemical factory.
2. A P J Abdul Kalam known as the Missile Man of India as he successfully headed a programme that produced a number of missiles for our defence forces.
3. Asima Chatterjee is highly recognised for her work in the fields of medicine and chemistry.

D. 1. Dr Vikram Ambalal Sarabhai was a physicist and an astronomer (space scientist). He founded the Indian Space Research Organisation (ISRO) in 1969. He is globally known as the Father of the Indian Space Programme. He also set up India's first rocket-launching station at Thumba near Thiruvananthapuram.
2. Sir Jagadish Chandra Bose was a botanist (scientist of plants) and a physicist (scientist of physics). He was the first person to prove that, like animals and humans, plants also can feel.

I am a doer

Accept all relevant responses.

I am an all-rounder

A. **English:**
1. He 2. She

B. **Maths:** 10

C. **Social studies:** Ferdinand Magellan

Students' Worksheets

Worksheet 1

A. 1. botanist and physicist
2. Chemistry
3. rocket
4. A P J Abdul Kalam
5. genetics

B. 1. Sir J C Bose
2. Prafulla Chandra Ray
3. Dr Vikram Sarabhai
4. A P J Abdul Kalam
5. Har Gobind Khorana

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

Worksheet 2

A. 1. Sir J C Bose
2. Asima Chatterjee
3. Har Gobind Khorana
4. Prafulla Chandra Ray
5. Dr Vikram Sarabhai

B. 1. Chemistry 2. Chemistry
3. Botany and Physics
4. Physics
5. Medicine and Chemistry

C. 1. C 2. I 3. I 4. I 5. C

Worksheet 3

A. 1. missiles 2. chemical 3. Thumba
4. medicine 5. astronomer

B. 1. PHYSICIST 2. CHEMIST
3. ASTRONOMER 4. BOTANIST
5. SCIENTIST

C. 1. →d 2. →e 3. →a
4. →c 5. →b

Worksheet 4

A. Accept all relevant responses.

B. 1. Crescograph is used to measure the growth of plants.
2. Dr Vikram Ambalal Sarabhai was a renowned astronomer.
3. Dr A P J Abdul Kalam served as President of India.
4. Asima Chatterjee developed medicine for malaria and epilepsy.
5. Prafulla Chandra Ray founded the first chemical factory.

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

Teacher's Worksheets

Worksheet 1

A. 1. →c 2. →e 3. → b 4. →a 5. →d

B. 1. Sir J C Bose was a botanist and a physicist. He was the first person to prove that plants also can feel, just like animals and humans.
2. Har Gobind Khorana was a scientist of chemistry of living organisms.
3. A P J Abdul Kalam is known as the Missile

Man of India as he successfully headed a programme that produced a number of missiles for our defence forces.

Worksheet 2

A. 1. Sir J C Bose
2. Prafulla Chandra Ray
3. medicine
4. Medicine
5. A P J Abdul Kalam
6. space

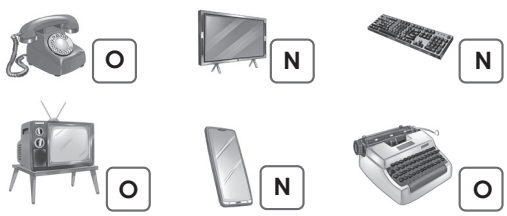
B. 1. F 2. T 3. F
4. T 5. F 6. F
7. F

Theme 5: Our Solar System

Chapter 7: Ancient Scientific Inventions of India

Main Coursebook

I am ready



Icebreaker:

1. LUDO 2. CHESS

In-text Question:

1. *Charaka Samhita* 2. Patanjali

I am a learner

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

B. 1. inventions 2. prevention
3. 5,000 4. spinning
5. weave

C. 1. Experiments by scientists leading to new findings are called inventions.
2. We should practise yoga regularly to keep ourselves healthy and fit.
3. Ayurveda can be practised by the following ways.
   i. Sleeping and waking up early.
   ii. Eating fresh and healthy food.
   (Accept all relevant responses)

D. 1. Practising yoga strengthens our body and relaxes our mind. It is one of the most accepted forms of exercise around the world. Yoga originated in India around 5,000 years ago. The great Indian yogic sage, Patanjali, wrote different '*sutras*' (ancient Indian books) on Yoga. These sutras were later developed by other practitioners of yoga and taken to all corners of the world.
2. *Charkha* or spinning wheel, invented around 500 AD, is scientific invention of ancient India. The spinning wheel was used to spin the animal or plant fibres, such as wool or cotton, into thread or yarn. Many studies suggest that ancient Indians were the first to spin and weave cotton into clothes.

I am a thinker

Yes. Usually, people invent things when they are in dire need of it.

I am an all-rounder

A. **English:**
1. unique 2. Due

B. **Maths:** 20 minutes

C. **Social studies:** Vasco Da Gama

Students' Worksheets

Worksheet 1

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

B. 1. Sushruta 2. yogic 3. clothes
4. *Charkha* 5. Mahatma Gandhi

C. 1. d 2. e 3. b 4. c 5. a

Worksheet 2

A. 1. Charaka was a great Indian physician.
2. We should eat fresh food to remain healthy.
3. Patanjali is a yogic sage.
4. Indians were first to use the spinning wheel to weave clothes.
5. Mahatma Gandhi reintroduced the use of charkha.

B. 1. sutras 2. ayurveda
3. yoga 4. *charkha*
5. Patanjali

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

Worksheet 3

A. 1. several 2. written 3. home
4. Yoga 5. fibres

B. 1. sick 2. fresh 3. Herbs
4. most 5. spinning

C. 2, 3, 5

Worksheet 4

A. 3, 5

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

C. 1, 2, 3

Teacher's Worksheets

Worksheet 1

A.

P	T	Y	U	I	O	O	Y	E
A	H	J	K	L	E	M	O	T
T	A	Z	X	C	V	E	G	H
A	Y	U	R	V	E	D	A	E
N	E	R	T	Y	U	I	N	S
J	E	D	Q	Z	T	C	X	Z
A	C	V	H	J	K	I	M	X
L	Q	W	E	H	J	N	J	C
I	K	L	O	N	S	E	K	V
Z	E	X	E	R	C	I	S	E

B. 1. Ayurveda is one of the oldest systems of medicine that originated in India about 6,000 years ago.
2. Yoga is one of the most accepted forms of exercise around the world. Practising yoga strengthens our body and relaxes our mind.
3. Charaka wrote *Charaka Samhita*.

Worksheet 2

A. 1. Ayurveda 2. Sushruta 3. healthy
4. 5,000 5. Patanjali

B. 1. F 2. T 3. F
4. T 5. T 6. T

Revision Worksheet

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

B. 1. two 2. flower 3. Sir J C Bose
4. 6,000 5. exercise

C. 1. →e 2. →c 3. →d
4. →b 5. →a

D. 1. chair plants animals
2. owl hawk sparrow
3. ant hen cockroach
4. cow goat tiger
5. carrot radish banana

E. 1. Things that are given to us by nature are called natural things. Examples are the Sun, Moon, stars, clouds, plants, animals, rocks and so on.
2. Things that are made by humans are called man-made things. Examples are buses, cars, aeroplanes, buildings, roads and so on.
3. Strong, sharp and pointed beaks (eagles), short, hard and pointed beaks (sparrows) and strong and pointed beaks (woodpeckers). (Accept all relevant responses)
4. Small animals are called insects. They live on land, in water and in the air. Examples are butterflies and honeybees. (Accept all relevant responses).
5. Ayurveda focuses on the prevention of diseases by maintaining a healthy lifestyle. It can be practised by:
   - sleeping and waking up early.
   - eating fresh and healthy food.
   - using herbs and practising yoga.

F.