Answers

Theme 9: How Do We Survive?
Lesson-13: All About Matter

Main Coursebook

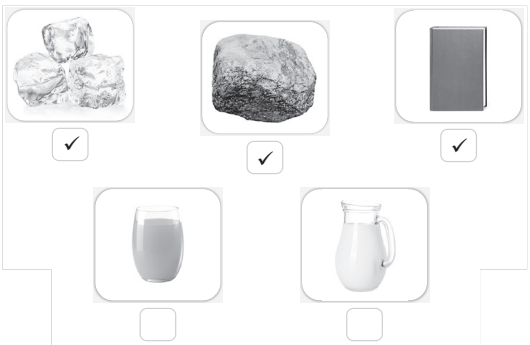
Kinaesthetic:

Accept all relevant responses

Auditory:

The example of a solid substance given in the text is wooden chair.

Pictorial



Interacting better:

Accept all relevant responses

Understanding better (Page 91)

1. There are three states of matter which exist in nature.
2. Yes, matter includes both living and non-living things. Anything that takes up space and has weight is considered matter, like plants, animals, rocks and water.

Understanding better (Page 92)

1. True 2. False

Learning better

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

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

C. 1. Anything around us that occupies space and has some mass is called matter.

2. When water vapour is allowed to cool, it changes into water (liquid) again. The process of changing a gas into liquid is called condensation.

3. A solution is a mixture of two or more substances. Generally, a solution has two major components. The component that is present in the smaller quantity is called a solute. The component present in larger quantity is called the solvent. For example, sugar and water solution.

D. 1. Matter can exist in three common states – solid, liquid and gas.

Solids

In solids, the particles are very tightly packed. Therefore, solids have a definite shape and volume. Some examples of solids are desks, chairs, doors and cars.

Liquids

The particles of liquids are not as tightly packed as solids. Therefore, liquids do not have a specific shape. But they have a fixed volume. Some examples of liquid are milk, water and juice.

Gases

Gases have neither a definite shape nor a definite volume. In gases, the particles are very loosely packed and are free to move in any direction. Some examples of gases are air, water vapour, oxygen and nitrogen.

2. All the three states of matter can be interchanged into one another.

Melting

Some solids can change into liquid by heating. Melting refers to the process by which a solid is converted into a liquid form. For example, when ice is taken out of the freezer and kept at room temperature, it gets converted into water.

Freezing

On cooling, some liquids change to solid. This process is called freezing. For example, when we place water in a freezer, it turns into ice.

Boiling

When water is heated, it gets changed into steam or water vapour. This is known as boiling.

Condensation

When water vapour is allowed to cool, it changes into water (liquid) again. The process of changing a gas into liquid is called condensation.

Creating better:

Accept all relevant responses

Thinking better:

If everything around us were in a gaseous state, we couldn't sit, walk or hold anything because there would be no solid objects. Life would be very hard as even houses and food would not stay in one place.

Choosing better:

2. She should put a bucket under the flowing water to collect it.

Students' Worksheets

Worksheet 1

A. 1. ice 2. water 3. water
4. tightly 5. loosely

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

C. 1, 2, 5

Worksheet 2

A.

ICF

WATER

MELTING

VAPOUR

FREEZING

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

B. 1. can change 2. container
3. fluids 4. free 5. steam

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

Worksheet 3

A. 1. interchanged 2. solid
3. liquid 4. gas
5. liquid

B. 3, 5

C. 2, 4, 5

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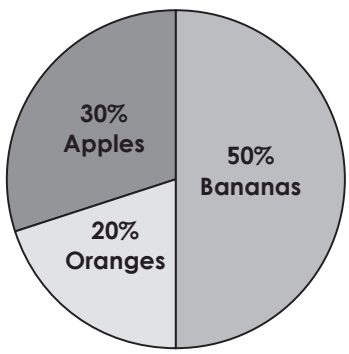
Developing better

A. **English**

1. Rupali went to the market to buy fruits, **but** she forgot to take her purse.
2. Teena boarded the bus **and** got the front seat.

B. **Maths:**



C. **Social Studies:** Steel and cement

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Making better

Accept all relevant responses.

Answers

Theme 9: How Do We Survive?
Lesson-14: Our Environment

Main Coursebook

Kinaesthetic:

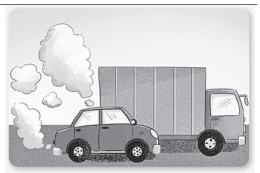
Accept all relevant responses

Auditory:

Some of the abiotic components mentioned in the text are air and water.

Pictorial

EP



EP

EF

EF

Interacting better: Accept all relevant responses

Understanding better (Page 98)

1. True 2. True

Learning better

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

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

C. 1. Natural resources are the materials that occur naturally on the Earth. For example, water.

2. Reuse

3. The decrease in the purity of the air is called air pollution. It occurs because of the burning of coal, diesel, petrol in vehicles and factories.

D. 1. Biodegradable wastes

Wastes that can decompose easily and mix with the soil are called biodegradable wastes. For example, vegetable peels, fruit peels and newspapers are biodegradable wastes.

Non-biodegradable wastes

Wastes that cannot decompose and mix with the soil are called non-biodegradable wastes. Such wastes remain in the environment for long periods of time. For example, plastic, glass and rubber are non-biodegradable wastes.

To reduce wastes and keep our surroundings clean, we should follow the three R's – reduce, reuse and recycle.

Reduce

This R means using less. If we use anything in lesser amount, it will create less waste. For example, we can reduce the use of plastic bags and limit our purchases to only what we need.

Reuse

This R stands for using again. For example, we can use empty bottles and cans for storing things at home. We can also donate our clothes to those in need.

Recycle

This R means to make new things from old or used things. For example, we can recycle old newspapers and make paper from them.

Creating better:

Accept all relevant responses

Thinking better:

Air pollution releases harmful gases like carbon dioxide into the air, which trap the Sun's heat. This makes the Earth hotter, leading to climate change and problems like unusual weather and melting ice.

Choosing better:

1. She should pick up as much scattered garbage as she can and put it in the dustbin.

Students' Worksheets

Worksheet 1

A. 1. naturally 2. natural resource
3. Renewable 4. Non-renewable
5. Pollution

B. 1. Natural resources are the materials that occur naturally on the Earth.

2. Soil, water, fossil fuels, plants and animals.

3. Renewable resources are available in unlimited amounts that do not deplete and can be used again and again.

4. Non-renewable resources are the natural substances that are available in limited amounts. Such resources deplete with time.

5. Pollution is decreasing the purity of environment by increasing the harmful substances in air, water and soil.

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

Worksheet 2

A. 1, 2, 5

B. 3, 4, 5

C. 1. → b 2. → a 3. → e
4. → c 5. → d

Worksheet 3

A. 1. The decrease in the purity of the air is called air pollution.
2. The decrease in the purity of water is called water pollution.
3. When some harmful substances mix with soil and decrease its purity, it causes land pollution.
4. Biodegradable wastes are the ones that decompose easily and mix with the soil.
5. Non-biodegradable wastes are the ones that cannot decompose and mix with the soil.

B. 1. air 2. water 3. Harmful
4. Biodegradable
5. Non-biodegradable

C. 1. AIR 2. SOIL
3. WATER 4. NATURAL
5. RENEWABLE

Worksheet 4

A. 1. Polluted 2. typhoid; diarrhoea
3. mix 4. remain
5. reduce; reuse; recycle

B. 2, 5

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

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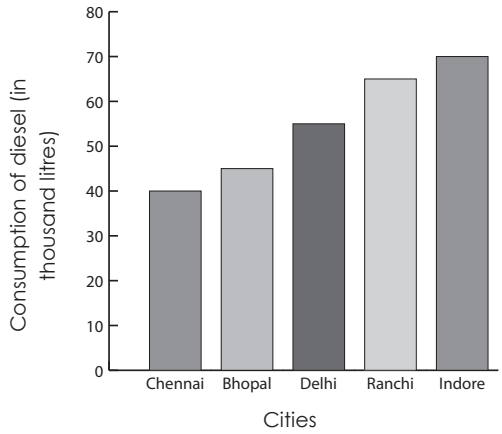
Developing better

A. **English**

1. because
2. and

B. **Maths:**



C. **Social Studies:**

Bridges are made up of steel, cement, stone, bricks, asphalt, iron, aluminium, whereas some are made up of roots of living trees. Underline the materials that are biodegradable and are used to make bridges.

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Making better

Accept all relevant responses.