

# CONTENTS

## UNIT 1

### SKELETAL AND MUSCULAR SYSTEMS

Activity 1	Bones and Joints	1
Creative Science	Bony Fun	3
Activity 2	Muscle Puzzle	4
Activity 3	Working Together for Movement	6
Let's Review		8

## UNIT 2

### THE RESPIRATORY SYSTEM

Activity 1	The Air We Breathe Out	13
Creative Science	Model of Our Respiratory System	16
Activity 2	Common Illnesses of Our Respiratory System	18
Let's Review		21

## UNIT 3

### THE DIGESTIVE SYSTEM

Creative Science	Model of Our Digestive System	23
Activity 1	Absorption in the Small Intestine	25
Activity 2	A Healthy Digestive System	27
Activity 3	Caring for Our Digestive System	30
Activity 4	Digestive System of a Chicken and a Cow	32
Let's Review		34

## UNIT 4

### THE CIRCULATORY SYSTEM

Creative Science	Model of Our Circulatory System	37
Activity 1	Pulse of Life	39
Activity 2	Common Illnesses of Our Circulatory System	41
Activity 3	Relationship Between Circulatory, Digestive and Respiratory Systems	44
Let's Review		46

## UNIT 5

### CELLS

Activity 1	Observing Cells	49
Creative Science	Model of Blood	53
Activity 2	Cells in Our Body	54
Activity 3	Cells in a Leaf	55
Let's Review		57

## UNIT 6

### HEALTHY DIET

Activity 1	Nutrients in Food	61
Creative Science	Healthy Eating Plate	63
Activity 2	Making Healthy Food Choices	65
Activity 3	Plan a Menu	67
Let's Review		69

# UNIT 7

## PHOTOSYNTHESIS

Activity 1	Light and Photosynthesis	71
Activity 2	Effect of Carbon Dioxide on Photosynthesis	73
Activity 3	Plants Make Food	74
Creative Science	From Invisible to Visible	77
Let's Review		79

# UNIT 8

## ECOSYSTEMS

Activity 1	Eat and Be Eaten!	82
Activity 2	Building a Terrarium	84
Activity 3	Chained to the Web	86
Let's Review		88

# UNIT 9

## HEAT TRANSFER

Activity 1	Direction of Heat Transfer	90
Activity 2	Changes in State of Matter	92
Activity 3	Good and Poor Conductors of Heat	93
Activity 4	Methods of Heat Transfer	95
Activity 5	Mini Fire Extinguisher	96
Let's Review		97

# UNIT 10

## PHYSICAL AND CHEMICAL CHANGES

Activity 1	A Mixture and Its Constituents	100
Creative Science	Modelling Clay Animal	102
Activity 2	Comparing Physical and Chemical Changes	103
Let's Review		105

# UNIT 11

## MATERIALS AND THEIR PROPERTIES

Activity 1	Is It Harder or Stronger?	107
Creative Science	Diving Under Command	109
Activity 2	The Right Choice	110
Let's Review		111

# UNIT 12

## THE WATER CYCLE

Activity 1	Model of Water Cycle	113
Activity 2	Role of Plants in the Water Cycle	115
Creative Science	Water Cycle in Action	117
Activity 3	Role of Oceans in the Water Cycle	118
Activity 4	Shaping the Earth's Surface	119
Let's Review		120

## REVISION EXERCISE

# UNIT 12

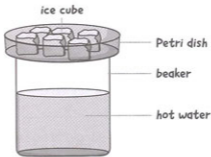
# THE WATER CYCLE

## Activity 1 Model of Water Cycle

- ▶ **Aim:** To use a model to observe how the natural water cycle works
- ▶ **Process skills:** Observing, analysing
- ▶ **Materials:** Beaker, hot water, Petri dish, ice cubes

### Procedure and Observations

1. Half-fill a beaker with hot water.
2. Place a Petri dish over the mouth of the beaker immediately. Ensure that the mouth of the beaker is fully covered by the base of the Petri dish.
3. Place a few ice cubes in the Petri dish.



4. Observe what happens inside the beaker.

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## Questions

1. What is the purpose of placing ice cubes on the Petri dish?

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2. Fill in the blanks below to show the changes in the state of water in the experiment.



3. What happened to the ice cubes at the end of the experiment?

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4. Name the part of the set-up that represents each of the following.

(a) Oceans and seas: \_\_\_\_\_

(b) Sky: \_\_\_\_\_

(c) Clouds: \_\_\_\_\_

(d) Rain: \_\_\_\_\_

## Conclusion

The set-up is a model of the \_\_\_\_\_ .

The processes of \_\_\_\_\_ and \_\_\_\_\_ took place and resulted in the formation of water on the base of the Petri dish.

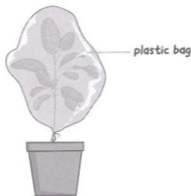


## Activity 2 Role of Plants in the Water Cycle

- ▶ **Aim:** To find out whether plants give out water vapour
- ▶ **Process skills:** Observing, comparing, inferring
- ▶ **Materials:** Potted plant, water, two transparent plastic bags, two pieces of string

### Procedure and Observations

1. Water a potted plant and wrap it with a plastic bag as shown below. Tie the mouth of the plastic bag with a piece of string. Label the plastic bag A.



2. Fill the other plastic bag with some air. Tie its mouth with a piece of string. Label the plastic bag B.
3. Place the potted plant wrapped in plastic bag A, and plastic bag B in a sunny place for one hour.
4. Observe and record what you see in plastic bags A and B.

Plastic bag A: \_\_\_\_\_

Plastic bag B: \_\_\_\_\_

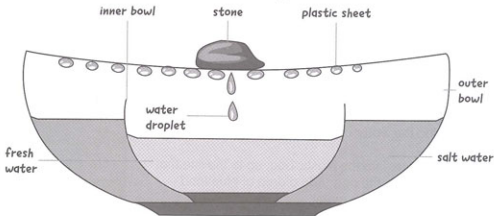


### Activity 3 Role of Oceans in the Water Cycle

- ▶ **Aim:** To explain the role of oceans in the water cycle
- ▶ **Process skills:** Observing, analysing, inferring

#### Procedure and Observations

1. Work in groups. Study a model of the water cycle below.



2. Discuss the following questions and write down your answers.

(a) Which part of the model represents an ocean?

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(b) What is needed for this model to work? Explain your answer.

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(c) Much of the water on the Earth is found in oceans. What is the role of oceans in the water cycle?

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## Activity 4 Shaping the Earth's Surface

- ▶ **Aim:** To observe and explain the effect of running water on the surface of soil
- ▶ **Process skills:** Observing, communicating
- ▶ **Materials:** Baking tray, dry sandy soil, large tray, thick book, watering can, water

### Procedure and Observations

1. Fill a baking tray with dry soil. Gently make the surface of the soil level. Do not pack the soil in the tray tightly.
2. Make the baking tray slanted by placing one end of the tray in a large tray and the other end on a thick book.
3. Fill a watering can with water. Pour water continuously from the watering can into the higher end of the baking tray.
4. Observe what happens when the water runs down the tray. Record your observation below.



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### Conclusion

The surface of the Earth is not even. When running water or \_\_\_\_\_ runs over the surface of land, soil is carried away. This \_\_\_\_\_ the surface of the land and can result in soil \_\_\_\_\_.