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NEW Amazing Science

TEACHING GUIDE

GRADE 3

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Introduction

The New Amazing Science Teaching Guide is a valuable key resource for science teachers. It helps deliver knowledge, introduce concepts, and clearly explain them by effectively utilizing various skills, thus reaching academic objectives for primary students.

Key Terms

Starter Activity:

These help in bringing focus to the lesson and set the tone for learning.

Learning Methodology:

It suggests the method to cover the learning objectives for having a complete teaching and learning experience.

PMI Chart:

It is a graphic organizer where students examine the pluses, minuses, and interests.

Plus — Advantage

Minus — disadvantages

Interesting — Implications

It is filled using a Tick or Cross

PLUS	MINUS	INTERESTING
×	×	✔
✔	✔	✔
×	×	

Home Learning:
For revision and reinforcement of the topic learned to strengthen the knowledge of students.

Activity:

Field trips and hands-on activities, Internet searches and educational videos are suggested to enhance the knowledge further and for students to learn and enjoy.

Contents

Unit 1 THE LIFE CYCLES OF PLANTS AND ANIMALS

SUB-TOPICS

- Introduction
  - Plant Life Cycle
  - Germination
  - Seedling
  - Mature plant
  - Aging and Death
  - Life Cycle of a Sunflower
- Animal Life Cycle
- Hatching or birth
- Growth
- Adulthood
- Aging and Death
- Life Cycle of a Hen
- Life Cycle of a Salmon(fish)
- Metamorphosis in Butterfly
- Metamorphosis in Frog

LESSON PLAN #1

Class: III Subject: General Science

Unit: 1

Topic: The Life Cycles of Plants and Animals

Sub-Topics:

- Introduction
- Plant Life Cycle
  - Germination
  - Seedling
  - Mature plant
  - Aging and Death
- Life Cycle of a Sunflower

Date : Duration: 2x40 Term : Week:

Learning objectives

- To give knowledge of the topic.
- To make them aware of life cycles of plants, with example..

Resources:

- Textbook NAS 3
- Charts
- Video

Activity Material:

- Flashcards with pictures of life cycle of a plant. i.e.,

  Preparation of soil, planting seeds, watering seeds, providing sunlight, sprouting, mature flowering plants, and dead plants.

Starter Activity: (10 min)

- Teacher will show flash cards and take responses from students.
- Next, the correct sequence will be shown.
- Teacher will write keywords on the board.

Methodology: (25 min)

- Students will be asked to open their books to assigned page numbers and read silently. The teacher will take rounds and facilitate. Loud reading will be done. The available resources will be effectively utilized. Explanation will be given next
- A teacher-student discussion will follow to elaborate the topic further.
- Teacher will give a quick analysis of the key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus, Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to attempt 'Chapter Review' Q. 2.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2, to do.

Activity:

- Students will be shown video on life cycle of a plant.

  Link: https://youtu.be/7viA16-J2K0?si=vS0RK7KxPzfwEnNz

Further Notes

Teacher Ideas

LESSON PLAN #2

Class: III Subject: General Science

Unit: 1

Topic: The Life Cycles of Plants and Animals

Sub-Topics:

- Animal Life Cycle
  - Hatching or birth
  - Growth
  - Adulthood
  - Aging and Death
- Life Cycle of a Hen
- Life Cycle of a Salmon(fish)
- Metamorphosis in Butterfly
- Metamorphosis in Frog

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To give knowledge to students of life stages and life span of animals.
- To enable them to recognize the changes in the life span of an animal.

Resources:

- Textbook NAS 3
- Charts
- Videos

Activity Material:

- Magazine cutouts on life cycle of animals like butterflies, and frogs (metamorphosis)

Starter Activity: (10 min)

- Students will be divided into four groups. Each group will be assigned an animal, for example, Salmon, Hen, Butterfly or Frog. The groups will be given cutouts and asked to paste on chart papers. The completed charts will be displayed on school boards.

Methodology: (30 min)

- Teacher will write keywords on the board .e.g., Stages in the life cycle of a hen and a frog.
- Students will be asked to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Loud reading will be done. Teacher will explain the topic utilizing available resources.
- Students-teacher discussion will be conducted to elaborate the topic further.
- Teacher will give a quick analysis of the key points.
- Videos will be shown on life cycle of a butterfly and frog.
- Links: https://youtu.be/gfjBLB9ywn0?si=csHm2VYb2CVT7ClV

  https:/youtu.be/F3ElGMVU6SY?si=qvUe8bgL0mR7OA99

Plenary: (5 min)

- Students will fill out quick PMI (Plus, Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Q. 1,4 and 5 from Chapter Review.

Home learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2 to do.

Activity:

- Students will be provided with the following links to watch and learn about the life cycle of Salmon and Hen.

  https://youtu.be/itjWSotbmGk?si=YWawUlNzS3H0ImD5

  https://youtu.be/DORbovoZUvU?si=CDP1ZULGfn_Z0CHf

Further Notes

Teacher Ideas

Worksheet # 1

1. Name the four stages in the life cycle of a plant.

- _____
- _____
- _____
- _____

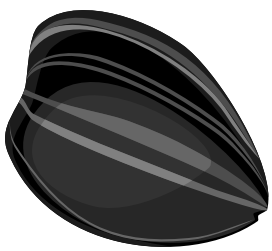
2. Mark the following as True or False.

- A tiny seed turns into a tall tree. _____
- A caterpillar transforms into a butterfly. _____
- Pupal is the first stage in the life cycle of a butterfly. _____
- Seedling is the young plant. _____

3. Match the following:

Term	Statement
Germination	Can be of different sizes and shapes
Mature Plant	The seed starts to grow
Death of a Plant	Leaves turn yellow and dry
Flowering	A stage when plants produce flowers and seeds

4. Identify the following stages:



_____ _____ _____

Answer Key

Worksheet 1

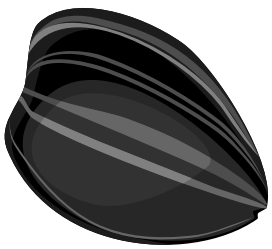
1. Name the four stages in the life cycle of a plant.
   - Germination
   - Seedling
   - Mature Plant
   - Aging and Death

2. Mark the following as True or False.
   - A tiny seed turns into a tall tree. **True**
   - A caterpillar transforms into a butterfly. **True**
   - Pupal is the first stage in the life cycle of a butterfly. **False**
   - Seedling is the young plant. **True**

3. Match the following:

Term	Statement
Germination	Can be of different sizes and shapes
Mature Plant	The seed starts to grow
Death of a Plant	Leaves turn yellow and dry
Flowering	A stage when plants produce flowers and seeds

4. Identify the following stages:



Seed

Mature/ Flowering Plant

End of Life

Worksheet 2

1. Tick ✔ the correct answer:
   - Baby sea turtles use light of the moon to find their way to the ocean. _____
   - Birds lay eggs. _____
   - Growth is the process of increase in size. _____
   - Animals always stay young. _____

2. Name the stages in the life cycle of a hen.




3. Fill in the blanks:
   - Salmon babies are called as _____.
   - Fry grows into _____.
   - Adult animals take care of their _____ and _____.

4. Give short answers:
   a. What is metamorphosis?

      _____

   b. Give two examples.

      _____

5. Draw and colour caterpillar of a butterfly.

Answer Key

Worksheet 2

1. Tick ✔ the correct answer:
   - Baby sea turtles use light of the moon to find their way to the ocean. ✔
   - Birds lay eggs. ✔
   - Growth is the process of increase in size. ✔
   - Animals always stay young.

2. Name the stages in the life cycle of a hen.

Egg

Chick

Growth of chick

Hen

3. Fill in the blanks:
   - Salmon babies are called as **alevin**.
   - Fry grows into **smolt**.
   - Adult animals take care of their **food** and **shelter**.

4. Give short answers:
   a. What is metamorphosis?

      Ans: It is a change in an animal's form, structure, or appearance as it grows from a baby to an adult.

   b. Give two examples.

      Ans: **Frog , butterfly**

5. Draw and colour the caterpillar of a butterfly.

Answer key

Quick Review

1. Draw and explain life cycle of a hen.

Egg

Chick

Growth of chick

Hen

1. A Hen lays eggs
2. A Chick hatches from it after some time. The chick is covered with feathers.
3. The chick grows and becomes stronger.
4. A grown, adult chick is a hen or a rooster.

Chapter Review

1. CHOOSE THE BEST ANSWER.

1	a
2	b
3	a

2. LABEL THE LIFE CYCLE SHOWN BELOW

Seed **Germination** **Seedling** **Mature Plant** **Flowering** **End of Life**

3. GIVE SHORT ANSWERS TO THE FOLLOWING

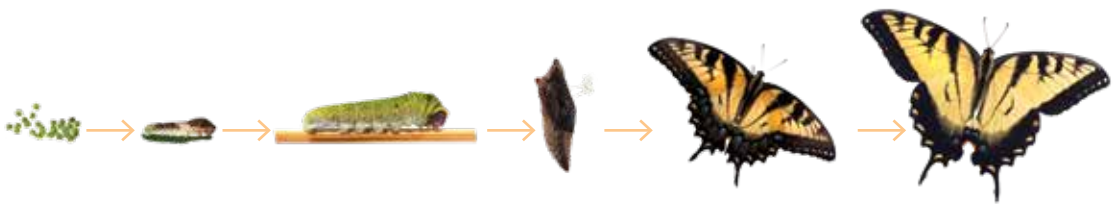
1. Ans. The different stages in the life cycle of a living thing from birth till death is called life cycle.
2. Ans. Living things age in time and the life cycle ends due to disease or mature age.
3. Ans. When the seed starts to grow, the process is called germination. The process by which a seed grows into a plant.

GIVE ONE WORD ANSWER

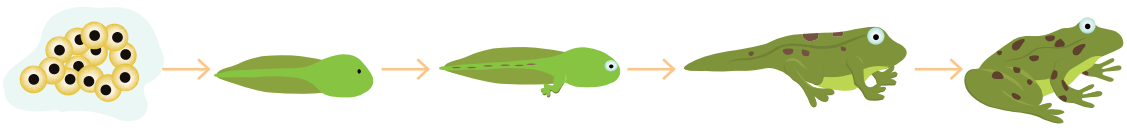
Number	Answer
1	Germination
2	Death
3	Mature/adulthood

4. LABEL THE LIFE CYCLE OF THE FOLLOWING ANIMALS

Life cycle of a butterfly



Egg **Caterpillar** **Pupa** **Butterfly**



Egg **Tadpole** **Tadpole with legs** **Young Frog** **Adult Frog**

Unit 2 | FOOD

SUB-TOPICS

- Introduction
- Photosynthesis
- Sunlight
- Water
- Air
- Food
- What do animals eat?
- Herbivores
- Carnivores
- Omnivores
- Scavangers
- Food Groups
- Fruits
- Vegetables
- Grains
- Proteins
- Dairy products
- Dry Fruits

LESSON PLAN #1

Class: III

Subject: General Science

Unit: 2

Topic: Food

Sub-Topics:

- Introduction
- Photosynthesis
  - Sunlight
  - Water
  - Air
  - Food
- What do animals eat?
  - Herbivores
  - Carnivores
  - Omnivores
  - Scavangers

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To give a clear concept of plant food (plants prepare their own food)
- To raise awareness of animal food habits (Animals are divided into different groups based on their food choices)

Resources

- Text Book NAS 3
- Charts -poster of image on page 11 on photosynthesis.

Activity Material:

- 2 glass jars with lid, water, leaves of evergreen plants.
- Label the jars with two tags, i.e., Dark, Light

Starter Activity: (10 min)

- Place the glass jars, water and plant leaves on the display table.
- Call students to display table. Start the activity by putting water in the jars almost 8/10 parts. Add evergreen leaves. Put the lid on and keep the one with dark tag in a dark place like closet. Keep the other one in sunlight.
- Leave for a few days, undisturbed.
- Check the jars with students.
- The jar kept in the sunlight will show air bubbles near the leaves, showing release of gas. While the jar kept in dark will show no gas.
- Share that photosynthesis is taking place in the jar, kept in sunlight.

Methodology: (25 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Loud reading will be done by the teacher, furthermore, explanation will be done. The available resources and demonstration conducted would be further elaborated.
- Teacher-student discussion will be carried out to allow students to actively engage with the subject matter.
- A quick analysis will be given by the teacher to emphasize key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Q. 2 and 4 of Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2, to do.

Activity:

- Students will be allowed to observe the jars frequently and note down their observations.

Teacher Ideas

LESSON PLAN #2

Class: III Subject: General Science

Unit: 2

Topic: Food

Sub-Topics:

- Food Groups
- Fruits
- Vegetables
- Grains
- Proteins
- Dairy products
- Dry Fruits

Date : Duration: 2x 40

Term : Week:

Learning objectives:

- To enable students to recognize various food groups.
- To give awareness of healthy and unhealthy food.
- To give knowledge of balanced diet.
- To give concept of healthy living and importance of incorporating exercise in our daily lives

Resources:

- Text Book NAS 3
- Charts

Starter Activity: (10 min)

- Teacher will write the following on board:

Main Food Groups

No	Words	Key
1.	Uitsfr	Fruits
2.	Sgetableev	Vegetables
3.	Rainsg	Grains
4.	Einstorp	Proteins
5.	Yriad ductsorp	Dairy Products
6.	Ryd uitsfr	Dry Fruits

- Students will be asked to respond, and the teacher will note the unscrambled words simultaneously on the board.

Teacher Ideas

Methodology: (25 min)

- Students will be asked to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Teacher will read loudly alongside the students. Furthermore, explanation will be done utilizing available resources.
- Teacher will conduct a discussion with students on the topic to elaborate the topic further. The discussion will allow students to share their thoughts, opinions with the teacher.
- A quick analysis will be given to highlight keywords.
- Students will be asked to do Quick Review on page 16.

Plenary: (5 min)

- Students will fill out quick PMI (Plus, Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Q.1 and 3 of Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be asked to read the topic for revision and reinforcement.o.

ACTIVITY:

- Students will be asked to prepare a paper plate with magazine cutouts to show food groups.

Worksheet 1

1. Draw and label a diagram to show photosynthesis in the plant.

2. Name the essential requirements for making food in green plants.

- _____
- _____
- _____

3. Match the following:

Feeding type	Definition
Herbivores	Animals that eat other animals
Carnivores	Animals that eat plants
Omnivores	Animals that eat dead animals
Scavengers	Animals that eat animals as well as plants

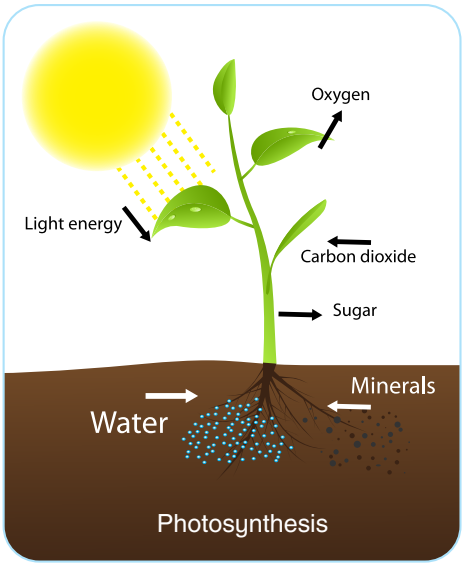
4. Give two examples:

- _____ and _____ are herbivores.
- _____ and _____ are carnivores
- _____ and _____ are omnivores.
- _____ and _____ are scavengers.

Answer Key

Worksheet 1

1. Draw and label a diagram to show photosynthesis in the plant.



2. Name the essential requirements for making food in green plants.

- Water
- Air
- Sunlight

3. Match the following:

Feeding type	Definition
Herbivores	Animals that eat other animals
Carnivores	Animals that eat plants
Omnivores	Animals that eat dead animals
Scavengers	Animals that eat animals as well as plants

4. Give two examples:

- **Goats** and **cows** are herbivores.
- **Lions** and **eagles** are carnivores
- **Bears** and **Raccoon** are omnivores.
- **Jackel** and **Hyenas** are scavengers.

Worksheet 2

1. Name the food groups:
   - _____
   - _____
   - _____
   - _____
   - _____
   - _____

2. Fill in the blanks:
   - Taking care of our bodies keeps us _____.
   - We _____well, if we eat _____ diet.
   - _____ provides proteins.
   - Healthy people do not fall _____ easily.

3. Name the four healthy habits:
   - _____
   - _____
   - _____
   - _____

4. Mark as True or False:
   - Human growth is retarded with balanced diet. _____
   - Good food gives us energy. _____
   - Unhealthy people are always careful about their life style. _____
   - Washing hands after eating keeps us safe from germs and infection. _____

Answer Key

Worksheet 2

1. Name the food groups:

- Fruits
- Vegetables
- Proteins
- Dairy products
- Grains
- Dry Fruits

2. Fill in the blanks:

- Taking care of our bodies keeps us **healthy**.
- We **grow** well if we eat balanced diet.
- **Meat** provides proteins.
- Healthy people do not fall **sick** easily.

3. Name the four healthy habits:

- Eating balanced diet
- Keeping clean
- Sleeping well
- Exercising

4. Mark as True or False:

- Human growth is retarded with balanced diet. **False**
- Good food gives us energy**. True**
- Unhealthy people are always careful about their lifestyle. **False**
- Washing hands after eating keeps us safe from germs and infections. **True**

Quick Review

Imagine you have a friend who feels tired all the time. He is weak and often gets sick. What advice would you give him to improve his health?

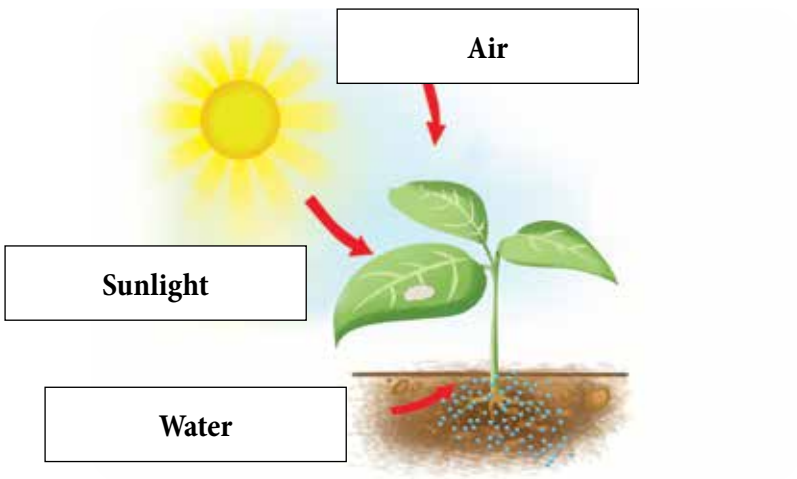
Ans: Avoid skipping meals since extended fasting causes blood sugar levels to drop. Consume more fruits, vegetables, wholegrain meals, low-fat dairy products, and lean meats to maintain a healthy diet. Have a good sleep.

Chapter Review

CHOOSE THE CORRECT ANSWER.

Number	Answer
1	b
2	a
3	a
4	a

Label the following diagram



GIVE SHORT ANSWERS TO THE FOLLOWING

1. Ans. Plants need sunlight, water, and Carbon dioxide in the presence of Oxygen to make food
2. Ans. Balanced diet is food that includes a variety of food groups in the right amount.

3. Ans. Plants make their own food through a process called photosynthesis. Plants make their own food using sunlight, water, and air.

4. Ans. Eating healthy food helps us live longer, maintain a healthy weight and reduce our risk of chronic diseases.

LOOK AT THE IMAGES BELOW AND CATEGORIZE THEM IN THE TABLE GIVEN BELOW:

Herbivores	**Carnivores**	**Omnivores**
Cow	Tiger	Bear
Goat		Raccoon
Elephant		

Unit 3 ECOSYSTEM AND HABITATS

SUB-TOPICS

- Introduction
- Energy
- Light
- Warmth
- Habitat
- Polar Habitat
- Plants
- Animals
- Desert Habitat
- Plants
- Animals
- Forest Habitat
- Plants
- Animals
- Aquatic Habitat

LESSON PLAN #1

Class: III

Subject: General Science

Unit: 3

Topic: Food

Sub-Topics:

- Introduction
- Energy
  - Light
  - Warmth
  - Habitat
  - Polar Habitat
- Plants
  - Animals
  - Desert Habitat
  - Plants
  - Animals
  - Forest Habitat
  - Plants
  - Animals
  - Aquatic Habitat

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To enable students to understand the importance of Sun and how it affects the sustenance of life on Earth.
- To have clear concept of habitat and variety of habitat on Earth.
- To give information on the types of plants and animals found in particular environments.
- To give awareness of features evolved by plants and animals to survive in a particular habitat.

Resources:

- Textbook NAS 3
- Charts

Activity Material:

- Animal Cards, Chart Papers labelled as Polar, Desert, Forest, and Aquatic Thumbnails

Starter Activity: (10 min)

- The teacher will write the following on the board.

Sun energy

light

warmth

- Food, water, shelter, and space go together, especially so that the plants and animals live together. This is their habitat.
- Prepare animal cards matching their respective habitat.

Further Notes

Teacher Ideas

Habitats	Animals
Polar	Polar Bear, Arctic Hare, Arctic Fox, Musk Ox
Desert	Camel, Meerkat, Viper
Forest	Birds, Raccoon, Reptiles like Lizards
Aquatic	Dolphin, Fish, Shark, Whale

- Place 4 charts with titles based on habitats, on a soft board.
- Divide students into four groups, and assign one student as group leader. Distribute animal cards, and ask them to separate cards into four habitats. One by one call group leaders to attach the cards on charts.

Methodology: (25 min)

- Students will be asked to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Loud reading will be done alongside students, followed by explanation. The available resources will be effectively utilized.
- Teacher will conduct a discussion to further elaborate the topic.
- A quick analysis will be given by the teacher to highlight key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Q. 2 and 3.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 1 to do.

Activity:

- Students will be asked to watch a video at home on the following link:
  https://youtu.be/_yMvMxVgfOI?si=O_fNMViD4Ecz-hQK

LESSON PLAN #2

Class: III Subject: General Science

Unit: 3

Topic: Ecosystem and Homes of Organisms

Sub-Topics:

- Ecosystem
- Parts of an Ecosystem
  - Living Things: plants and animals
  - Non-living Things: Sunlight, water, air and soil
- How do ecosystems work?
  - Plants, animals, water and soil
- Light, temperature and water supports life.
  - Temperature, water
- Ways human activities affect habitat
  - Cutting down trees, pollution, building cities, climate change, farming.

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To introduce ecosystem
- To give awareness of environmental factors that support life in a habitat.
- To give them knowledge of human activities that are negatively affecting the habitat.

Resources:

- Textbook NAS 3
- Charts

Activity Material:

- A glass bottle, patches of mosses (found easily on small rocks) soil, decorative accessories.

Starter Activity: (10 min)

Teacher will write definition of Ecosystem on board:

'Ecosystem is made by interaction of all living organisms with non-living things, such as water in an area.'

Teacher will set up an ecosystem, through the following demonstration:

- Step 1: In a glass bottle, small rocks will be placed at its bottom.
- Step 2: Cover the rocks with a small layer of soil.
- Step 3: Place the damp moss over the base layer.
- Step 4: Place in a windowsill.

Students will keep observing for the changes.

Methodology: (25 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Loud reading will be done by the teacher alongside students. Teacher will explain the topic and the available resources will be effectively used.

- Students-teacher discussion will be conducted to further elaborate the topic.
- A quick analysis will be given by the teacher to emphasize upon key points.

PLENARY: (5 min)

- Students will fill out quick PMI (Plus. Minus, Interesting)) on board.

ASSESSMENT OPPORTUNITIES: (30 min)

- Students will be asked to do Quick Reviews on Page 24 and 25. From Chapter Review Q.1 and 4 will be done.

HOME LEARNING:

Students will be asked to read the topic for revision and reinforcement.

LESSON EVALUATION: (10 min)

- Students will be asked to do Worksheet 2.

ACTIVITY:

- Students will be asked to watch a video at home on the following link.
  https://youtu.be/40B2IjLWfTQ?si=tM9XYCtrJW0BbcLB

Worksheet 1

1. Fill in the blanks:

- _____ is vital for life on Earth.
- _____ is the process by which plants make their own food.
- The Sun provides us with _____ which provides heat.
- The home of an animal or a plant is known as its _____.
- Plants and animals survive in particular _____.

2. Recognize the habitat in the following:




3. Match the following:

Habitat	Examples
Aquatic	Grey wolf, ferns
Forest	Seaweed, dolphins
Desert	Arctic fox, Antarctic lichens
Polar	Cactus, scorpion

Answer Key

Worksheet 1

1. Fill in the blanks:

- The Sun is vital for life on Earth.
- Photosynthesis is the process by which plants make their own food.
- The Sun provides us with warmth which provides heat.
- The home of an animal or a plant is known as its habitat.
- Plants and animals survive in particular habitats.

2. Recognize the habitat in the following:

Polar Region

Desert

Forest

Aquatic

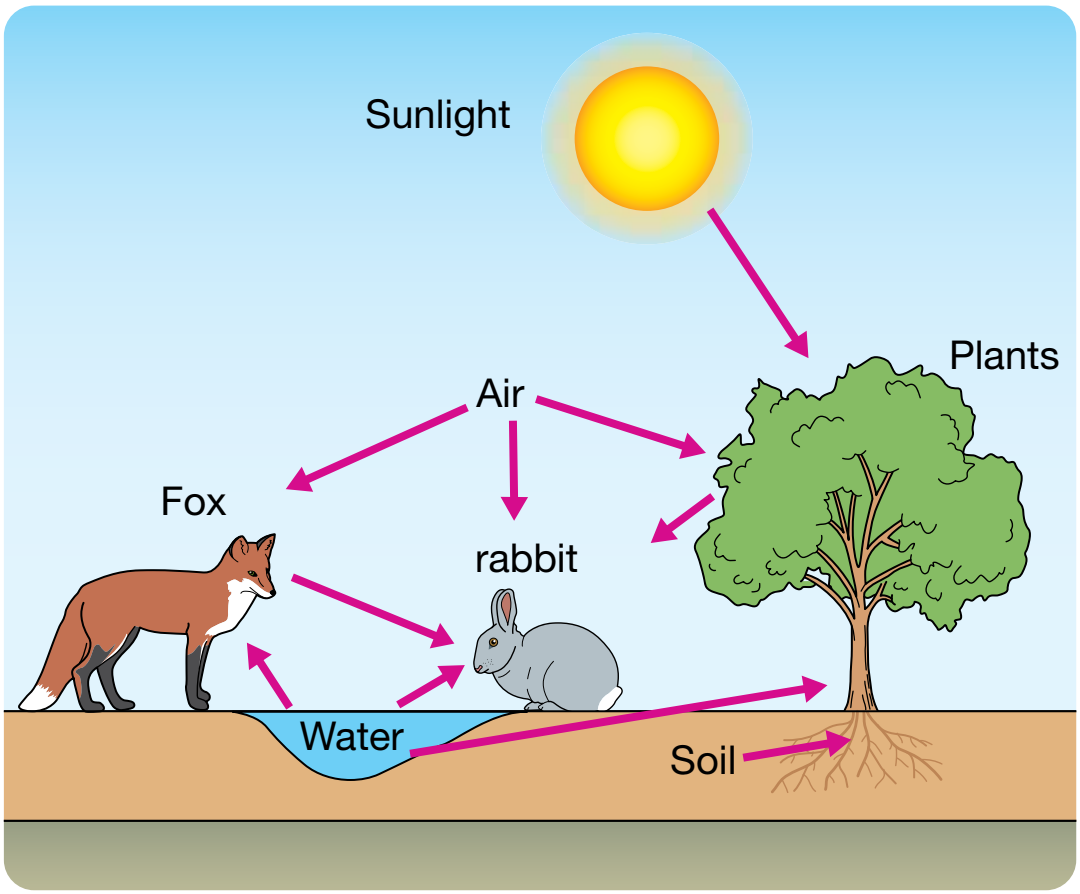
3. Match the following:

Habitat	Examples
Aquatic	Grey wolf, ferns
Forest	Seaweed, dolphins
Desert	Arctic fox, Antarctic lichens
Polar	Cactus, scorpion

Answer key

Worksheet 2

1. Draw a diagram to show how ecosystem works.



2. Mark as True or False:

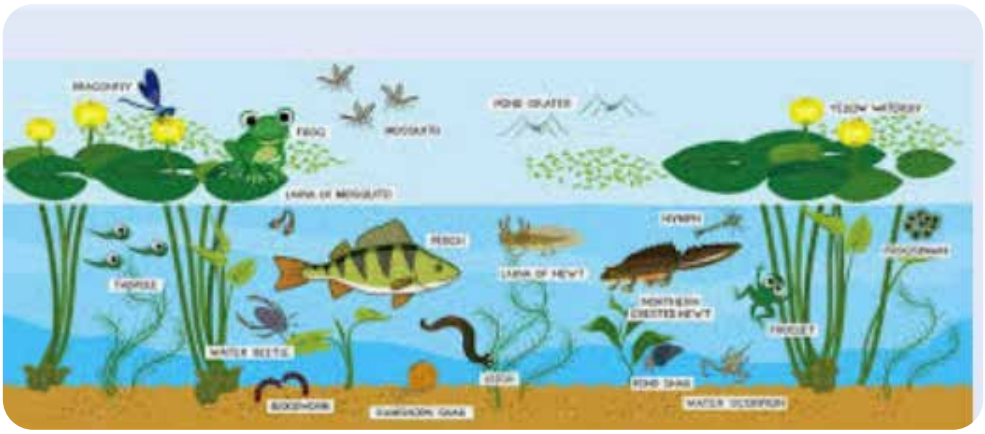
- An ecosystem works by the interaction of all living organisms. True
- Only non-living things are part of an ecosystem. False
- Air has oxygen for breathing. True
- Plants need animals for food. False
- Light allows animals to see. True

3. List down three activities by which human activities are affecting habitats.

- Cutting down trees
- Building cities
- Pollution

Quick Review

Draw your own ecosystem and label the parts. Include at least one plant, one animal and one non-living thing. Also draw arrows to show how they work together in an ecosystem.



Match the following:

It allows animals to see	Water
Snow hare lives in this kind of place	Light
It is used for drinking	Cold

Chapter Review

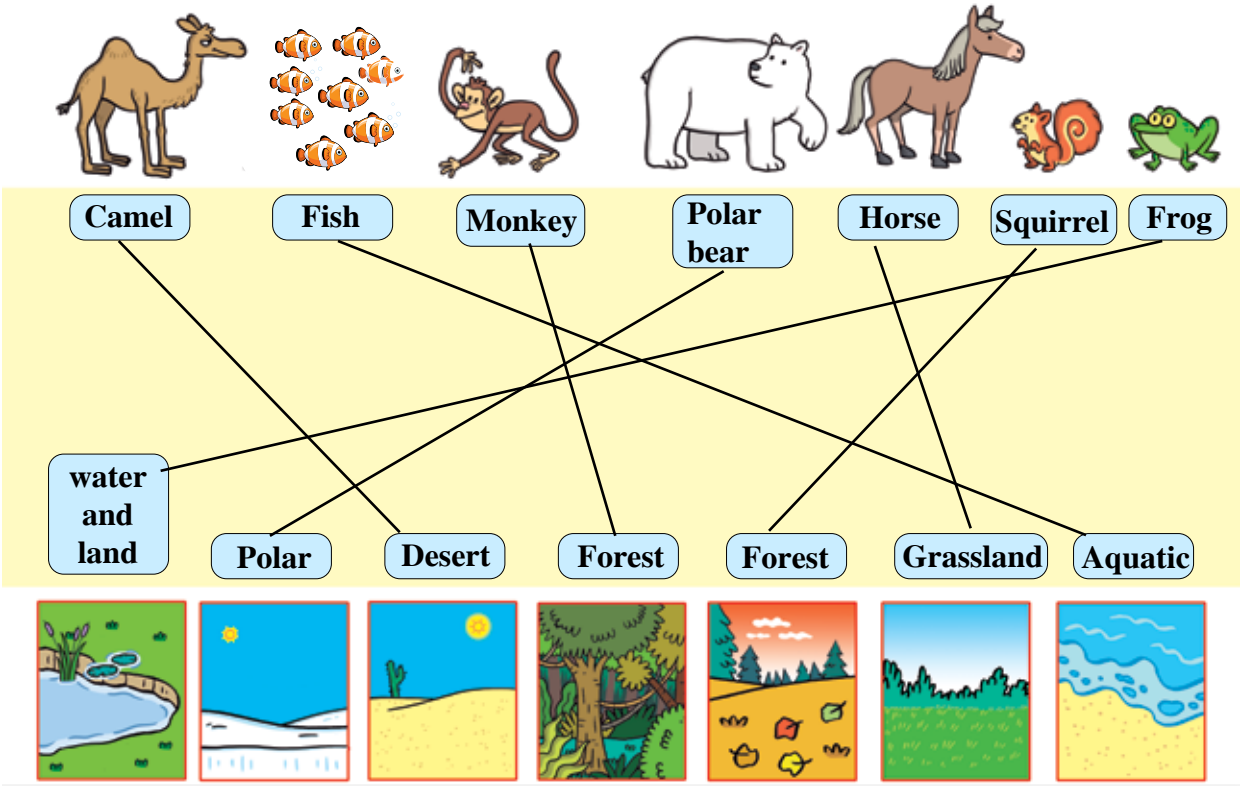
Choose the correct answer

Number	Answer
1	a
2	b
3	b
4	a

Give one word answer

Number	**Answer**
1	Desert
2	Tundra
3	Sun
4	Camel
5	Plants

Draw lines to connect the animal to its correct Habitat. Write the name of the animal and its habitat.



Draw an animal that you find in aquatic ecosystem. Point out the features that help them survive

Gills, scales, fins, a flexible back bone (clown fish)

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Unit 4 MATTER

SUB-TOPICS

- Introduction
- Matter
- Solids
- Fixed shape
- Liquids
- Gases
- States of matter and Earth
- Three states of water
- Changing states of matter

LESSON PLAN #1

Class: III Subject: General Science

Unit: 4

Topic: Matter

Sub-Topics:

- Introduction
- Matter
- Solids
- Liquids

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To enable students to recognize the three states of matter.
- To give them awareness of shapes of states of matter.

Resources:

- Textbook NAS 3
- Charts

Activity Material:

- Conical flask
- Balloon
- Baking soda
- Vinegar

Starter Activity: (10 min)

- Ask students to observe the demonstration:
- Prepare the table
- Pour some vinegar (1/8 of bottle) in the conical flask.
- Put 1 tablespoon of baking soda in the balloon, and cover the mouth of conical flask with it, keeping the powder on a side.
- Now pour the soda in the flask and ask students to observe closely. The balloon will fill up with the gas formed as a result of chemical reaction. (Proving the formation of gas). The gas is now in the balloon. Next remove the balloon from the conical flask. Gas released will spread in the room.
- This shows that gas has spread out in the space.

Methodology: (25 min)

- Students will be asked to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Loud reading will be done by the teacher followed by explanation. All available resources will be used effectively.
- Teacher will discuss the topic with the students to elaborate further.
- A quick analysis will be given by the teacher to emphasize key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus, Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Quick Review page 31 and Q.1 and 3 of Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 1 to do.

Activity:

- Students will be asked to watch the video at home on the following link:

  https://youtu.be/Mm6Z6vJ-qlk?si=BccFJKwm9rrI4cMD

Further Notes

Teacher Ideas

LESSON PLAN #2

Class: III Subject: General Science

Unit: 4

Topic: Matter

Sub-Topics:

- States of matter and Earth
- Three states of matter
- Changing states of matter

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To enable students to understand the basic differences between states of matter through physically observable properties.

Resources:

- Textbook NAS 3
- Charts

Activity Material:

- Flashcards with images on the prompt and their state on the reverse side as follows:

Brick	Popsicles	Clouds	Smoke	Pencil	Juices	Ice cubes
Solid	Solid	Solid	Gas	Solid	Liquid	Solid and Liqiud

Starter Activity: (10 min)

- Teacher will ask students to identify the picture and its state, as solid, liquid or gas or a mixture.
- The responses will be noted on board.

Methodology: (25 min)

- Students will be asked to open their books to assigned page numbers and read silently. Teacher will take rounds in the class to facilitate. Loud reading will be done by the teacher alongside students. Teacher will explain the topic utilizing all the available resources.
- Teacher-student discussion will be conducted in order to elaborate the topic.
- A quick analysis will be given by the teacher to emphasize the key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus. Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Teacher will ask students to do Quick Review on page 32 and Q.2 and 4 of Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2 to do.

Activity:

- To watch the videos on the following links:
- https://youtu.be/oIYyeFhZ7eE?si=BmRaGtzuyWq9jgWU

  https://youtu.be/DE3LCPfP8N8?si=2wt98cGG7Fr9inmF

Further Notes

Teacher Ideas

Worksheet 1

1. Fill in the blanks:
   - _____ is all around us.
   - Matter occupies _____.
   - Things around us have _____.
   - _____ is a state of matter with no fixed shape or volume.

2. Name the states of matter of the following:
   - Rocks _____
   - Air bubble _____
   - Honey _____
   - Glaciers _____
   - Hot air balloon _____

3. Draw diagrams to show objects as example of solid, liquid and gas.

   Solid

   Liquid

   Gas

Answer Key

Worksheet 1

Fill in the blanks:

- Matter is all around us.
- Matter occupies space.
- Things around us have weight.
- Gas is a state of matter with no fixed shape or volume.

Name the states of matter of the following:

- Rocks solid
- Air bubble Gas
- Honey liquid
- Glaciers Solid
- Hot air balloon gas

Draw diagrams to show objects as example of solid, liquid and gas.

Solid

Liquid

Gas

Worksheet 2

1. Draw and label a diagram to show layers of Earth.

2. Name the three states of matter.

- _____
- _____
- _____

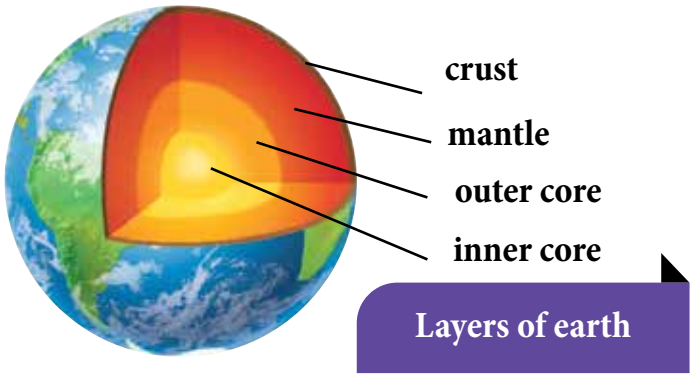
3. Match the following:

Water	Heated or cools, changes state
Matter	Found in all tree states
Solid	Ice lollies
Freezing Juice	Are mostly liquid
Oceans	Changes into liquid by heating

Answer Key

Worksheet 2

1. Draw and label a diagram to show layers of Earth.



2. Name the three states of matter.

- Solid
- Liquid
- Gas

3. Match the following:

Water	Heated or cools, changes state
Matter	Found in all three states
Solid	Ice lollies
Freezing Juice	Are mostly liquid
Oceans	Changes into liquid by heating

Answer Key

Quick Review

1. Mention which states the following matter is found in.

Matter	State
Steam	Gas
Leaf	Solid
Milk	Liquid
Soup	Liquid
Cup	Solid
Water Vapour	Gas

Quick Review

Decide which state of matter is in the pics below:

Solid

Liquid

Gas

Chapter Review

CHOOSE THE CORRECT ANSWER

Number	Answer
1	a
2	b
3	b
4	a

Give short answers

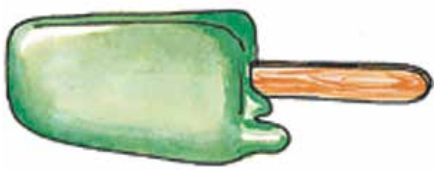
1. Liquid, gas
2. Gas
3. Solid
4. Crust, mantle, inner core, outer core

Write correct state of the matter in the blank

1. Water **liquid**
2. Balloon **gas**
3. Juice **liquid**
4. Stone **solid**
5. Air **gas**
6. Ice **solid**

DRAW AND NAME STATE OF THE MATTER BELOW WHEN IT IS COOLED OR HEATED

Heated



liquid

Cooled

Solid

Heated

gas

Unit 5 | ENERGY

SUB-TOPICS

- Introduction
- Energy
- Natural Sources of Energy
- Sun
- Wood
- Water
- Natural Gas
- Coal
- Oil
- Types of Energy:
- Light Energy
- Sound Energy
- Heat Energy

LESSON PLAN #1

Class: III

Subject: General Science

Unit: 4

Topic: Matter

Sub-Topics:

- Introduction
- Energy
- Natural Sources of Energy
  - Sun
  - Wood
  - Water
  - Natural Gas
  - Coal
  - Oil

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To give students a clear concept of the topic.
- To make them aware of the sources of energy
- To impart knowledge of various uses of energy

Resources:

- Textbook NAS 3
- Charts

Activity Material:

- Candle (heat and light)
- Flute (Sound)
- Torch (light)
- Toy car (battery cell—Electrical charge)

- Coal (heat)
- Piece of wood (heat)
- Vinegar

Starter Activity: (10 min)

- Teacher will write the definition of energy on the board.
- ‘ Energy is the power to make things move, work or change.’
- Students will be asked to bring some items (energy sources) for show and tell. Each student will show the item brought, name it, and describe it.

Methodology: (25 min)

- Students will be asked to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Next, the topic will be read by the teacher loudly. The explanation will follow. All the available resources will be effectively used.
- Teacher will conduct a discussion with students to elaborate further.
- Teacher will give a quick analysis to emphasize key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Quick Review on page 39, and Q.1 of Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be asked to do Worksheet 1.

Activity:

- Students will be asked to observe various natural sources of energy at their home and make a list on A4 sheet, for class display.

Further Notes

Teacher Ideas

LESSON PLAN #2

Class: III Subject: General Science

Unit: 5

Topic: Energy

Sub-Topics:

- Types of Energy
- Light Energy
- Sound Energy
- Heat Energy

Date : Duration: 2x 40

Term : Week:

Learning objectives:

- To give knowledge of different types of energy

Resources:

- Text Book NAS 3
- Charts

Activity Material:

- Video
  https://youtu.be/E9OX-y2PErk?si=8ITE_Qi0DaV7gj0a

Starter Activity: (10 min)

- Teacher will make prior arrangements to show students the video on the topic.
- The key points and types of energy will be written on the board.

Methodology: (30 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. The teacher will do loud reading alongside students. Furthermore, explanation will be done. All the available resources will be effectively used.
- A student-teacher discussion will be conducted to elaborate on the topic further.
- Teacher will give a quick analysis of the topic, to emphasize the key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus, Minus, Interesting) on board.

Teacher Ideas

Assessment Opportunities: (30 min)

- Students will be asked to do Q.2 and 3 from Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2 to do.

Activity:

- Students will be given the following link to watch the video with a parent/sibling.
  https://youtu.be/fjuvatIoSzY?si=k_wP7V1-wM49o0Fp

Further Notes

Teacher Ideas

Worksheet 1

1. Define energy.

2. Look at the following images and write the type of energy at work.

3. Match the following

Sun	Wind energy
Air	Solar energy
Oil	Heat
Wood	Fuel
Natural Gas	Heat

Answer Key

Worksheet 1

1. Define energy Ans. Energy is the power to make things work, move and change.

2. Look at the following images and write the type of energy at work.

Oil/ Petrol

Solar Energy

Water

Wind

3. Match the following

Sun	Wind energy
Air	Solar energy
Oil	Heat
Wood	Fuel
Natural Gas	Heat

Worksheet 2

1. Fill in the blanks.

- The energy that comes from a _____ source helps us to see.
- _____ energy helps us to hear.
- _____energy makes things warm.
- Devices work due to _____ energy.

2. Look at the following images, name the objects, and recognize the type of energy.

Mark as True or False.

- Hydroelectric energy is produced by wind. _____
- Certain jellyfish in the oceans produce their own light. _____
- To run a mobile phone, we need to charge it with electrical energy. _____
- A turbine turns wind energy into electrical energy. _____
- Animals use sunlight to produce their food. _____

Answer Key

Worksheet 2

1. Fill in the blanks.

- The energy that comes from a **light** source helps us to see.
- **Sound** energy enables us to hear.
- **Heat** energy makes things warm.
- Devices work due to **electrical** energy.

2. Look at the following images, name the objects, and recognize the type of energy.

Candles produce heat and light

Fireflies produce light energy

Sun produces light and heat

Flute produces sound

Mark as **True** or **False.**

- Hydroelectric energy is produced by wind. **False**
- Certain jellyfish in the oceans produce their own light. **True**
- To run a mobile phone, we need to charge it with electrical energy. **True**
- A turbine turns wind energy into electrical energy. **True**
- Animals use sunlight to produce their food. **False**

Answer Key

Quick Review

It is used to make hydroelectric power	Natural Gas
It is a black liquid used to make fuel	Water
We burn it to make ourselves warm	Coal
It comes from our stoves	Wood
It is old plant matter	Sun
Solar panels use its energy	Oil

Chapter Review

1. CHOOSE THE CORRECT ANSWER

Number	Answer
1	a
2	b
3	b
4	a

2. GIVE SHORT ANSWERS

- Ans. Natural gas is used to power stoves and gas heaters.
- Ans. Sun provides energy in the form of sunlight to plants due to which they can make their own food.
- Ans. Hydroelectric power is generated by the dams which is then used to run our home appliances.
- Ans. Light helps us to see.
- Ans. We use energy for heating and cooling our homes. e.g., electricity is used to run fans and electric cookers.

3. WRITE SHORT NOTE ON:

- Coal: Coal is an energy resource burned to generate electricity. In coal-fired power plants, heat is produced, which converts water into high-pressure steam, which drives turbines to produce electricity.
- Oil: A primary source of energy that comes from burning oil to generate electricity and power. From oil, transportation fuels, heat and light are produced which are useful energy for all of us.
- Water: The primary form of energy, harnessed in hydroelectric power, which is generated by the movement of water, (in the liquid state) through a turbine, e.g., dams and rivers.

Unit 6 NATURAL RESOURCES

SUB-TOPICS

- Introduction
- Water
- Land
- Air
- Animals
- Use of Natural Resources
- Water
- Trees
- Sunlight
- Soil
- Wind
- Rocks and Minerals

LESSON PLAN #1

Class: III

Subject: General Science

Unit: 6

Topic: Natural Resources

Sub-Topics:

- Introduction
- Water
- Land
  - Air
  - Forests and Plants
  - Animals
  - Use of Natural Resources
  - Water
  - Trees
  - Sunlight
  - Soil
  - Wind
  - Rocks and Minerals
  - (Human activities that adversely affect us)
  - Cutting Down Trees
  - Building Cities
  - Overuse of Natural Resources
  - Changing the Land

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To enable students to recognize natural resources.
- To enable them to predict result of complete consumption of natural resources.
- To give awareness on the changes in the environment due to human activities.

Resources:

- Text Book NAS 3
- Charts

Activity Material:

- Pictures of some objects made from natural resources., e.g., piece of paper, cotton shirt, glass bottle, glass of water, chair on a chart paper.
- On the flip side, pictures of corresponding natural sources, like wood, water, sand, cotton plan

Starter Activity: (10 min)

- In this activity students will guess the natural resource. The teacher will display a poster showing pictures of objects made from natural resources. Students will be asked to name the natural resource used in the making of these objects while the flip side will be simultaneously shown. Correct responses will be acknowledged.

Methodology: (25 min)

- The students will be asked to open their books to assigned page numbers and read silently. Teacher will stay on round to facilitate. Next, the topic will be read loudly by the teacher alongside the students. Furthermore, topic will be explained by the teacher. The effective use of resources will be ensured by the teacher; especially starter activity material.
- Teacher will conduct a discussion with students to further elaborate the topic.
- A quick analysis will be given by the teacher to emphasize key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus, Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Quick Review on page 46 and Q.2 from Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be asked to do Worksheet 1.

Activity:

- Students will be asked to watch the video with a parent/sibling on the following link.

  https://youtu.be/SXqPnzgBwLk?si=GL59JkieuB_l6let

Teacher Ideas

LESSON PLAN #2

Class: III

Subject: General Science

Unit: 6

Topic: Natural Resources

Sub-Topics:

- Pollution
- Air Pollution
- Water Pollution
- Land Pollution
- Noise Pollution
- Ways to reduce pollution

1. Ways to reduce pollution
   - Reduce, Reuse, and Recycle
   - Save Energy
   - Use public transport or carpool
   - Avoid using plastic
   - Keep water clean
2. Endangered species of Pakistan
   - Indus River Dolphin
   - Snow Leopard
   - Markhor
   - Forest Dormice
   - Green Turtle
   - Black Buck
3. Ways to protect Endangered Animals
   - Protect their homes
   - Stop Illegal Hunting
   - Work with Communities
   - Reduce Pollution
   - Extinct Animals
   - Dinosaur
   - Do do Bird
   - Western Black Rhinoceros

Date :

Duration: 2x 40

Term :

Week:

Learning objectives:

- To enable students to learn the definition of pollution and its types.
- To give knowledge of endangered animals in Pakistan
- To give awareness of the environmental changes due to human activities and measures that need to be taken for their preservation.
- To give knowledge of extinct animals.

Teacher Ideas

Resources:

- Text Book NAS 3
- Charts

Activity Material:

- Water, oil, salt and vinegar, glasses

Starter Activity: (10 min)

- Teacher will write definition of pollution on the board.
- 'Pollution is the human activity that hurts the environment around us like the air, the land, the water or anything.'
- The teacher will place glasses of water labelled as A, B, C, T (T IS TEST) on the display table and other activity material. Oil will be added to Glass A, and salt will be added to Glass B. Vinegar will be added to glass C. Nothing will be added in Glass T.
- Students will be asked to make observations and note.
- Result: Glass A:- Oil will come on the surface (like oil spills in oceans)

  Glass B:- Salt will dissolve and disappear(it's there, but not visible).

  Glass C:- Vinegar will dissolve and disappear.(Can smell it)

  Test will show no result.

Methodology: (30 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will stay on round to facilitate reading and learning. Teacher will then read loudly alongside students. Explanation will be done by the teacher. All the available resources will be used effectively.
- Teacher-student discussion will be conducted to further elaborate the topic.
- A quick analysis will be given by the teacher to emphasize key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus. Minus, Interesting)) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Quick Reviews on page 51 and 55; and Q.1,3,4 of Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2, to do.

Activity:

- Students will be taken on a visit to a public park to make observation and note litter and other acts of human negligence and suggest measures to improve the situation as well as realise their role in the community.
- Their reports can be shared in morning presentations; by selecting and coming up with common class suggestions.

Worksheet 1

1. Match the following:

Natural Resource	Use
Water	Breathing
Air	Drinking
Soil	Building
Minerals	Plant Growth

2. Fill in the blanks:

- Dams are constructed to produce _____ through power of water.
- _____ and _____ are found in land.
- Life is impossible without _____.
- _____ is a big danger for plant and animal life.
- We get _____ and _____ from chicken.
- Animals and plants will _____ without water.
- Some species of plants and animals can go _____ with overuse.

3. Look at the images and label.

Answer Key

Worksheet 1

1. Match the following:

Natural Resource	Use
Water	Breathing
Air	Drinking
Soil	Building
Minerals	Plant Growth

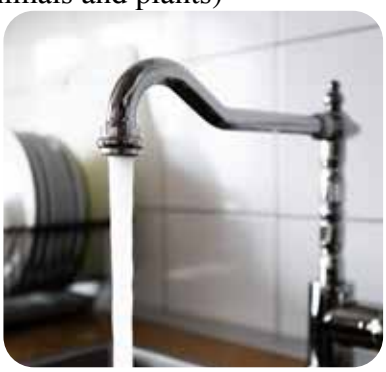
2. Fill in the blanks:

- Dams are constructed to produce **electric energy** through the power of water.
- **Stones** and **metals** are found in land.
- Life is impossible without **air**.
- **Deforestation** is a big danger to plant and animal life.
- We get **meat** and **eggs** from chicken.
- Animals and plants will **die** without water.
- Some species of plants and animals can go **extinct** with overuse.

3. Look at the images and label.

Deforestation (limiting homes for animals and plants)

Building cities (affect natural resources)



Tap water (Overuse of natural resources)

Quarry (Changing the land)

Worksheet 2

1. Define pollution.
2. Name the types of pollution.
3. Write any four ways to reduce pollution.
4. Identify the image and name the endangered species.






5. Name any two extinct animals.

Answer Key

Worksheet 2

1. Define pollution.

Ans. 'Pollution is when harmful things go into the air, water or ground and make them dirty.'

2. Name the types of pollution.

- Air
- Water
- Land
- Noise
- Light

3. Write any four ways to reduce pollution.

- Reduce, Reuse, Recycle
- Usage of public transport or carpool
- Avoid use of public transport
- Energy saving measures

4. Identify the image and name the endangered species.

Markhor

Snow Leopard

Indus River Dolphin

Black Buck

Green Turtle

Forest Dormice

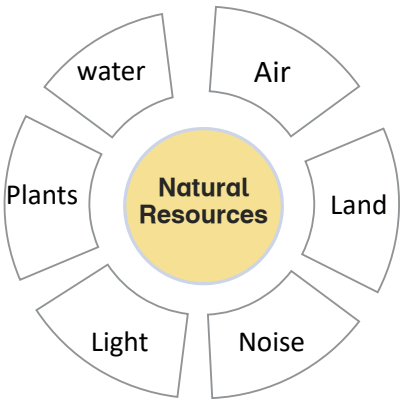
5. Name any two extinct animals.

- Dinosaur
- Do do bird

Answer Key

Quick Review

1. Fill in the names of natural resources.



Quick Review

1. Look around the surroundings of your home or school. Can you identify any kind of pollution?

Noise pollution is prevalent in my locality.

Chapter Review

1. CHOOSE THE CORRECT ANSWER

Number	Answer
1	b
2	c
3	a
4	a

2. MATCH THE IMAGE WITH THE DESCRIPTION

Help plant grow	
Deforestation	
Use wind to make electricity	
National animal of Pakistan	

3. FILL IN THE BLANKS

Number	Answer
1	Furniture
2	Light
3	Sun
4	Littering
5	Asthma
6	Carbon dioxide

ANSWER BRIEFLY

Ans.

Conserve water

Use renewable energy

Ans.

Indus River Dolphin

Markhor

Ans. 'Extinct animals are species of animals that have completely died out and no longer exist.'

Unit 7 | FORCES

SUB-TOPICS

- Forces
- Push
- Pull
- Uses of Force
- Effects of Force
- Change directions
- Stop
- Slow down
- Speed up
- Tools
- Simple Machines
- Lever
- Inclined Plans
- Wheels and Axle
- Screws
- Wedge
- Pulley
- Vehicles –past and present
- Tonga
- Bullock Cart
- Cycle
- Bus
- Motorcycle
- Car

LESSON PLAN #1

Class: III

Subject: General Science

Unit: 7

Topic: Force

Sub-Topics:

- Forces
- Push
- Pull
  - Uses of Force
  - Effects of Force
  - Change directions
  - Stop
  - Slow down
  - Speed up

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To enable students to define force
- To make them aware of simple machines used by humans in the past
- To make them understand how motion of vehicles can be changed through application of force, and ratio of force and motion

Resources:

- Text Book NAS 3
- Charts

Starter Activity: (10 min)

- Teacher will write the following on the board
  'Force is a push or pull that acts on an object to move, stop, or pull an object.'
- Teacher will ask students to read the definition and develop relevant examples of push and pull.
- Examples:

Pushing a trolley at the airport

--Hitting a ball with a cricket bat

--Pull or push a drawer

--Push a door to close it

--Pull a plug out from a socket

Methodology: (25 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will take rounds and facilitate. Loud reading will be done by the teacher alongside the students. Furthermore, teacher will explain the topic. All the available resources will be effectively used.
- Student-teacher discussion will be conducted to elaborate further.
- A quick analysis will be given by the teacher to emphasize key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus. Minus, Interesting)) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Quick Review on page 46 and Q.2 from Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 1 to do.

Activity:

- Students will be provided with link for a video, to watch with a parent or sibling.
  https://youtu.be/sva0ZRfFx4k?si=uB1Y4mRGhvYLniYr

Teacher Ideas

LESSON PLAN #2

Class: III Subject: General Science

Unit: 7

Topic: Forces

Sub-Topics:

- Tools
- Simple Machines
- Lever
- Inclined Plans
- Wheels and Axle
- Screws
- Wedge
- Pulley
- Vehicles –past and present
- Tonga
- Bullock Cart
- Cycle
- Bus
- Motorcycle
- Car

Date : Duration: 2x 40

Term : Week:

Learning objectives:

- To enable students to have clear concept of tools.
- To make them aware of various different types of machines
- To give them awareness of machines used in the past through pictures.

Resources:

- Text Book NAS 3
- Charts

Activity Material:

- Picture of simple machines posted on chart paper from page 64
- Pictures with the answers on another sheet.

Starter Activity: (10 min)

- Teacher will place the poster on a visible place and ask students to recognize the machines. Their responses will be noted.
- At the end, the second poster will be displayed.

Methodology: (30 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will take rounds to facilitate. Loud

Teacher Ideas

reading will be done by the teacher, alongside the students. The explanation will follow and teacher will use all the available resources.
- A student-teacher discussion will be conducted to elaborate.
- Teacher will give a quick analysis to highlight key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus. Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Chapter Reviews on page 65 and 66; and Q. 1,2,3,4 of Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2, to do.

Activity:

- Students will be asked to observe any two activities using force in their daily lives.

Worksheet 1

1. Fill in the blanks:

- We use our hands to _____ or move an object away from our bodies.
- An object is brought closer to our body when _____.
- _____is a push or _____that can move objects move closer or away from us.
- We cannot see _____ but can feel it.

2. Recognize the action in the following and write.



3. Match the following.

Force	It stops
Catch a rolling ball	Can change direction
Bicycle brakes	Quicker movement
Faster push	Reduce speed
Pulling	Things move towards us

Answer Key

Worksheet 1

1. Fill in the blanks:

- We use our hands to **push** or move an object away from our bodies.
- An object is brought closer to our body when **pulled**.
- **Force** is a push or **pull** that can move objects closer or away from us.
- We cannot see **force** but can feel it.

2. Recognize the action in the following and write.

Cutting

Playing

Hitting

3. Match the following.

Force	It stops
Catch a rolling ball	Can change direction
Bicycle brakes	Quicker movement
Faster push	Reduce speed
Pulling	Things move towards us

Worksheet 2

1. Write three ways tools are helpful for us.

2. Look at the following images and name the simple machine..

3. Name the following vehicles from the past.

4. Name and draw a vehicle that can carry 5 people.

Answer Key

Worksheet 2

1. Write three ways tools are helpful for us.

- Building houses
- Cooking tools
- Used as weapon

2. Look at the following images and name the simple machine..

Pulley

Lever

inclined plane

3. Name the following vehicles from the past.

Bullock cart

Tonga

Bicycle

4. Name and draw a vehicle that can carry 5 people.

Car

Answer Key

Quick Review

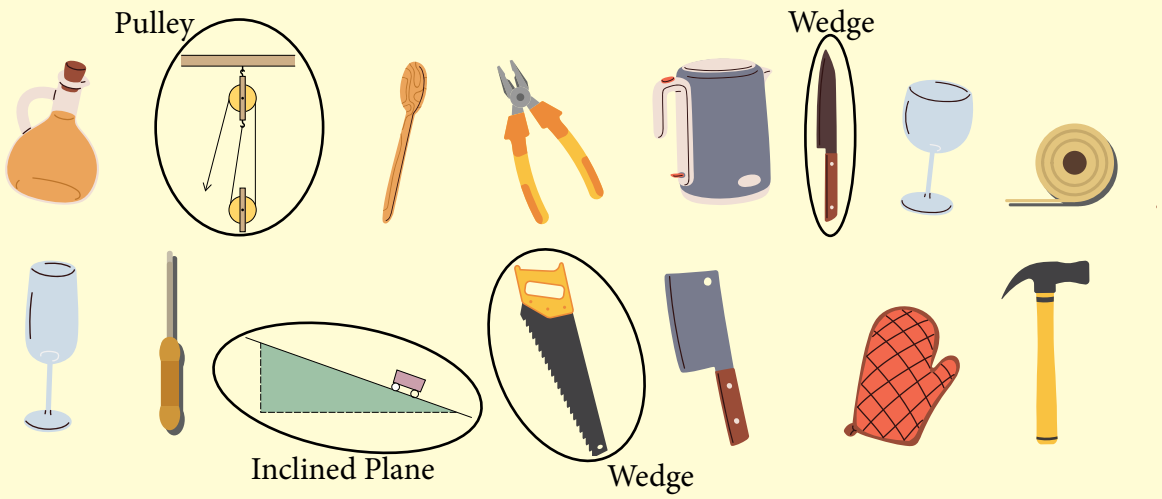
Ans. Teacher will ask students to create a story to help out people in difficult situations with extraordinary efforts and smart use of the forces.

Hints:

- A child hanging from a balcony
- A traffic accident about to happen

Quick Review

Circle the simple machines and write the names of the type of simple machines in the picture given below.



- Students to colour.
- Names of machines:
- Bicycle, ladder, wheelbarrow, wedge, Tools(various) like scissors, screw, can opener, nails, stapler, hammer, plier, nuts, and bolts

Vehicles of the past	Vehicles of present
People used their strength to move the vehicles	Machines help move things faster
Simple machines were used, like pulley, wheel and axle	The machines help us move faster and are less tiring

Chapter Review

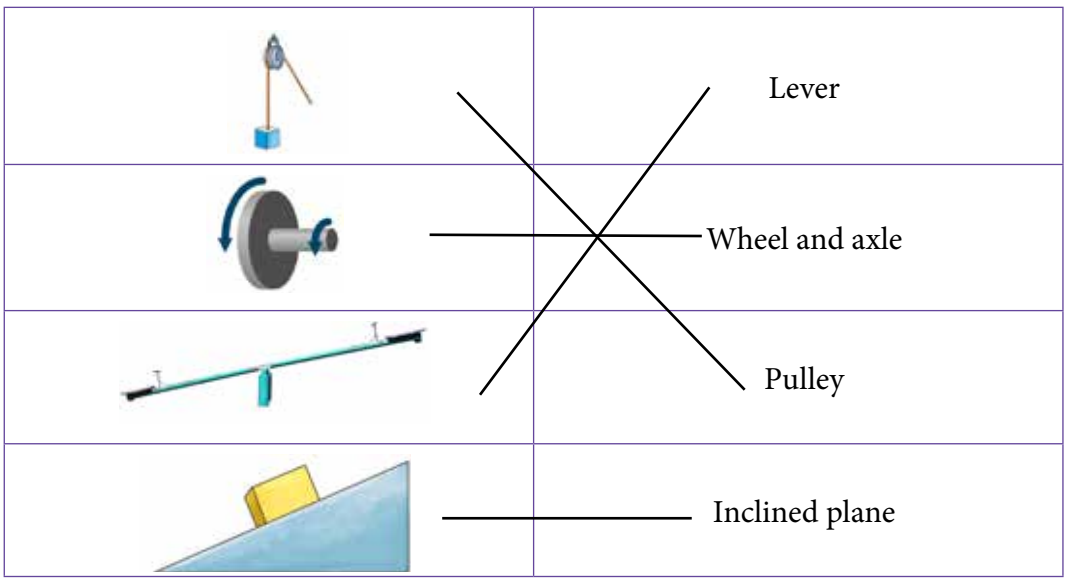
1. CHOOSE THE CORRECT ANSWER

Number	Answer
1	b
2	a
3	b
4	a

2. FILL IN THE BLANKS

Number	Answer
1	Motion
2	Pulley
3	Force
4	Fuel/Electricity

3. MATCH THE PICTURES OF SIMPLE MACHINES WITH THEIR NAMES



4. ANSWER THE FOLLOWING

1. Ans. Simple machines are tools that make work easier by changing the force needed or the direction of the force.
2. Ans, Lever is a bar that rotates on a fulcrum, while the inclined plane is a sloping surface used to lift heavy objects by distributing the force over a longer distance.
3. Ans. Old transport was about animals like buffalo, donkeys, camels, etc. In modern transport, we have cars, bikes, ships, and trains. In comparison to past ones, modern transportation is significantly faster, more convenient, accessible and safe.

Unit 8 | THE HELPFUL SUN

SUB-TOPICS

- The Sun
- Shadow formation
- Morning
- Noon
- Afternoon
- Day and Night
- Cardinal Directions
- North
- South
- East
- West

LESSON PLAN #1

Class: III Subject: General Science

Unit: 8

Topic: The Helpful Sun

Sub-Topics:

- The Sun
- Shadow formation
  - Morning
  - Noon
  - Afternoon

Date : Duration: 2x40 Term : Week:

Learning objectives:

- To enable students to understand the concept of shadow formation.
- To make them aware that size and location of shadow can be used to estimate time.

Resources:

- Text Book NAS 3
- Charts

Activity Material:

- Video on shadow
  Link: https://youtu.be/pFUjKg2iMmE?si=caGCyJD9ttv36LFZ

Starter Activity: (10 min)

- Teacher will arrange to show a video on 'Shadow' on the given link.
- Teacher will write keywords on the board after completion of video.

Methodology: (30 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will stay on round and facilitate. Loud reading will be done by the teacher alongside students. Furthermore, topic will be explained. The available resources will be effectively used.
- Teacher will conduct a discussion with the students and elaborate further.
- A quick analysis will be given by the teacher to emphasize key points.

Plenary: (5 min)

- Students will fill out quick PMI (Plus Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Quick Review on page 72, and Q.2,3—1,2 from Chapter Review.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 1, to do.

Activity:

- By setting up a light source and keeping various objects in front of it will enable students to see the shadow. Ask students to perform this activity with a friend.

Further Notes

Teacher Ideas

LESSON PLAN #2

Class: III Subject: General Science

Unit: 8

Topic: The Helpful Sun

Sub-Topics:

- Day and Night
- Cardinal Directions
- North
- South
- East
- West

Date : Duration: 2x 40

Term : Week:

Learning objectives:

- To enable students to understand fully the concept of movement of Earth and the direction of sunrise and sunset.
- To enable students to identify the cardinal directions with respect to East.
- To give them awareness of directions towards their school, home, etc.

Resources:

- Text Book NAS 3
- Charts

Activity MAterial:

- Video on Cardinal directions on the following.
  https://youtu.be/ibLedhew2r0?si=cBmusHVQPBPH3Jx_

Starter Activity: (10 min)

- Teacher will arrange to show the video on the given link.
- After video completion, 4 volunteers will be called to practice cardinal directions. The compass will be used to point towards North.

Further Notes

Teacher Ideas

Methodology: (30 min)

- Teacher will ask students to open their books to assigned page numbers and read silently. Teacher will stay on round and facilitate. Loud reading will be done by the teacher alongside students, explanation will follow. All the available resources will be effectively used.
- Student-teacher discussion will be conducted to elaborate further.
- Teacher will give quick analysis of the topic to emphasize key words.

Plenary: (5 min)

- Students will fill out quick PMI (Plus, Minus, Interesting) on board.

Assessment Opportunities: (30 min)

- Students will be asked to do Q.1,4.

Home Learning:

- Students will be asked to read the topic for revision and reinforcement.

Lesson Evaluation: (10 min)

- Students will be given Worksheet 2 to do.

Activity:

- Students will be asked to practice recognition of cardinal directions with their friends.

Worksheet 1

1. State whether True or False.
   - Our Sun formed in a solar nebula. _____
   - The Sun is located in the centre of the solar system. ____
   - The light travels in irregular lines. _____
   - When light hits an object it always passes through it.
2. Complete.
   - Morning: The Sun is _____ in the sky.
   - Shadows are _____and stretch towards the _____.
   - Noon: The Sun is _____in the sky.
   - Shadows become _____ and they appear directly _____ the objects.
3. How is shadow formed?
4. Draw a diagram to show shadow formation at noon time and evening time.

Answer Key

Worksheet 1

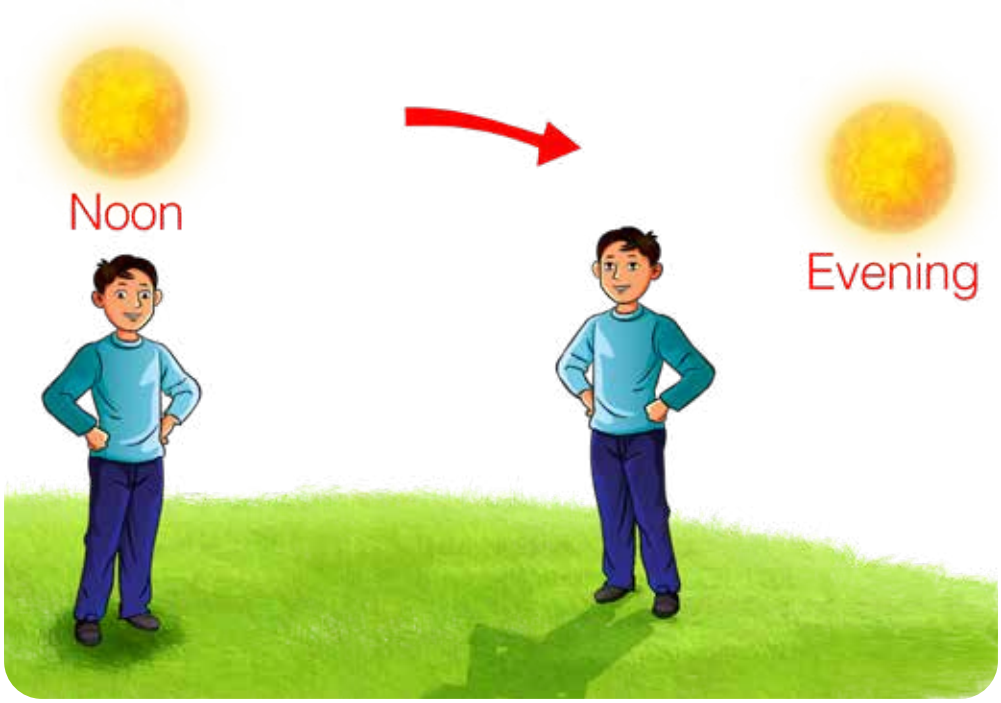
1. State whether True or False.
   - Our Sun formed in a solar nebula. **True**
   - The Sun is located in the centre of the solar system. **True**
   - When light hits an object, it always passes through it. **False**
   - The light travels in irregular lines. **False**

2. Complete.
   - **Morning:** The Sun is **low** in the sky.
   - Shadows are **long** and stretch towards the **West**.
   - **Noon:** The Sun is **high** in the sky.
   - Shadows become **short** and they appear directly **beneath** the objects.

3. How is shadow formed?

   Ans. When light shines on an object, but cannot pass through it a shadow forms. The object blocks the light so there is a dark shape behind the object where the light does not shine.

4. Draw a diagram to show shadow formation at noon time and evening time.



Worksheet 2

1. Draw a diagram to show the rotation of the Earth.

2. What are cardinal directions? What are they?

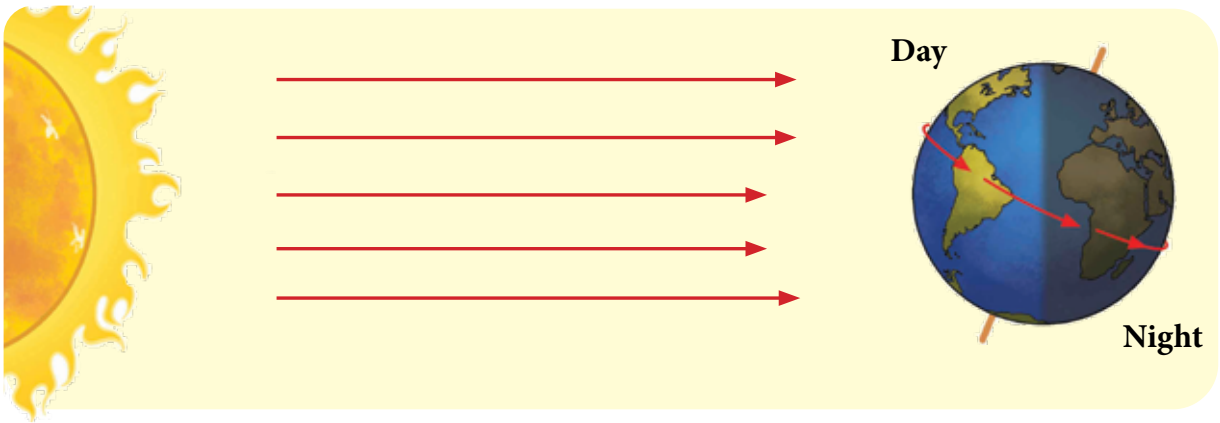
3. Match the following.

Directions	Facts
Cardinal directions	The Sun rises in this direction
East	Help find our way
West	Its opposite to South and East is on the right
South	The direction where Sun sets
North	East is on the left and West on your right

Answer Key

Worksheet 1

1. Draw a diagram to show the rotation of the Earth.



2. What are cardinal directions?

Ans. There are four main directions known as cardinal directions. They are North, South, East and West.

3. Match the following.

Directions	Facts
Cardinal directions	The Sun rises in this direction
East	Help find our way
West	Its opposite to South and East is on the right
South	The direction where Sun sets
North	East is on the left and West on your right

Answer Key

Chapter Review

1. CHOOSE THE CORRECT ANSWER

Number	Answer
1	a
2	a
3	a
4	b

2. WRITE TRUE OR FALSE

Number	Answer
1	True
2	True
3	True
4	False
5	True

3. ANSWER THE FOLLOWING QUESTIONS IN DETAIL 4. ANSWER THE FOLLOWING

1. Ans. Shadows are dark areas formed when light falls on an object but cannot pass through it. The object blocks the light thus there is a dark shape behind the object where the light does not shine. This dark shape is known as shadow.

2. Ans. The Sun gives us light and heat which are essential for life. The Sun helps plants grow by providing the energy they need for photosynthesis. It also affects weather and seasons. Without Sun life is impossible.

3. The time of the day can be estimated by observing the direction and length of shadows. For example: In the morning, The Sun is low in the sky and shadows are long and stretch towards West, so with the help of sundial we can estimate time by looking at the shadow.

Sunset

West

South

North

East