

Lesson Plan

Grade: Five

Subject: Science

Term: 2nd

Time: 40min

Teacher's Name: _____

Week: 6

Day: 1

Chapter 6: Light and Sound

Topic: Natural and Artificial Sources of Light

Objective(s):

At the end of this period, the students will be able to:

- Identify natural and artificial sources of light.
- Investigate luminous and non-luminous objects in daily life.

Resource Materials:

Chalk/marker, white/blackboard, Science Textbook, Worksheet

Warm-up Activities

5mins

Before beginning the lesson, ask students to say "Tasmiya."

Ask them: Can you name some objects that give their own light? Can you hear sound under water? Is noise a pleasant sound? Wait for their responses.

Teaching and Learning Activities:

25mins

- Write the topic name 'Light' on the board.
- Ask students can you see in dark? Let them respond.
- Tell them we cannot see in the dark. That's why we switch on light to see things.
- Darkness is absence of light. If there is no light, everything will be dark.
- Life cannot exist without light because everything depends on light.
- Light is a form of energy that helps us to see things.
- Tell students the biggest source of light is Sun.
- The objects that emit light are called sources of light.
- They can be: (i) Natural sources (ii) Man-made sources
- Natural sources are sun, stars and fireflies.
- Tell students man has also created some sources of light. They are called man-made sources.
- Electric bulbs, candles, lamps, etc. are man-made sources.
- Now write 'Luminous objects' on the board.
- All objects that emit their own light are called luminous objects.
- Tell them the Sun, stars, bulbs, candles, etc. are some examples of luminous objects.
- Now write 'non-luminous objects' on the board.
- Tell students non-luminous objects cannot emit their own light.
- Examples include books, chairs, tables, doors, etc.
- Ask students what do you think if Moon is luminous or non-luminous. Let them respond.

- Tell them Moon is a non-luminous object. It does not have its own light. It reflects light coming from the Sun.
- Ask students to look around their surroundings and identify natural and artificial sources of light.

Review:**3mins**

Explain the main points about light, luminous and non-luminous objects.

Evaluation:**5mins**

To check the understanding of students, ask them:

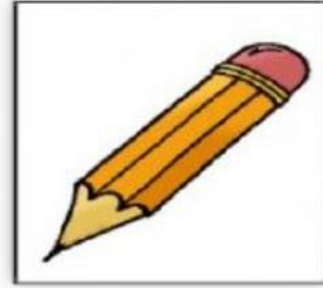
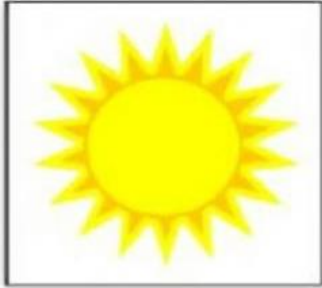
- What is light?
- What are sources of light?
- Name some natural sources of light.
- Name some man-made sources of light.
- What are luminous objects? Give some examples.
- What are non-luminous objects? Give some examples.

Homework:**2mins**

Ask students to learn the topic. Solve worksheet.

Worksheet

Write luminous or non-luminous objects with each picture.



Lesson Plan

Grade: Five

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Time: 40min

Teacher's Name: _____

Week: 6

Day: 2

Chapter 6: Light and Sound

Topic: Materials are of three types

Objective(s):

At the end of this period, the students will be able to:

- Identify and differentiate between transparent, opaque and translucent objects in their surroundings.

Resource Materials:

Chalk/marker, white/blackboard, Science Textbook, Worksheet

Warm-up Activities

5mins

Before beginning the lesson, ask students to say "Tasmiya."

Ask them: What is light? What are luminous objects? What are non-luminous objects? Wait for their responses.

Teaching and Learning Activities:

30mins

- Write the topic name 'Types of materials' on the board.
- Tell students light interacts with different materials. Some of them allow light to pass and some of them block its path.
- On these basis materials are divided into three categories:
 - (i) Transparent materials
 - (ii) Translucent materials
 - (ii) Opaque materials
- Tell the students about type of material one by one.
- Now write 'Transparent materials' on the board.
- The materials that allow light to pass through them are called transparent materials. Water, glass, etc. are transparent materials. They do not cast shadows.
- Now write 'Translucent materials' on the board.
- **Translucent Materials:** The materials that allow some of the light to pass through them are called translucent materials. Plastic, butter paper, frosted glass, and wax paper etc. are translucent materials. They form a lighter shadow. Objects on other side appear fuzzy.
- Now write 'Opaque materials' on the board.
- **Opaque Materials:** The materials that do not allow light to pass through them are called opaque materials. Wood, stone, metal sheets etc. are opaque materials. They form a clear and dark shadow. Light is reflected, scattered or absorbed when it strikes them.
- Draw ray diagrams of transparent, translucent and opaque object on the board and explain concept with their help.
- Ask students to open their textbooks and do activity.

Review:**0mins**

Explain the main points about types of materials.

Evaluation:**5mins**

To check the understanding of students, ask them:

- What are the types of materials?
- What are transparent materials? Give some examples.
- What are translucent materials? Give some examples.
- What are opaque materials? Give some examples.

Homework:**5mins**

Ask students to learn the topic. And solve the given worksheet.

Worksheet

Q1. Answer the following questions.

- i. Differentiate between transparent and opaque objects. Give example.

- ii. What is a translucent object? Give three examples.

- iii. What are artificial sources of light?

- iv. Differentiate between Luminous and non-Luminous objects.

Lesson Plan

Grade: Five

Subject: Science

Term: 2nd

Time: 40min

Teacher's Name: _____

Week: 6

Day: 3

Chapter 6: Light and Sound

Topic: Light Travels in a Straight Line

Objective(s):

At the end of this period, the students will be able to:

- Justify that light emerges from a source and travels in a straight line.
- Investigate those light travels in a straight line.

Resource Materials:

Chalk/marker, white/blackboard, Science Textbook

Warm-up Activities

5mins

Before beginning the lesson, ask students to say "Tasmiya."

Ask them: What do you know about transparent, translucent and opaque materials? Wait for their responses.

Teaching and Learning Activities:

25mins

- Write the topic name 'Light travels in a straight line' on the board.
- Ask students have they ever used torch in the dark? Let them respond.
- Tell them a sharp beam of light travels in a straight line. It means light travels in a straight line.
- Tell them you might have seen sunrays travelling straight.
- Ask students to open their textbooks and do the activity. Divide the class in group of 4.
- Tell the student, take an ordinary hollow straw which can be bent easily. Light a candle and fix it on a table.
- Now ask the student to stand at some distance from it. Observe the glowing candle flame through the straw. Tell them, now, bend the straw from the center and try to see the candle flame through it.
- Ask them, are you able to see the flame now? Take their response.
- Tell them, we conclude that the light coming from the candle flame reaches when the candle flame is seen through a straight straw, whereas, this does not happen while observing the candle flame through a bent straw. This proves that light travels in a straight line.

Review:

3mins

Explain the main points about light travels in a straight line.

Evaluation:

5mins

To check the understanding of students, ask them:

- How light travels?

Homework:

2mins

Ask students to learn the topic.

Lesson Plan

Grade: Five

Subject: Science

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Time: 40min

Teacher's Name: _____

Week: 6

Day: 4

Chapter 6: Light and Sound

Topic: Formation of Shadow

Objective(s):

At the end of this period, the students will be able to:

- Explain the formation of shadows.

Resource Materials:

Chalk/marker, white/blackboard, Science Textbook, Worksheet

Warm-up Activities

5mins

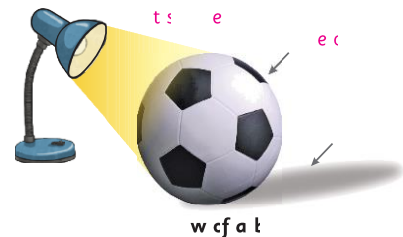
Before beginning the lesson, ask students to say "Tasmiya."

Ask them: How light travels? Wait for their responses.

Teaching and Learning Activities:

25mins

- Write the topic name 'Formation of shadow' on the board.
- Tell students light travels in straight line. If the path of light is blocked by an opaque object, it blocks the travelling rays and shadow is formed behind the object in opposite direction.
- A shadow is actually a dark area on a bright surface.
- A shadow requires three things to form:
 - An opaque object
 - A light source
 - A screen
- **How is shadow formed?** Ask students to answer this question. Wait for their responses.
- Write the answer on the board: **'When the path of light is blocked by an opaque object, a shadow of the object is formed in the opposite direction.'** Tell students to write the answer in their notebooks. Check their work.
- Ask students to go in school ground and observe shadows of different objects. Let them respond.



Review:

3mins

Explain the main points about formation of shadow.

Evaluation:

5mins

To check the understanding of students, ask them:

- What is shadow?
- How is a shadow formed?

Homework:

2mins

Ask students to learn the topic.

Lesson Plan

Grade: Five	Subject: Science	Term: 2 nd	Time: 40min
Teacher's Name: _____		Week: 6	Day: 5
Chapter 6: Light and Sound	Topic: Shape and Size, Shadow Formation due to Distance		

Objective(s):

At the end of this period, the students will be able to:

- Predict the location, size and shape of a shadow from a light source relative to the position of objects

Resource Materials:

Chalk/marker, white/blackboard, Science Textbook, Worksheet

Warm-up Activities

5mins

Before beginning the lesson, ask students to say "Tasmiya."

Ask them: How is shadow formed? Wait for their responses. Appreciate them for good response.

Teaching and Learning Activities:

25mins

- Write the topic name 'Shape and Size' on the board.
- Tell students you have learnt in previous lecture what shadows are? Today we will learn more about shadows.
- The size of shadow depends upon two things, i.e., position and distance of light source.
- Now write 'Shadow formation due to distance' on the board.
- Tell students when light source is closer, shadow is large.
- Ask students if they have ever observed their shadows at different times of the day. Let them respond.
- Tell them in the morning and evening, the Sun is closer so long shadow is formed.
- At noon the Sun is at our head so the shadow is short.
- Ask students to find a location in the school ground to trace and measure the shadows of your classmates twice a day. Take a piece of chalk and outline the shadows of your friends formed on the ground. Observe both shadows and see which shadow is longer and which one is shorter. Let them respond. Check their work. Ask the students to open their textbooks and do the activity.

Review:

3mins

Explain the main points about formation of shadow.

Evaluation:

5mins

To check the understanding of students, ask them:

- How is a shadow formed?
- On what factors the size of shadow depends?

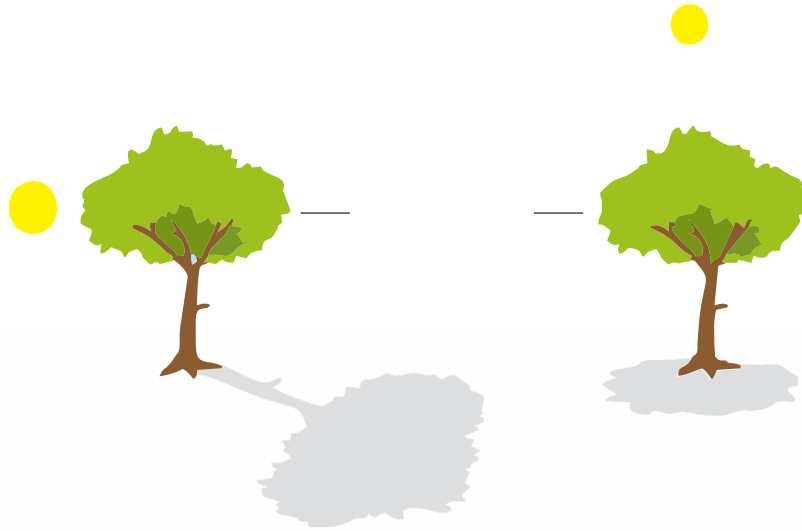
Homework:

2mins

Ask students to learn the topic. And solve the given worksheet.

Worksheet

Q1. Label the given figure.



Q2. Answer the following questions.

i. What is a shadow?

ii. How shadow is formed?

iii. What are the factors on which the size of a shadow depends on?
