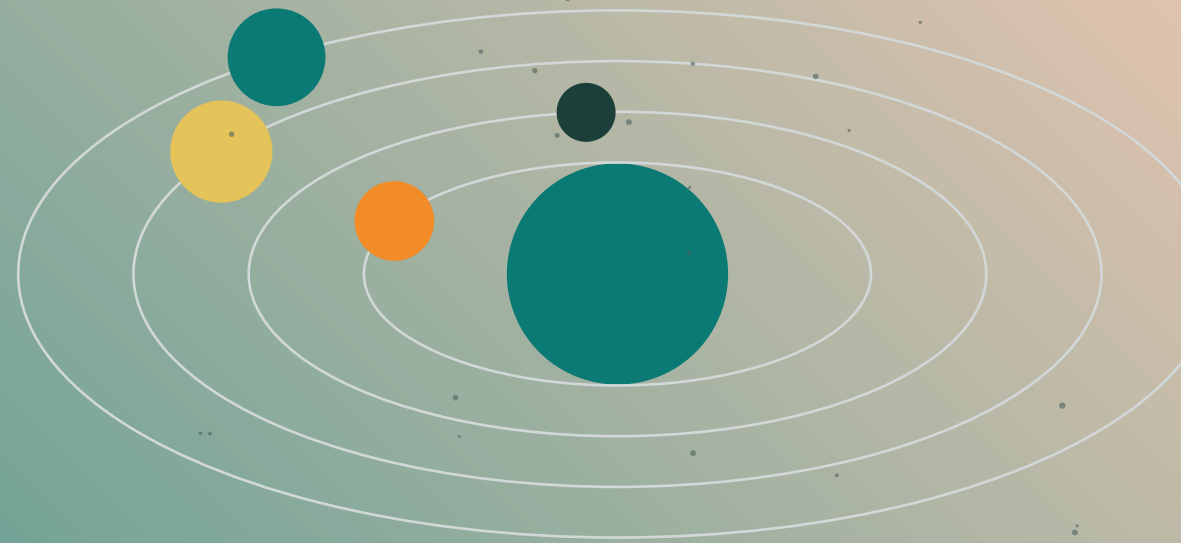


SCIENCE • CLASS 6

Light and Shadows

How light travels and why shadows form

Teacher Name • 6 • 40 minutes



Lesson plan

01 Warm-up

02 Learn

03 Explore

04 Practise



Image

Learning objectives

- Explain that light travels in straight lines
- Classify transparent, translucent and opaque materials
- Explain how shadows form
- Describe a pinhole camera

YOU ALREADY KNOW

Light comes from sources like the sun and bulbs.

KEY IDEA

Light travels in straight lines



Diagram / picture

Light moves in straight lines called rays.

When an opaque object blocks light, a dark area forms behind it – a shadow. Its size depends on the distances between the light, the object and the screen.

Make a pinhole camera



Box

Take a small closed box



Pinhole

Make a tiny hole on one side



Screen

Fix tracing paper opposite



Observe

See an upside-down image

Materials and light

Material	Type	Shadow
Glass	Transparent	Very faint
Oiled paper	Translucent	Light
Cardboard	Opaque	Dark

Test your own materials with a torch.

Did you know?

3 lakh km

light travels each second

8 min

for sunlight to reach
Earth

Upside down

pinhole camera images

QUICK QUIZ

Check your understanding

- Why do shadows form?
- Name one translucent material
- When is your shadow shortest?
- Why is a pinhole image upside down?



Activity time

1

Shadow tracing

Trace a friend's shadow at three times of day.

2

Material test

Sort objects with a torch.

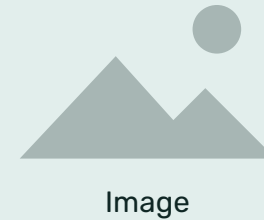
3

Pinhole camera

Build one in groups.

Homework

- Draw how a shadow forms
- List five opaque objects at home
- Write about an eclipse



Great work today!

Next lesson: Mirrors and reflection

Teacher Name

Class 6

