



BRIGHTPENCIL KIDS

Grade 1 | Ages 5-7 | 12-page learning pack

Light & Shadow Explorers

LEARNING GOAL

Recognise common light sources and investigate how opaque objects create shadows.

Study -> Practise -> Talk -> Make -> Reflect

Designed for short adult-supported sessions and independent return practice.

Purpose

Recognise common light sources and investigate how opaque objects create shadows.

Suggested rhythm

Use 10-15 minutes. Model one example, let the child try, ask how they know, then stop while attention is still positive.

Feedback

Praise the strategy, careful observation or explanation. If an answer is wrong, ask the child to show their thinking before correcting it.

Transfer

Use the hands-on task before or after the printable page so the skill connects to real objects, talk and movement.

Safety & independence

Adult supervision is expected for cutting, small objects, outdoor exploration, water, torches or elastic bands. Adapt materials to the child.

Words & ideas to notice

SCIENCE

Say the words, use them in conversation, then return to them during the activities.

Light Source

Use it in your own sentence or explanation.

Shadow

Use it in your own sentence or explanation.

Opaque

Use it in your own sentence or explanation.

Transparent

Use it in your own sentence or explanation.

Position

Use it in your own sentence or explanation.

Talk prompt

Which of these words feels newest? Explain what you think it means and give an example connected to light.

1

A shadow forms when an opaque object blocks light.

2

Changing the relative positions of light, object and screen can change shadow size/position.

SHOW IT ANOTHER WAY

I notice

I wonder

I predict

I found

Adult: model the first item. Child: explain what you notice or how you know.

1 Circle true light sources.

2 Predict which material will make the darkest shadow.

3 Move an object closer to a torch: what might happen to its shadow?

4 Record one observation from a shadow test.

Work carefully. Draw, mark, build or write when that helps your thinking.

1 Circle true light sources.

2 Predict which material will make the darkest shadow.

3 Move an object closer to a torch: what might happen to its shadow?

4 Record one observation from a shadow test.

5 Is the Moon a light source in the same way as the Sun? Explain simply.

SHOW YOUR THINKING

Use the idea in a new way

SCIENCE

Work carefully. Draw, mark, build or write when that helps your thinking.

1 Move an object closer to a torch: what might happen to its shadow?

2 Record one observation from a shadow test.

3 Is the Moon a light source in the same way as the Sun? Explain simply.

4 Why can clear glass transmit much more light than cardboard?

5 Circle true light sources.

SHOW YOUR THINKING

Talk 1 Is the Moon a light source in the same way as the Sun? Explain simply.

Talk 2 Why can clear glass transmit much more light than cardboard?

Talk 3 What strategy, clue or observation helped you most with light?

Talk 4 What mistake might someone make here? How could you help them notice it?

A complete explanation is more valuable than a fast one-word answer.

DO SOMETHING REAL

With an adult and a safe torch, project a toy shadow onto a wall. Change one distance at a time and compare.

RECORD WHAT HAPPENED

What I did

What I noticed

What I would try next

CREATE CHALLENGE

Create shadow art by tracing two different shadow outlines made by the same object.

Use this space to draw, label, plan or draft.

Independent challenge

SCIENCE

Try without help first. Then explain or check your work with a grown-up.

- 1 Is the Moon a light source in the same way as the Sun? Explain simply.
- 2 Why can clear glass transmit much more light than cardboard?
- 3 Create one new example that would help another Grade 1 learner practise light.

MY CHECK

☐ I tried a strategy ☐ I checked it ☐ I can explain one idea

ANSWER / REVIEW NOTES

- The Moon mainly reflects sunlight; it does not generate visible light like the Sun.
- Glass is transparent; cardboard is opaque.

LEARNER REFLECTION

One thing I understand better now:

One thing I want to practise again:

One real-life example I can think of:

Review status: original BrightPencil draft. Educational and rights review required before public publication.