

How Shadows Work · Conversation & classroom guide

Learning with a grown-up · Ages 4–8 · Flexible participation

What needs to be between a light and a screen to make this shadow?

Learning aim: Identify light source, blocking object and shadow in their correct relationship.

A five-minute conversation

Start with the pictured flashlight, then find the object and the screen. Trace the light's path and notice where the object blocks it. The discussion can stay entirely on the page. If you later try a flashlight activity, an adult should help and keep the light aimed at the screen, away from eyes.

Remember: Choose one comfortable way to notice or describe a detail. What do you already wonder about this picture?

Start here: Follow the picture from flashlight to object to screen.

Explore further: Predict what might happen when the object moves, then compare the result.

What is the source of light here?

Answer cue: The flashlight.

What makes the shadow appear?

Answer cue: The solid object blocks some light.

Where can we see the shadow in the picture?

Answer cue: On the screen behind the object.

Keep the idea clear

A shadow is an area where light has been blocked. It is not a dark object coming out of the flashlight.

Try: Move one shadow maker

Materials: An adult, cool flashlight, large opaque toy and clear wall.

1. An adult sets a cool flashlight toward a wall, away from eyes. Put a large opaque toy between the light and wall.
2. Keep the light and wall fixed. Predict, then move only the toy nearer the light or farther from it.
3. Describe or draw the shadow before and after. Repeat the same change to check your observation.

What this can show: The object blocks light reaching part of the wall. Record the actual change; the drawn rays are a model, not visible sticks.

Return to it: When you notice another shadow, identify what supplies light and what blocks it.

How Shadows Work · In the classroom

A 20-minute classroom lesson

Prepare: Read the poster, answer cues and misconception note. Prepare only the materials named in the activity; keep a picture-only or described option available.

Words to explore

light source — Something that gives out light.

shadow — An area receiving less light because something blocks it.

3 min · Reconnect and wonder: What needs to be between a light and a screen to make this shadow? Invite an initial idea; record it without marking it right or wrong.

4 min · Look together: Follow the picture from flashlight to object to screen. Introduce light source using the poster.

8 min · Investigate or represent: Use “Move one shadow maker.” Let pairs take turns noticing and recording, with adult help and the activity’s stated boundaries.

5 min · Explain and return: Ask the core check: What needs to be between a light and a screen to make this shadow? Accept pointing, words, signing or a drawing. If the learner is ready, offer this optional extension: Predict what might happen when the object moves, then compare the result.

Understanding check: What needs to be between a light and a screen to make this shadow?

Answer guidance: A solid object between the flashlight and wall blocks some light, leaving a darker area on the wall. The object blocks light reaching part of the wall. Record the actual change; the drawn rays are a model, not visible sticks.

Accept pointing, speech, signing, a drawing or adult dictation. Describe the illustration and use labels/position as well as color. Offer one contrast first, and use the extension when the learner is ready.

A response to keep

My idea or question

What I noticed (date/time if useful)

What I think now / my next question

<https://kiddos.ai/learn/learning-with-gina-and-ollie/how-shadows-work>

Related story: Gina and the Light Chase — Continue with Gina’s curiosity about light and shadows.

Our discovery record

Use words, marks, a drawing or an adult's notes. Keep this page with you; nothing needs to be uploaded.

Date / time (if useful): _____

My question or idea

What I noticed

What I think now

What I want to explore next

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