

Little owl. Giant shadow.

Ages 4–7 with a grown-up · 5–10 minutes · Compare position

<https://kiddos.ai/explorations/learning-with-gina-and-ollie/little-owl-giant-shadow>

Wonder together

Where should Ollie stand? To make his shadow smaller: near the flashlight, or near the wall?

Materials

A cool LED flashlight, a plain wall and one hand.

Adult setup – read before trying

An adult holds the flashlight still, aimed at a wall. Use a clear indoor space with enough light to move safely. Keep the beam away from eyes; do not use lasers or sunlight. The child can direct the adult's hand.

Try together

1. An adult holds the flashlight still, aimed at a wall, while the child predicts which hand position will make a smaller shadow.
2. Place the same hand shape in the beam, first near the flashlight, then nearer the wall. Keep the light and wall fixed.
3. Compare shadow sizes. Let the child direct another position without changing the hand's shape.

Keep the comparison clear

Keep fixed: Flashlight, wall, hand size and hand shape.

What changes: The hand's position between the flashlight and wall.

Look for: Compare the edges of the shadow when the same hand is near the light and near the wall.

Explain with care

A nearby flashlight sends light out in different directions. A hand nearer the light blocks a wider part of the beam before it reaches the fixed wall.

This nearby-flashlight comparison is not a distance rule for sunlight. A changed hand shape, moving flashlight or shifted wall changes the comparison.

Talk about it

Where should Ollie stand? To make his shadow smaller: near the flashlight, or near the wall?

Answer cue: Welcome a guess before reading the result. No correct prediction is required.

Which shadow covers more of the wall?

Answer cue: The shadow is bigger when the same hand is nearer the nearby flashlight.

Did the hand grow when its shadow grew?

Answer cue: No. The hand stayed the same; its position changed.

A parent move: Let the child choose a position before you move the hand. Keep the first guess welcome.

Start simply: Try just two clearly different positions with the same open hand.

Explore further: Choose a position between the two and predict a medium-sized shadow.

Return to it: At another time, ask your child to direct you to make the shadow smaller.

In the classroom

Flexible 20-minute small-group session; pause or shorten as needed.

3 min · Wonder

Read pages 1–2. Invite a prediction with words, pointing or a sketch; keep the result hidden.

4 min · Notice the story

Read pages 3–5. Which shadow covers more of the wall? Separate the observation from the explanation.

9 min · Try together

Use the materials and adult setup on this guide, then follow the activity steps in this guide. Compare the edges of the shadow when the same hand is near the light and near the wall.

4 min · Make meaning

Did the hand grow when its shadow grew? Invite a drawing, a description or an adult-written note. Let the child choose a position before you move the hand. Keep the first guess welcome.

Understanding check

Did the hand grow when its shadow grew?

Answer guidance: No. The hand stayed the same; its position changed.

Participation choices: Try just two clearly different positions with the same open hand. Accept pointing, words, a drawing or adult-directed action. Use the story alone if the activity is unsuitable.

Words to explore

shadow — A darker place where something blocks light.

Full adult notes and honest limits

Gina directs the test as the curious learner; Ollie cooperates and helps her notice the result.

Pause on slide 2 and accept a prediction without correcting it. With flashlight and wall fixed, moving the same blocker toward the flashlight enlarges its shadow; moving it toward the wall makes the shadow smaller. On slide 6, let your child choose and test. The hand's position and shadow size change; the hand's shape and size, flashlight and wall stay fixed. A child can point, describe, or direct your hand. If the result surprises you, check those fixed parts and try again. This is a nearby-flashlight experiment, not a distance rule for sunlight.

The nearby flashlight, fixed wall, unchanged pose and unchanged owl size are the controlled comparison. Illustrations are not dimensioned apparatus drawings.

Related reading

Gina and the Light Chase explores shadows and reflection. This fixed-flashlight test is an additional activity.

Scientific sources

pbs-shrinking-shadows — <https://www.pbs.org/parents/crafts-and-experiments/shrinking-shadows>

gbh-first8-move-light — <https://www.first8studios.org/nicoandnor/guide/shadows/lesson6/move-light.html>

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