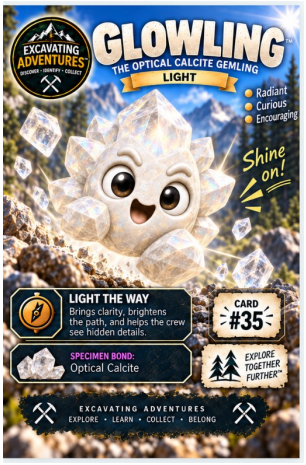
Reflection

Mirror Hall with Glowling



Learning target

Use a diagram to explain a reflection.

Before you begin

Use the reference page and discussion prompts on their own, or open the optional browser adventure. No earlier lesson or physical kit is required.

For online play: use an internet-connected current browser with local storage enabled. Read the three-part Gemling briefing, answer the quick check, and apply the evidence at three checkpoints. Retry feedback supports review; results are not a secure test or gradebook.

Use for teacher-led review, science centers or partner practice. Independent readers may need support with the vocabulary below. The design target is grades 3-5; choose support based on the learner.

Vocabulary and concepts to discuss

Light bouncing from surfaces; mirrors; direction; simple ray models

Open Mirror Hall - direct lesson link

Scan the QR code or use the clickable link. This guide is usable offline; the adventure runs on an external educational website.

Reflection - key ideas

1. The first clues

Reflection is light changing direction at a surface. A mirror reflects light in an organized way that a simple ray diagram can show.

2. How the clues connect

Changing mirror orientation changes the outgoing direction. Trace the incoming and reflected paths rather than assuming light always continues straight through a mirror.

3. Our evidence record

Our diagram marks an incoming ray and two candidate reflected routes. The supplied mirror model redirects the ray toward the target labeled B; route A misses it.

Keep the science accurate

No wavelength calculations, Snell's law or looking at the Sun/lasers. Refraction and dispersion remain clear qualitative extensions.

Apply the evidence

Use a specific observation from this lesson to explain one choice. Point to a clue, then connect that clue to a scientific idea.

Curriculum reference:
https://www.nextgenscience.org/dci-arrangement/4-ps4-waves-and-their-applications-technologies-information-transfer

Talk through the evidence

1. What is reflection?

Expected answer: Light bouncing from a surface

Reasoning: Reflection is light changing direction at a surface. A mirror reflects light in an organized way that a simple ray diagram can show.

2. Which target is reached in the supplied model?

Expected answer: B

Reasoning: Our diagram marks an incoming ray and two candidate reflected routes. The supplied mirror model redirects the ray toward the target labeled B; route A misses it.

3. What changes the outgoing direction?

Expected answer: Turning the mirror

Reasoning: Changing mirror orientation changes the outgoing direction. Trace the incoming and reflected paths rather than assuming light always continues straight through a mirror.

4. Should we trace both incoming and outgoing paths?

Expected answer: Yes

Reasoning: Changing mirror orientation changes the outgoing direction. Trace the incoming and reflected paths rather than assuming light always continues straight through a mirror.

Guide the discussion

Ask learners to name the evidence that supports their answer. If an answer differs, revisit the matching key idea on page 2 and invite a revised explanation.

Online rewards: this lesson grants one fixed digital Expedition Discovery. Five saved digital Gemling friends become available only after all six distinct subject lessons are complete, in any order. Digital rewards do not establish physical ownership.