

Sun, Earth & Moon

Skywatch Plaza with Skyling

Learning target

Distinguish the three objects and their roles.



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

Sun as a star; Earth as a planet; Moon as a satellite; reflected light

Open Skywatch Plaza - 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.



Sun, Earth & Moon - key ideas

1. The first clues

The Sun is a star that produces light. Earth is a planet orbiting the Sun. The Moon is Earth's natural satellite.

2. How the clues connect

Moonlight is sunlight reflected from the Moon's surface. The Moon does not shine by producing its own visible light like a star.

3. Our evidence record

Our object cards separate source from reflector: Sun is the source, Moon reflects, and Earth is where our observer stands. Models are for indirect learning, never direct Sun viewing.

Keep the science accurate

Phases are not normally Earth's shadow. Seasons are primarily tilt-related, not distance-related. Eclipse mechanics are optional.

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/5-ess1-earths-place-universe>

Talk through the evidence

1. Which object is a star?

Expected answer: The Sun

Reasoning: The Sun is a star that produces light. Earth is a planet orbiting the Sun. The Moon is Earth's natural satellite.

2. Where does moonlight mainly originate?

Expected answer: The Sun

Reasoning: Moonlight is sunlight reflected from the Moon's surface. The Moon does not shine by producing its own visible light like a star.

3. What is the Moon to Earth?

Expected answer: A natural satellite

Reasoning: The Sun is a star that produces light. Earth is a planet orbiting the Sun. The Moon is Earth's natural satellite.

4. Which card is the reflector?

Expected answer: Moon

Reasoning: Our object cards separate source from reflector: Sun is the source, Moon reflects, and Earth is where our observer stands. Models are for indirect learning, never direct Sun viewing.

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.