

The Sun & Rocky Planets

Asteroid Run with Spaceling

Learning target

Compare the rocky planets using a few meaningful properties.



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 energy source; inner planets; rocky surfaces; Earth comparisons

Open Asteroid Run - 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.



The Sun & Rocky Planets - key ideas

1. The first clues

The Sun is the solar system's main source of light and heat. Mercury, Venus, Earth and Mars are rocky inner planets.

2. How the clues connect

These worlds differ in atmosphere, surface conditions and size. Being rocky does not mean a planet has Earth's air or liquid surface water.

3. Our evidence record

Our table marks Earth with oceans of liquid water and Mars with a thin atmosphere and a colder surface. Use those recorded differences rather than assuming all rocky planets are Earth copies.

Keep the science accurate

Use relative scale and selected comparisons, not memorized distances, all moons or advanced stellar evolution.

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 group contains rocky inner planets?

Expected answer: Mercury, Venus, Earth and Mars

Reasoning: The Sun is the solar system's main source of light and heat. Mercury, Venus, Earth and Mars are rocky inner planets.

2. Where does much solar-system light come from?

Expected answer: The Sun

Reasoning: The Sun is the solar system's main source of light and heat. Mercury, Venus, Earth and Mars are rocky inner planets.

3. Which table entry distinguishes Earth here?

Expected answer: Oceans of liquid water

Reasoning: Our table marks Earth with oceans of liquid water and Mars with a thin atmosphere and a colder surface. Use those recorded differences rather than assuming all rocky planets are Earth copies.

4. What is a supported comparison?

Expected answer: Rocky planets still have different conditions

Reasoning: The Sun is the solar system's main source of light and heat. Mercury, Venus, Earth and Mars are rocky inner planets.

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.