

Energy Resources

Wind Canyon with Earthling

Learning target

Compare energy-source options for a stated need.



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

Fuels; wind, water and sunlight; energy uses; advantages and limits

Open Wind Canyon - 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.



Energy Resources - key ideas

1. The first clues

Energy resources include fuels, sunlight, wind and moving water. Different technologies use them to produce useful motion, heating or electricity.

2. How the clues connect

Choices have advantages and limits. Sunlight varies with time and weather; wind varies too. Fuels require supplies and can produce emissions.

3. Our evidence record

Our comparison says Site A has strong reliable sunlight but little wind. For this specific small daytime device, solar power fits the evidence. A different site could lead to a different choice.

Keep the science accurate

Renewable does not mean unlimited or impact-free. Use evidence and tradeoffs, not a universally best energy source.

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-ess3-earth-and-human-activity>

Talk through the evidence

1. Which resource drives a solar panel?

Expected answer: Sunlight

Reasoning: Energy resources include fuels, sunlight, wind and moving water. Different technologies use them to produce useful motion, heating or electricity.

2. Which choice fits the supplied daytime site?

Expected answer: Solar

Reasoning: Our comparison says Site A has strong reliable sunlight but little wind. For this specific small daytime device, solar power fits the evidence. A different site could lead to a different choice.

3. Why might another site need another choice?

Expected answer: Resource conditions and needs differ

Reasoning: Energy resources include fuels, sunlight, wind and moving water. Different technologies use them to produce useful motion, heating or electricity.

4. Which statement is accurate?

Expected answer: Every option has benefits and limits

Reasoning: Choices have advantages and limits. Sunlight varies with time and weather; wind varies too. Fuels require supplies and can produce emissions.

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.