

Power Sources

Battery Bay with Sparkling

Learning target

Identify a source and explain its role.



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

Batteries; stored chemical energy; generators overview; source versus load

Open Battery Bay - 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.



Power Sources - key ideas

1. The first clues

A battery is a source that stores chemical energy and can supply electrical energy in a circuit. A generator converts other energy, often motion, into electrical energy.

2. How the clues connect

The load is the part that uses electrical energy, such as a lamp or motor. Source and load have different roles.

3. Our evidence record

Our supplied low-voltage model labels a matching battery source and a lamp load. Choose components from the given specifications; no household wiring or real powered experiment is required.

Keep the science accurate

Use digital or teacher-managed low-voltage models only. No mains electricity, wiring instructions or Ohm's-law calculations.

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-ps3-energy>

Talk through the evidence

1. Which part is the source?

Expected answer: Battery

Reasoning: The load is the part that uses electrical energy, such as a lamp or motor. Source and load have different roles.

2. Which part is the load?

Expected answer: Lamp

Reasoning: Our supplied low-voltage model labels a matching battery source and a lamp load. Choose components from the given specifications; no household wiring or real powered experiment is required.

3. What energy does a battery store?

Expected answer: Chemical energy

Reasoning: A battery is a source that stores chemical energy and can supply electrical energy in a circuit. A generator converts other energy, often motion, into electrical energy.

4. What guides component selection here?

Expected answer: The supplied matching specifications

Reasoning: Our supplied low-voltage model labels a matching battery source and a lamp load. Choose components from the given specifications; no household wiring or real powered experiment is required.

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.