

Water on Earth

Headwaters Camp with Trickling

Learning target

Identify where water is stored and in what form.



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

Water stores; freshwater and saltwater; solid, liquid and gas; movement

Open Headwaters Camp - 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.



Water on Earth - key ideas

1. The first clues

Water is stored in oceans, ice, lakes, rivers, soil, groundwater and the atmosphere. Most of Earth's water is salty ocean water.

2. How the clues connect

Water can be solid ice, liquid water or invisible water vapor. Clouds are tiny droplets or ice, not just invisible vapor.

3. Our evidence record

Our inventory includes ocean water, glacier ice and water vapor in air. A store tells where water is; a state tells its physical form.

Keep the science accurate

Water vapor is invisible; clouds contain droplets/ice. Groundwater occupies spaces, not necessarily underground rivers. No required purification experiments.

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-ess2-earths-systems>

Talk through the evidence

1. Which store holds most of Earth's water?

Expected answer: Oceans

Reasoning: Water is stored in oceans, ice, lakes, rivers, soil, groundwater and the atmosphere. Most of Earth's water is salty ocean water.

2. What state is glacier ice?

Expected answer: Solid

Reasoning: Our inventory includes ocean water, glacier ice and water vapor in air. A store tells where water is; a state tells its physical form.

3. What state is water vapor?

Expected answer: Gas

Reasoning: Water can be solid ice, liquid water or invisible water vapor. Clouds are tiny droplets or ice, not just invisible vapor.

4. Which distinction is useful?

Expected answer: Store means location; state means form

Reasoning: Our inventory includes ocean water, glacier ice and water vapor in air. A store tells where water is; a state tells its physical form.

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.