

The Water Cycle & Watersheds

Watershed Reservoir Vault with Trickling

Learning target

Model multiple water routes and explain a watershed connection.



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

Connected pathways; sun and gravity; watershed drainage; water stewardship

Open Watershed Reservoir Vault - 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 Water Cycle & Watersheds - key ideas

1. The first clues

The water cycle connects many stores and pathways. Sunlight supplies energy for evaporation, while gravity helps water fall and flow.

2. How the clues connect

A watershed is land that drains toward a common outlet. Choices upstream can affect water downstream because flowing water can carry materials.

3. Our evidence record

Journey A runs from ocean to vapor to cloud to rain. Journey B runs from rain into soil and groundwater, then to a stream. Neither is the only possible route.

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. What supplies energy for much evaporation?

Expected answer: The Sun

Reasoning: The water cycle connects many stores and pathways. Sunlight supplies energy for evaporation, while gravity helps water fall and flow.

2. What is a watershed?

Expected answer: Land draining toward a common outlet

Reasoning: A watershed is land that drains toward a common outlet. Choices upstream can affect water downstream because flowing water can carry materials.

3. Can groundwater connect to a stream?

Expected answer: Yes

Reasoning: Journey A runs from ocean to vapor to cloud to rain. Journey B runs from rain into soil and groundwater, then to a stream. Neither is the only possible route.

4. Why reduce pollution upstream?

Expected answer: Water can carry materials downstream

Reasoning: A watershed is land that drains toward a common outlet. Choices upstream can affect water downstream because flowing water can carry materials.

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.