Infiltration & Groundwater

Underground Aquifer Grotto with Trickling

Learning target

Explain groundwater without imagining only underground rivers.

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 entering soil; spaces in rock; aquifers; springs and wells

Open Underground Aquifer Grotto - 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.

Infiltration & Groundwater - key ideas

1. The first clues

Infiltration is water entering the ground. Groundwater occupies spaces between grains and cracks in rock.

2. How the clues connect

An aquifer is material that stores and transmits groundwater. It is not necessarily an underground cave or river. Springs and wells can bring groundwater to the surface.

3. Our evidence record

Our cutaway shows rain entering soil and filling connected spaces below. Water traveling across the top is runoff; water entering those spaces is infiltration.

Keep the science accurate

Groundwater commonly occupies pore spaces and cracks; an aquifer is not necessarily a cave or river.

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 is infiltration?

Expected answer: Water entering the ground

Reasoning: Infiltration is water entering the ground. Groundwater occupies spaces between grains and cracks in rock.

2. Where is groundwater often stored?

Expected answer: Pores and cracks

Reasoning: Infiltration is water entering the ground. Groundwater occupies spaces between grains and cracks in rock.

3. What can provide access to groundwater?

Expected answer: A well

Reasoning: An aquifer is material that stores and transmits groundwater. It is not necessarily an underground cave or river. Springs and wells can bring groundwater to the surface.

4. Which arrow should enter the soil in our model?

Expected answer: Infiltration

Reasoning: Our cutaway shows rain entering soil and filling connected spaces below. Water traveling across the top is runoff; water entering those spaces is infiltration.

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.