

Evaporation & Transpiration

Mist Lift Cliffs with Trickling

Learning target

Explain two ways water enters the air.



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

Liquid to gas; sunlight and heat; plant water release; invisible vapor

Open Mist Lift Cliffs - 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.



Evaporation & Transpiration - key ideas

1. The first clues

Evaporation changes liquid water into invisible gas. It can happen from a puddle without the puddle boiling.

2. How the clues connect

Plants release water vapor through transpiration, mainly from leaves. Energy from sunlight helps drive water movement through these pathways.

3. Our evidence record

Our shallow tray loses liquid on a warm day. The water has moved into the air, not stopped existing. Visible mist nearby is droplets, not the vapor itself.

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 happens during evaporation?

Expected answer: Liquid becomes gas

Reasoning: Evaporation changes liquid water into invisible gas. It can happen from a puddle without the puddle boiling.

2. Must a puddle boil to evaporate?

Expected answer: No

Reasoning: Evaporation changes liquid water into invisible gas. It can happen from a puddle without the puddle boiling.

3. What is plant water release called?

Expected answer: Transpiration

Reasoning: Plants release water vapor through transpiration, mainly from leaves. Energy from sunlight helps drive water movement through these pathways.

4. Why is there less water in the tray?

Expected answer: Some entered the air as vapor

Reasoning: Our shallow tray loses liquid on a warm day. The water has moved into the air, not stopped existing. Visible mist nearby is droplets, not the vapor itself.

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.