Classroom Intelligence

Video Demo August 2026

School	D DeJager Primary	**Status**	DRAFT - Teacher review required
Subject	Science	**Grade**	12
Class	VIdeo Demo Class	**Assessment date**	2026-08-05
Audit report	#21	**Generated**	2026-08-05T10:34:29

This report provides advisory guidance. The teacher retains professional authority over all instructional decisions and final marks.

AI-assisted educational analysis generated using Google Gemini. Evidence aggregation, performance bands, privacy controls, validation and audit integrity are provided by Cloud Grader.

Evidence readiness

State	READY	**Coverage**	100.0%
Final papers	8	**Usable papers**	8

Class evidence summary

The class demonstrates a solid grasp of precipitation and condensation, but shows inconsistent understanding of evaporation and the full sequence of the water cycle. While most students correctly identify precipitation, nearly half struggle to articulate the full four-stage process in detail.

Strongest signals

- High proficiency in identifying precipitation as a process (Q3).
- Strong recognition of condensation as the cooling process (Q2).

Priority signals

- Difficulty defining evaporation as the gas-forming stage (Q1).
- Inconsistent recall of the full four-stage water cycle sequence (Q4).

Cross-question patterns

- Students who struggle with the definition of evaporation (Q1) also tend to miss the evaporation component in the multi-stage explanation (Q4).

Recommended instructional sequence

Step 1 - Reviewing Evaporation and Condensation

Addressing the foundational stages of the cycle before moving to the full sequence.

Questions 1, 2 | 15 minutes

Step 2 - Mapping the Full Water Cycle

Connecting individual stages into a cohesive narrative to improve long-answer performance.

Questions 4 | 20 minutes

Question 1

DEVELOPING

Definition of evaporation

What the aggregate evidence shows

Final marking covers 8 attempts; the observed average is 50.00%. Short-response analysis covers 8 of 8 final responses; recurring aggregate pattern count meeting the minimum group size of 3: 1; suppressed response count: 5; missing response count: 0; blank response count: 0.

Mark Performance | 50.0% | 8 final attempts
Final marking covers 8 attempts; the observed average is 50.00%.

Short Response Pattern | 50.0% | 8 final attempts
Short-response analysis covers 8 of 8 final responses; recurring aggregate pattern count meeting the minimum group size of 3: 1; suppressed response count: 5; missing response count: 0; blank response count: 0.

Possible misconception hypotheses

Confusion between state and process

Students may be focusing on the liquid state rather than the resulting gas state.

Confidence	medium
Evidence basis	50% of students failed to identify water vapour as the product.
Alternative explanation	Students may simply lack the specific vocabulary term 'water vapour'.

Teacher explanation

Phase change from liquid to gas

Evaporation is the process where heat turns liquid water into an invisible gas called water vapour.

Analogy or demonstration	Think of a puddle disappearing on a sunny day; the water hasn't vanished, it has turned into gas and risen into the air.
Common trap	Assuming the water just disappears or goes into the ground.

Reteaching sequence

Step 1 - 5 minutes

Teacher action	Demonstrate a small amount of water in a shallow dish over a heat source.
Learner action	Observe the water level decreasing over time.
Purpose	Visualise the transition from liquid to gas.

Step 2 - 5 minutes

Teacher action	Define 'water vapour' as the gaseous form of water.
Learner action	Write a sentence explaining where the water went.
Purpose	Reinforce the correct terminology.

Differentiated actions

Support - Visual Vocabulary Matching

Match the terms 'Liquid' and 'Gas' to pictures of water and steam.

Intended learning	Distinguish between water states.
Success indicator	Correctly identifies steam as the gas form.

Core - Process Definition

Write a clear definition of evaporation including the term 'water vapour'.

Intended learning	Define evaporation accurately.
Success indicator	Includes the transition to gas.

Extension - Energy Transfer Analysis

Explain how heat energy causes molecules to escape the liquid surface.

Intended learning	Understand the molecular basis of evaporation.
Success indicator	Correctly describes energy gain.

Quick formative check

Prompt	What happens to water molecules when they are heated?
Expected response	They gain energy and turn into water vapour gas.
Secure indicator	Mentions energy gain and gas formation.
Still developing	States the water just gets hot or disappears.
Immediate response	Clarify that heat provides the energy for the phase change.

Watch next

- Q4 performance

Question evidence limitations

- Small sample size limits generalisation.

Question 2

STRONG

Condensation process

What the aggregate evidence shows

Final marking covers 8 attempts; the observed average is 87.50%. MCQ option distribution is available for 8 of 8 final responses across 4 options; missing response count: 0; blank response count: 1.

Mark Performance | 87.5% | 8 final attempts
Final marking covers 8 attempts; the observed average is 87.50%.

Mcq Option Pattern | 87.5% | 8 final attempts
MCQ option distribution is available for 8 of 8 final responses across 4 options; missing response count: 0; blank response count: 1.

Possible misconception hypotheses

No responsible misconception hypothesis was supported.

Teacher explanation

Phase change from gas to liquid

Condensation happens when water vapour cools down and turns back into tiny liquid droplets.

Analogy or demonstration	The water droplets on the outside of a cold soda can on a hot day.
Common trap	Confusing condensation with precipitation.

Reteaching sequence

Step 1 - 5 minutes

Teacher action	Show a cold glass of water with droplets on the outside.
Learner action	Discuss where the water came from.
Purpose	Connect observation to the concept of condensation.

Step 2 - 5 minutes

Teacher action	Explain that cooling causes gas molecules to slow down and cluster.
Learner action	Draw a diagram showing gas turning to liquid.
Purpose	Visualise the molecular change.

Differentiated actions

Support - Identify Condensation

Circle examples of condensation in a series of images.

Intended learning	Recognise condensation in real life.
Success indicator	Correctly identifies fog or dew.

Core - Process Explanation

Explain why water droplets form on a cold window.

Intended learning	Apply the concept of condensation.
Success indicator	Mentions cooling of water vapour.

Extension - Atmospheric Comparison

Compare condensation on a glass to cloud formation in the sky.

Intended learning	Generalise the concept to atmospheric scales.
Success indicator	Identifies cooling as the common factor.

Quick formative check

Prompt	Why does dew form on grass in the morning?
Expected response	Water vapour in the air cools down and condenses into liquid droplets.
Secure indicator	Correctly identifies cooling and condensation.
Still developing	Says the grass makes the water.
Immediate response	Reiterate that the water comes from the air.

Watch next

- Q3 precipitation links

Question evidence limitations

- One blank response limits full class insight.

Question 3

DEVELOPING

Precipitation characteristics

What the aggregate evidence shows

Final marking covers 8 attempts; the observed average is 75.00%. MCQ option distribution is available for 8 of 8 final responses across 4 options; missing response count: 0; blank response count: 0.

Mark Performance | 75.0% | 8 final attempts
Final marking covers 8 attempts; the observed average is 75.00%.

Mcq Option Pattern | 75.0% | 8 final attempts
MCQ option distribution is available for 8 of 8 final responses across 4 options; missing response count: 0; blank response count: 0.

Possible misconception hypotheses

Scope of precipitation

Some students may believe precipitation is limited to specific locations or types.

Confidence	medium
Evidence basis	25% of students incorrectly selected that it happens only over the ocean.
Alternative explanation	Students may be misinterpreting the question as asking about where most water is found.

Teacher explanation

Forms and locations of precipitation

Precipitation is any form of water falling from clouds, including rain, snow, sleet, or hail, occurring anywhere on Earth.

Analogy or demonstration	A sponge that is too full of water and starts to drip.
Common trap	Thinking precipitation only happens over oceans.

Reteaching sequence

Step 1 - 5 minutes

Teacher action	List various forms of precipitation.
Learner action	Brainstorm locations where they have seen rain or snow.
Purpose	Broaden the understanding of where precipitation occurs.

Step 2 - 5 minutes

Teacher action	Clarify that clouds move over land and sea.
Learner action	Map out a cycle showing precipitation over land.
Purpose	Correct the misconception about location.

Differentiated actions

Support - Forms of Water

List three types of precipitation.

Intended learning	Identify forms of precipitation.
Success indicator	Lists rain, snow, and hail.

Core - Location Analysis

Explain why precipitation is not limited to the ocean.

Intended learning	Understand global distribution.
Success indicator	Mentions cloud movement.

Extension - Geographic Factors

Research how mountains affect precipitation patterns.

Intended learning	Understand orographic effects.
Success indicator	Explains the rain shadow effect.

Quick formative check

Prompt	Is rain only found over the ocean? Explain.
Expected response	No, clouds move over land and release precipitation there too.
Secure indicator	Correctly refutes the claim.
Still developing	Agrees it is only over the ocean.
Immediate response	Use a map to show cloud movement over land.

Watch next

- Q4 sequence

Question evidence limitations

- Multiple choice format may mask partial understanding.

Question 4

DEVELOPING

Water cycle sequence

What the aggregate evidence shows

Final marking covers 8 attempts; the observed average is 53.12%. Rubric concept coverage is available for 8 of 8 final responses across 4 rubric concepts; missing response count: 0; blank response count: 0.

Mark Performance | 53.12% | 8 final attempts
Final marking covers 8 attempts; the observed average is 53.12%.

Rubric Concept Coverage | 53.12% | 8 final attempts
Rubric concept coverage is available for 8 of 8 final responses across 4 rubric concepts; missing response count: 0; blank response count: 0.

Possible misconception hypotheses

Fragmented understanding

Students may understand individual stages but fail to see them as a continuous cycle.

Confidence	high
Evidence basis	Inconsistent hit rates across the four rubric concepts.
Alternative explanation	Difficulty with long-form writing and sequencing.

Teacher explanation

The continuous nature of the water cycle

The water cycle is a never-ending loop: sun heats water (evaporation), it cools (condensation), falls (precipitation), and collects (runoff), then starts again.

Analogy or demonstration	A circular conveyor belt.
Common trap	Treating the cycle as a list of independent events rather than a loop.

Reteaching sequence

Step 1 - 10 minutes

Teacher action	Draw a circular diagram of the water cycle.
Learner action	Label the four stages in order.
Purpose	Establish the cyclical nature.

Step 2 - 10 minutes

Teacher action	Model a written explanation using transition words.
Learner action	Write a paragraph describing the cycle.
Purpose	Improve narrative structure.

Differentiated actions

Support - Sequence Ordering

Number the four stages of the water cycle in the correct order.

Intended learning	Sequence the cycle.
Success indicator	Correct order identified.

Core - Cycle Description

Write a short paragraph explaining how the cycle repeats.

Intended learning	Describe the continuous cycle.
Success indicator	Includes all four stages in order.

Extension - Cycle Disruption

Predict how a long drought would affect the water cycle.

Intended learning	Apply knowledge to new scenarios.
Success indicator	Identifies impact on collection and evaporation.

Quick formative check

Prompt	What is the correct order of the water cycle starting with the sun?
Expected response	Evaporation, condensation, precipitation, collection.
Secure indicator	Correct sequence provided.
Still developing	Incorrect order or missing stages.
Immediate response	Review the circular diagram.

Watch next

- Q1 and Q2 mastery

Question evidence limitations

- Rubric scoring may not capture the quality of the explanation.

Teacher decision points

Focus on cycle sequencing vs. individual stage definitions.

Evidence to consider	Q4 performance shows lower concept coverage than individual MCQ questions.
Why judgement matters	The teacher must decide if the class needs more vocabulary work or more practice in connecting concepts.

Whole-class next steps

- Conduct a whole-class review of the water cycle as a continuous loop.
- Use visual aids to reinforce the definition of evaporation.
- Provide structured writing frames for explaining multi-stage processes.

Evidence limitations

- The evidence is based on a small sample size of 8 papers.
- Long-answer marking is based on rubric concept hits, which may not reflect the full depth of student understanding.
- Aggregate data may mask individual variation in learning needs.
- Final-mark coverage includes 8 of 8 papers (100.0%). Response-pattern coverage by question is Q1 8/8, Q2 8/8, Q3 8/8, Q4 8/8; missing response counts are reported within each question's evidence anchors.

Audit reference

Evidence SHA-256	3a43c17438ec317c7b52f242002142a1895ba8ea0f8e1d6613f87b8f1cc71283
Draft SHA-256	f335f90c6b7f238d3cf479d40b9bddcfc0e6b081b18dac236fa4659a01d2c98b

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