



WATER CYCLE MISSION 1 · STARTER

Decode the Water Cycle

Follow one drop of water through its never-ending journey.

CASE
01

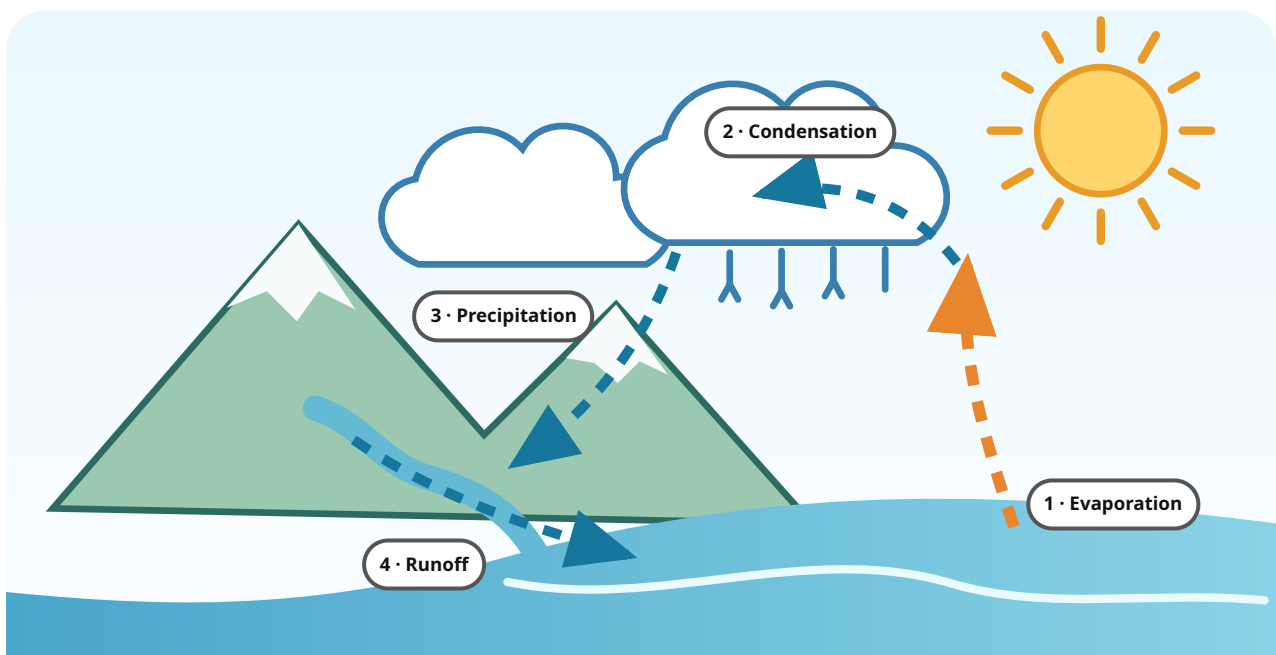
NAME _____

DATE _____

INVESTIGATION TEAM _____

YOUR MISSION

Tap each numbered clue on the diagram. Read the evidence, then explain the cycle in your own words.



WHAT POWERS THE WATER CYCLE?

Your answer...

WHERE MIGHT RUNOFF COLLECT?

Your answer...

Investigator note: Draw arrows to show the cycle. Circle the stage powered directly by the sun.



WATER CYCLE MISSION 2 · CORE

Match the Secret Science Words

Pair each water-cycle word with the correct evidence.



NAME

DATE

INVESTIGATION TEAM

VOCABULARY BRIEFING

Use each meaning once. Older detectives: add a real-life example in the notes column.

SECRET WORD	MATCH ITS MEANING	DETECTIVE NOTES
1 Evaporation	Choose a meaning...	▼ Example or sketch...
2 Condensation	Choose a meaning...	▼ Example or sketch...
3 Precipitation	Choose a meaning...	▼ Example or sketch...
4 Runoff	Choose a meaning...	▼ Example or sketch...



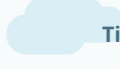
Liquid water + heat

→



Water vapour

→



Tiny droplets

Extension: Use two vocabulary words in one accurate sentence.



WATER CYCLE MISSION 3 · CORE+

Rebuild the Cycle

Put the evidence cards in the order a water drop could travel.



NAME

DATE

INVESTIGATION TEAM

1

Choose a step...



2

Choose a step...



3

Choose a step...



4

Choose a step...



5

Choose a step...



Evidence rules

- The sun supplies the energy.
- Water rises before clouds form.
- Water must fall before it can flow downhill.
- The final step returns water to a collection point.

WHY IS IT CALLED A CYCLE?

Because...

Challenge: Add arrows to turn your ordered steps into a closed loop.



WATER CYCLE MISSION 4 · CHALLENGE

Precipitation Patrol

Use cloud clues to identify rain, snow and hail.



NAME _____

DATE _____

INVESTIGATION TEAM _____

Case A



A warm cloud releases drops of liquid water.



Rain



Snow



Hail

Case B



Ice crystals join to make soft flakes.



Rain



Snow



Hail

Case C



A storm cloud tosses frozen drops up and down until they grow into hard balls.



Rain



Snow



Hail

WHAT DO ALL THREE FORMS HAVE IN COMMON?

They all...

HOW DOES AIR TEMPERATURE CHANGE THE TYPE THAT FALLS?

When the air is...

Draw one extra weather clue beside each case.



Junior Plumber Case Files

Apply the water cycle to clues found at home and outdoors.



NAME

DATE

INVESTIGATION TEAM

1

The Vanishing Puddle

After a sunny morning, a puddle beside the playground is smaller.

Choose the process...



EXPLAIN YOUR EVIDENCE

I know because...

2

The Misty Mirror

Warm shower vapour meets a cool mirror and forms tiny drops.

Choose the process...



EXPLAIN YOUR EVIDENCE

I know because...

3

The Gutter Rush

Rainwater travels down the street and into a stream.

Choose the process...



EXPLAIN YOUR EVIDENCE

I know because...

Create your own secret water case

Sketch or describe a water-cycle clue that could be found near your home or school.

My clue is...



WATER CYCLE

Master Detective

Mission pack completed