# Explain this – What is the water cycle?



| Video summary | Before watching the video | During the video |
|---|---|---|
| **Liz Bonnin introduces the water cycle - part of Hydrology at KS3 and Rivers and water at KS4 - and explains that water is constantly moving around Earth.**<br><br>Professor Iain Stewart examines the constant process of evaporation, condensation and precipitation. Water evaporates and forms clouds in the atmosphere; it condenses and returns to the Earth as rain or snow; it forms rivers that eventually lead to the sea or lakes; the water evaporates and the cycle begins again.<br><br>Professor Stewart explains that only 2% of the world's freshwater is held in rivers and rain: most is locked away as ice or stored deep in the earth as groundwater. | Ask students to draw their understanding of the water cycle on a mini whiteboard or a piece of paper. Can they label their diagram with the different parts of the water cycle?<br><br>**Introduce key terms such as:**<br><br>**Water vapour:** The gaseous state of water.<br><br>**Water cycle**: The continuous movement of water on, above and below the Earth's surface. | You may wish to stop at relevant points during this short film to pose questions and check understanding or wait until the end. Useful questions might include:<br><br>• What is the beginning stage of our cycle?<br>• What is evaporation?<br>• What happens to this water vapour when it rises?<br>• How long does it take for water to come back to Earth as rain?<br>• Why is 2% an important number?<br>• What is groundwater?<br>• How much water is frozen in the ice caps and glaciers? |

## After watching

Ask students to return to their diagram of the water cycle, what terminology did they include in comparison to what they saw in the clip. Show students a full diagram of the water cycle and ask students to draw this into their notes alongside the labels for each stage of the diagram. Students could also match the key terminology with the definitions. An empty diagram could also be provided for students to add labels to.

Ask students what could affect the water cycle, for example what might prevent water from being intercepted or infiltrated. This gives an opportunity to explore the impacts of deforestation and urbanisation and how this might lead to flooding.

Look at each stage of the cycle and categorise these into stores and flows. For example, an ocean is a store and groundwater flow is a flow.

| Curriculum notes | Where next? | Links |
|---|---|---|
| *This topic appears in Geography at KS3 (Hydrology) and KS4 / GCSE (Rivers and water) in England, Wales and Northern Ireland and National 4/5 in Scotland.* | A practical way to explore this is through half filling a sealed plastic sandwich bag with coloured water and adding labels such as evaporation, condensation and precipitation to the bag. Attach the bag to a window and watch the processes happen. The heat through the window will cause some water to evaporate and condense.<br><br>An example of how to do this can be found here: https://www.metlink.org/experiment/watch-the-water-cycle/ | The water cycle: https://www.bbc.co.uk/bitesize/guides/z4bk7ty/revision/1<br><br>Hydrological cycle within a drainage basin: https://www.bbc.co.uk/bitesize/guides/zrcbjhv/revision/2 |