

Nova's Journey Through the Clouds

Learning objective: To understand the stages of the water cycle: evaporation, condensation, precipitation, and collection.

Read the passage carefully, then answer the questions below. Ensure you use full sentences and provide evidence from the text to support your answers.

Nova the owl sat on her favourite oak branch, watching the morning mist rise from the lake. 'It is a magnificent cycle,' she hooted softly. The sun warms the Earth's surface, turning liquid water into an invisible gas called water vapour. This process, known as evaporation, lifts the moisture high into the cooler atmosphere. As the vapour rises, it chills and transforms back into tiny liquid droplets, clustering together to form fluffy clouds. Nova calls this condensation. When these clouds become heavy and saturated, gravity pulls the water back down to Earth as precipitation, such as rain, hail, or snow. Once the water lands, it gathers in rivers, lakes, and oceans, ready to start the journey again. Trees also play a vital role, releasing water vapour through their leaves in a process called transpiration. This continuous movement ensures that Earth's water is constantly recycled, sustaining all living things. Nova knows that without this natural rhythm, the forests she loves would be unable to flourish. Every drop of water is a traveller, moving endlessly between the ground and the sky in a perfect, repeating loop.

Word bank: evaporation · condensation · precipitation · collection · vapour · atmosphere · transpiration

1. Identify the two processes mentioned in the text that involve water turning into vapour. (2 marks)

2. According to the text, what weather conditions are necessary for precipitation to occur? (2 marks)

3. Explain why Nova describes the water cycle as a 'magnificent cycle' rather than just a process. (3 marks)

4. What might happen to the local environment if the evaporation stage stopped for a long period of time? Justify your answer. (3 marks)

5. Compare and contrast the roles of the sun and the clouds in the movement of water. Which do you believe is more essential to the cycle and why? (4 marks)

Draw: Draw a diagram of the water cycle showing the Sun, a lake, a tree, and clouds. Label the four main stages: evaporation, condensation, precipitation, and collection.



Extension challenge: Nova wants to know how human activity might interfere with the water cycle. Research 'deforestation' and write a short paragraph explaining how removing large areas of forest might affect the amount of water vapour released into the atmosphere through transpiration.