

Nova's Great Water Cycle Assessment

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

Read each question carefully. Use your scientific knowledge to provide detailed explanations. Remember to use technical vocabulary where appropriate.

Nova the owl is observing the forest pond. As the morning sun rises, she notices a thin mist rising from the surface of the water. Later, as the air cools, clouds gather above the trees, eventually releasing rain that flows back into the streams and the pond.

Word bank: evaporation · condensation · precipitation · collection · water vapour · temperature · liquid · gas

1. Identify the process occurring when the sun warms the water in the pond and it turns into water vapour. (1 mark) (1 mark)

2. Explain how clouds are formed in the sky. Use the term 'condensation' in your answer. (2 marks) (2 marks)

3. Name two different forms of precipitation that might fall if the temperature drops significantly. (2 marks) (2 marks)

4. Explain why the water cycle is considered a 'cycle'. What would happen if the sun stopped heating the Earth? (3 marks) (3 marks)

5. Compare and contrast the state of water during evaporation and precipitation. (4 marks) (4 marks)

6. Justify why plants are an important part of the collection process in the water cycle. (4 marks) (4 marks)

7. Imagine you are a drop of water. Describe your journey through the water cycle, starting from the ocean and ending as part of a mountain stream. Include the specific scientific processes you experience along the way. (5 marks) (5 marks)

Draw: Draw a labelled diagram of the water cycle, including the sun, a body of water, clouds, and arrows indicating the direction of the movement of water.



Extension challenge: Challenge: If the Earth's average temperature continues to rise, how might this affect the rate of the water cycle? What might happen to areas that rely on predictable seasonal rainfall? Justify your predictions. Total: /25