

Nova's Guide to the Water Cycle

Learning objective: To explain the processes of the water cycle, including evaporation, condensation, precipitation, and collection, using scientific vocabulary.

Use the prompts below to construct a detailed report on how water moves around our planet. Ensure you use the vocabulary provided to show a deep understanding of the cycle.

High above the Earth, the water cycle acts as a continuous, invisible engine that sustains all life by constantly recycling the planet's most precious resource.

Word bank: evaporation · condensation · precipitation · accumulation · transpiration · water vapour · solar energy · consequently · furthermore · subsequently

1. The Sun's Role: Explain how solar energy initiates the water cycle. Start your paragraph by... (2 marks)

2. Condensation and Cloud Formation: Describe the transformation of water vapour into clouds. Consider what happens to the temperature as the vapour rises. Start with... (3 marks)

3. Precipitation: Justify why precipitation occurs in different forms (rain, snow, or hail) depending on atmospheric conditions. Start with... (3 marks)

4. Collection and Transpiration: Compare and contrast how water gathers in oceans versus how plants contribute to the cycle through transpiration. Start with... (3 marks)

5. Critical Thinking: What might happen to the water cycle if the Earth's average temperature were to rise significantly? Explain your reasoning. (4 marks)

6. Evaluation: Why is the water cycle considered a 'closed system'? Use evidence from your writing to support your answer. (4 marks)

Extension challenge: Imagine you are a single droplet of water. Write a creative diary entry describing your journey through each stage of the cycle, focusing on the changes in your physical state and the locations you visit.