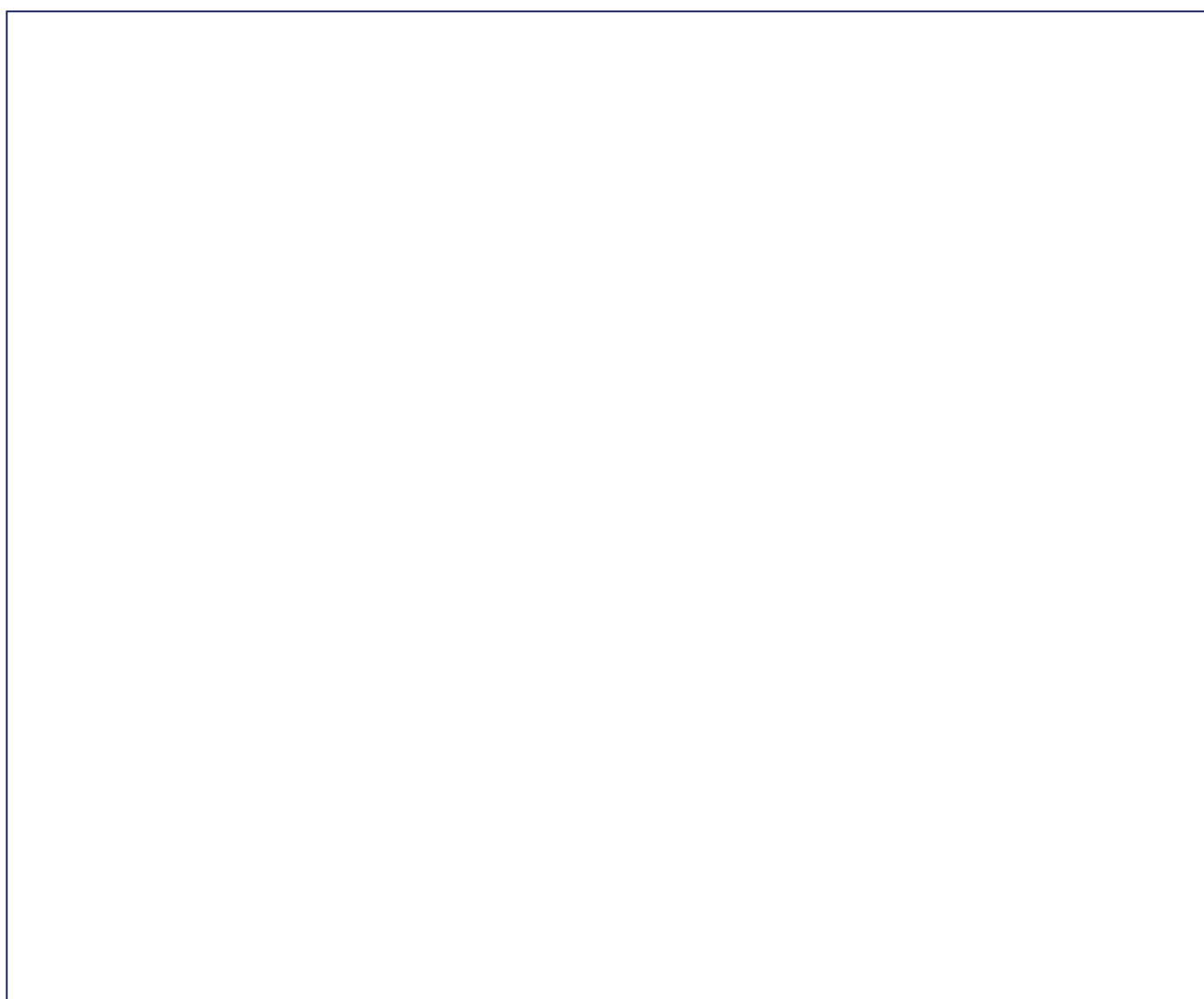


Mapping the Elements: A Weather and Climate Study

Learning objective: To identify and illustrate key meteorological phenomena and distinguish between daily weather conditions and long-term climate patterns.

Follow the drawing prompt to create a diagram showing both weather and climate factors. Use the word bank to label your illustration clearly. Once your drawing is complete, answer the challenge questions to demonstrate your understanding of meteorological processes.

Draw: Create a split-view landscape illustration. On the left side, draw a 'Daily Weather' scene featuring a range of conditions like cumulus clouds, a sun peeking through, and a localised rain shower. On the right side, draw a 'Climate' scene representing a specific biome (e.g., a temperate forest or a coastal region). Include labels for atmosphere, temperature, and precipitation. Use a clear, scientific diagram style with neat lines and accurate annotations.



Label words: Atmosphere · Precipitation · Temperature · Climate Zone · Meteorological Data · Prevailing Wind · Evaporation · Condensation

Steps:

1. Explain why it is important for scientists to collect meteorological data over a period of 30 years rather than just a few weeks when determining a region's climate.

2. Compare and contrast the impact of high-pressure systems and low-pressure systems on the weather conditions we experience in the UK.
3. Justify your answer: If a region suddenly experiences a week of heavy rainfall, has its climate changed? Why or why not?
4. Label the stage of the water cycle in your drawing where liquid water turns into water vapour. What is this process called?
5. What might happen if the global temperature continues to rise, affecting the delicate balance of the water cycle?
6. Describe the difference between 'weather' and 'climate' using a clear, original analogy.