Nova’s Rock and Fossil Investigation

Learning objective: To identify and describe the physical properties of different types of rocks and understand how fossils are formed.

Read each question carefully and use your knowledge of rocks and fossils to write your answers. Think about the investigations Nova the Owl has been doing in the forest!

Word bank: sedimentary · igneous · metamorphic · permeable · fossil · hard · texture · magma

1. Nova found a rock that is very hard and has crystals inside. She thinks it was formed from cooling magma. Which type of rock is this: igneous, sedimentary, or metamorphic? (1 mark)

2. Explain why some rocks are described as 'permeable'. What happens when you pour water onto a permeable rock? (2 marks)

3. Describe the process of how a fossil is formed. Use the words 'layers', 'sediment', and 'time' in your answer. (3 marks)

4. If you were testing the hardness of a rock, how could you perform a simple 'scratch test' to compare two different stones? (2 marks)

5. Look at these three rocks: Chalk, Granite, and Marble. Match them to their rock types: Igneous, Sedimentary, or Metamorphic. (3 marks)

Draw: Draw a diagram showing a fossil trapped inside layers of sedimentary rock. Label the 'fossil', the 'sediment layers', and the 'rock surface'.

Extension challenge: Imagine you are a geologist like Nova. Research one type of rock used to build houses in the UK. Write three sentences explaining why it is a good material to use for building.