

Nova's Geological Discovery Record

Learning objective: To identify and describe the properties and formation processes of igneous, sedimentary, and metamorphic rocks.

Help Nova the owl sort the rocks she found on her night-time expedition. Use your knowledge of the rock cycle to complete this field guide. Look at the properties of your chosen rock and decide which category it belongs to, explaining how it might have been formed.

Word bank: sedimentary · igneous · metamorphic · magma · fossil · pressure · erosion · crystals · sediment · volcanic

1. Rock Name and Appearance: Write the name of the rock you are studying and describe its physical appearance. Mention colours, texture, and whether it has visible grains or crystals. (2 marks)

2. Classification: Which of the three rock types (igneous, sedimentary, or metamorphic) is this rock? Explain one reason for your choice. (2 marks)

3. Formation Process: Describe the journey this rock took to form. Was it cooled from molten rock, compressed over time, or changed by intense heat and pressure? (3 marks)

4. Durability Test: If you were using this rock to build a garden wall for a farmer, would it be suitable? Explain your reasoning based on its hardness or porosity. (2 marks)

5. Evidence of History: If this is a sedimentary rock, does it contain fossils? If it is igneous, does it show evidence of cooling speed (e.g., small or large crystals)? (2 marks)

Extension challenge: Research a famous UK landmark, such as the Giant's Causeway or the White Cliffs of Dover. Write a short paragraph explaining which rock type forms the landmark and how it was created over millions of years.