

Nova's Rock Classification Field Journal

Learning objective: To identify and describe the physical properties and formation of different types of rocks (igneous, sedimentary, and metamorphic).

Imagine you are out on a field trip with Nova the owl. Use your magnifying glass and your scientific knowledge to examine a rock you have found. Fill in this field journal to classify your specimen and explain how it was formed.

Word bank: Igneous · Sedimentary · Metamorphic · Texture · Hardness · Fossil · Magma · Pressure · Sediment · Permeable

1. Rock Identification: Name the rock type (igneous, sedimentary, or metamorphic) and describe its appearance, such as its colour, pattern, or if it has visible crystals. (3 marks)

2. Formation Process: Explain how your rock was formed. Was it created from cooling magma, layers of sediment, or heat and pressure deep underground? (3 marks)

3. Physical Properties: Test your rock's hardness or texture. Is it rough, smooth, or crumbly? Does it feel heavy or light for its size? (2 marks)

4. The Fossil Clue: Look closely for any fossils. Why are you more likely to find a fossil in a sedimentary rock than in an igneous rock? (3 marks)

5. Nova's Science Challenge: If you left this rock outside in the rain and wind for one hundred years, how do you think it might change? (2 marks)

Extension challenge: Research the 'Rock Cycle'. Can you draw a flow chart showing how a sedimentary rock could eventually become a metamorphic rock?