

# Nova's Geological Discovery Log

*Learning objective: To identify, classify, and explain the formation of igneous, sedimentary, and metamorphic rocks.*

Use this log to document your investigation into the three main rock types. Research their characteristics and use your scientific knowledge to explain how they are formed. Ensure you use technical vocabulary to justify your classifications.

*Word bank: sedimentary · igneous · metamorphic · permeable · magma · sediment · pressure · fossil · crystals · weathering*

**1. Classify: Describe the appearance of an igneous rock and explain the process of its formation from magma or lava. (3 marks)**

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**2. Compare and Contrast: How does the formation of sedimentary rock differ from metamorphic rock? Mention the role of pressure in your answer. (4 marks)**

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**3. Explain why: Why are fossils most commonly found in sedimentary rocks rather than igneous rocks? (3 marks)**

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**4. Justify your answer: If you found a rock that was very soft and contained layers, which category would you place it in? Justify your choice. (3 marks)**

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**5. What might happen if: Imagine a metamorphic rock is pushed deep into the Earth's mantle. What might happen to its structure and appearance over time? (4 marks)**

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**6. Critical Thinking: If you were tasked with building a garden wall that needs to withstand years of British rain, which rock type would you choose and why? (4 marks)**

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*Extension challenge: Design a 'Rock Cycle' diagram that illustrates how one rock type can transform into another. Label each stage clearly and write a short paragraph explaining the 'Deep Time' required for these geological changes to occur.*