

Nova's Rock Classification Challenge

Learning objective: To identify and classify rocks as igneous, sedimentary, or metamorphic based on their formation and physical properties.

Nova the owl is out on a field trip! Read the descriptions of how different rocks were formed, then match each rock type to its correct category and explain your reasoning. Use the word bank to help you.

Word bank: Igneous · Sedimentary · Metamorphic · Magma · Pressure · Layers · Cooling · Heat

1. Nova finds a rock formed by layers of sand and pebbles being squashed together over millions of years at the bottom of a lake. Which rock type is this and why? (2 marks)

2. A rock is formed deep underground where intense heat and pressure change the rock's structure without melting it. Which category does this belong to? (2 marks)

3. Explain how an igneous rock is created when molten rock reaches the surface or stays underground. (2 marks)

4. True or False: A sedimentary rock can turn into a metamorphic rock if it is buried deep enough to experience extreme heat. Explain your reasoning. (2 marks)

5. If you were to buy a piece of granite for a garden project costing £12.50, and you paid with a £20 note, how much change would you receive? (2 marks)

Draw: Draw a diagram of the 'Rock Cycle', showing how magma cools to become igneous rock, how weathering creates sediment, and how heat and pressure create metamorphic rock.



Extension challenge: Research a common rock used in construction, such as limestone or slate. Write a short paragraph explaining its properties and why it is useful for building houses.