

Nova's Rock Classification Challenge

Learning objective: To identify, describe and group rocks based on their appearance and simple physical properties (sedimentary, igneous, and metamorphic).

Nova the Owl is sorting her collection of rocks for her nature museum. Read the descriptions below and match each rock to its correct group: Igneous, Sedimentary, or Metamorphic. Explain your reasoning for each choice using the key features found in the word bank.

Word bank: Igneous · Sedimentary · Metamorphic · Crystals · Layers · Heat · Pressure · Magma · Sediment

1. Rock A: This rock is made of small grains pressed together in distinct horizontal stripes. Which group is it, and how do you know? (2 marks)

2. Rock B: This rock is very hard with large, interlocking crystals. It was formed deep underground when hot liquid rock cooled down. Which group is it? (2 marks)

3. Rock C: This rock used to be a different type of rock, but it was changed deep underground by extreme heat and pressure. Which group is it? (2 marks)

4. Nova finds a rock with a fossil of a tiny shell inside it. Which group of rocks are fossils usually found in, and why? (2 marks)

5. If you had a piece of granite (an igneous rock), why would it be difficult to scratch it with your fingernail? (2 marks)

Draw: Draw a cross-section of a sedimentary rock, making sure to label the different layers of sediment that have built up over time.



Extension challenge: Research what 'obsidian' is. Why is it often called 'volcanic glass', and which of Nova's three groups does it belong to?