

## 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)**

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**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)**

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**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)**

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**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)**

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

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**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?*