

Nova's Geological Journey: Understanding Rocks

Learning objective: To identify and describe the properties of igneous, sedimentary, and metamorphic rocks, and to understand the process of rock formation.

Use these flashcards to test your knowledge of geology. Read the term or question on the left, then flip to check if your explanation matches the scientific definition.

What is an Igneous rock?

A rock formed from the cooling and solidification of molten magma or lava.

Define a Sedimentary rock.

A rock formed from layers of sediment (sand, mud, pebbles) that have been compressed and cemented together over millions of years.

What is a Metamorphic rock?

A rock that has been changed from its original form by intense heat and extreme pressure deep underground.

What is 'permeability' in relation to rocks?

The ability of a rock to allow water to pass through it, usually through small pores or cracks.

Where are fossils usually found?

Fossils are almost exclusively found in sedimentary rocks, as the gentle layering process preserves remains without melting them.

Explain the process of erosion.

The gradual wearing away of rocks by natural forces such as wind, rain, flowing water, or ice.

Compare and contrast Granite and Sandstone.

Granite is an intrusive igneous rock (formed underground, very hard), while Sandstone is a sedimentary rock (formed from grains of sand, often porous).

Why is Marble considered a metamorphic rock?

Marble starts as limestone, but under the heat and pressure of the Earth's crust, its structure recrystallises into a harder, denser form.

Justify why some rocks are used for building materials.

Some rocks are chosen for their durability, resistance to weathering, and aesthetic properties, such as Slate for roofing or Granite for foundations.

What might happen to a sedimentary rock if it is pushed deep into the Earth's mantle?

It would likely undergo metamorphism due to increased heat and pressure, turning into a metamorphic rock, or eventually melt into magma.