

Grade 4 Science Assessment: Rocks and Soils

Learning objective: To demonstrate knowledge of rock types, the formation of fossils, and the properties of soil.

Read each question carefully. Use your scientific knowledge to provide clear and accurate answers. Ensure you use the correct terminology.

Nova the owl has been exploring the cliffs near the coast. She has found three different types of rocks and wants to understand how they were formed and how they change over time.

Word bank: sedimentary · igneous · metamorphic · permeable · fossilisation · magma · sediment · erosion

1. Name the three main types of rock and give one example of each. (3 marks)

2. Explain the process of how a sedimentary rock is formed. You may use words from the word bank to help your explanation. (3 marks)

3. Nova finds a rock that contains the remains of a prehistoric creature. Describe the steps of fossilisation. (4 marks)

4. Why is it important for a scientist to test if a rock is permeable or impermeable before using it to build a garden path? (3 marks)

5. Explain the difference between magma and lava in the formation of igneous rocks. (3 marks)

6. Bea the honeybee is studying soil. Explain what soil is made of and why it is essential for plant growth. (4 marks)

7. Imagine you are a geologist like Nova. Write a short paragraph explaining how a metamorphic rock is created from an existing rock through heat and pressure. Include what happens to the rock's appearance. (5 marks)

Draw: Draw a labelled diagram showing the layers of the Earth or the process of sediment settling at the bottom of a lake.



Extension challenge: Total: /25