

Year 4 Science Assessment: Rocks and Fossils

Learning objective: To identify and describe the properties of rocks, explain how fossils are formed, and understand the difference between sedimentary, igneous, and metamorphic rocks.

Read each question carefully. Use the word bank to help you with your answers. Write your responses clearly in the spaces provided.

Max the monkey has been busy digging in the garden, and he has found three different types of stones. He wants to know how they were formed and why they look so different. Nova the owl is helping him classify his collection based on their texture, appearance, and how they were made.

Word bank: sedimentary · igneous · metamorphic · permeable · fossil · magma · sediment · erosion · hard

1. Max finds a rock that has layers of sand and pebbles pressed together over a long time. Which type of rock is this? (1 mark)

2. Nova explains that some rocks are formed when molten magma cools down deep underground or on the surface. What is the name given to this group of rocks? (1 mark)

3. Describe two physical properties you could test to identify a rock (for example, is it hard or soft?). (2 marks)

4. Explain the process of how a fossil is formed. You may use a diagram or bullet points to help your explanation. (4 marks)

5. Why do some rocks, like chalk, absorb water while others, like granite, do not? Use the term 'permeable' in your answer. (3 marks)

6. Max and Nova are looking at a metamorphic rock. Explain how a rock changes into a metamorphic rock. What two things must happen to the original rock? (4 marks)

7. Imagine you are a geologist like Nova. Write a short report explaining the journey of a piece of sediment as it travels down a river, settles at the bottom of the sea, and eventually turns into a sedimentary rock. Use at least five words from the word bank in your response. (10 marks)

Draw: In the box below, draw a cross-section of the Earth's crust showing the layers of sedimentary rock where a fossil might be found.



Extension challenge: Total: /25