

The hidden dinosaurs...

One of the reasons that the Isle of Wight is so rich in fossils is because it is made up of sedimentary rock

Student Introduction

- Can you find out how fossils are formed and discovered?
- Can you discover why sedimentary rocks are more likely to contain fossils?



Understanding Sedimentary Rock

There are three main types of rock: sedimentary, igneous and metamorphic. The diagram below shows how the rock cycle works, however we are interested in sedimentary rocks as these can contain many fossils.

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Sedimentary rocks are formed in the sea, ponds or lakes where material is deposited.

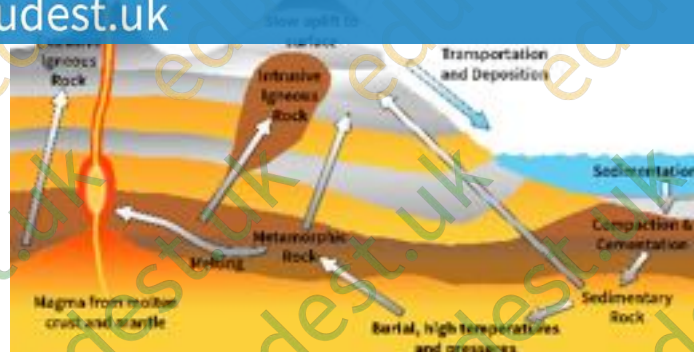
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pieces of rock along the way. This deposited rock eventually forms many layers: these are called

sediments, hence the name sedimentary rock. The name for this process is sedimentation.

As these layers build up, the ones below are squashed tightly together (compaction), water is pushed out and crystals form - these act like a glue that holds the rocks together. This is a process called cementation. This process can take millions of years.



Examples of sedimentary rocks include:

- ✓ siltstone
- ✓ chalk
- ✓ shale
- ✓ sandstone
- ✓ limestone

During your visit to the museum today you will see many fossilised items.

Can you find answers to the following questions?

Questions (continued on page 2...)

1. Sedimentary rocks can contain fossils of animals, plants or other organisms. How do you think they got in there?

Questions

2. Why are fossils 'rock coloured'?

3. Explain the process of fossilisation:

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- ▶ Because large numbers of species, including dinosaurs, became extinct at one time, the end of the Cretaceous period is identified as a mass extinction. Over 50% of life forms on the planet died out.
- ▶ Scientists have yet to discover the answer as to what caused this mass extinction that marks the end of the Cretaceous Period and the beginning of the Paleogene Period.
- ▶ Many scientists have devoted their lives to try and explain this strange event. Because so many species became extinct, something must have occurred on a large, global scale and been catastrophic.

Questions

Theories about extinction include an asteroid impact, intense volcano activity, or a gradual change and shift in climate and sea-levels, affecting the food-chain.

4. As you look around the museum, what evidence can you find to support any of these most popular theories?

5. What effect would these theoretical events have had on Earth's atmosphere and the creatures living on Earth?



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