

6.3.5 Fossils

AQA GCSE Biology (Higher) Question and answer notes

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How to use these notes

These notes cover everything you need to know for this part of the specification. They have been written in question-answer format to make them easier for you to study from.

In order to study successfully, I recommend you do the following for each question and answer:

- Read it carefully and make sure you **understand** it.
- **Memorise** the answer.
- **Practice** applying your understanding to past exam questions.

A good way to memorise information is to use **retrieval practice**. This is when you practise retrieving information from your memory. You could do this by making a flashcard for each question with the question on one side and the answer on the other. Or you could use a flashcard app. Alternatively, use a sheet of paper to cover up the answer so you can only see the question. Try to answer the question and then check how you did.

You should practise retrieving each answer from your memory until you can do it perfectly. Even once you can retrieve the answer perfectly, your ability to retrieve it will probably fade as time passes without practising. Therefore you will need to keep going back to the questions that you have previously mastered and practising them again. However, each time you re-learn the answer, the memory will be stronger and will last longer than the time before.

What are fossils?

Fossils are the remains of organisms from millions of years ago found in rocks.

What can we learn from fossils?

We can learn from fossils how much or how little different organisms have changed over time.

What are the main ways that fossils can form?

There are three main ways that fossils can form. They are as follows:

- The first way is when part of a dead organism is preserved because one or more of the conditions needed for decay are absent. This undecayed part of the organism becomes a fossil.
- The second way is when the dead organism decays but as it decays parts of it are replaced by minerals. These minerals form in the shape of the organism and become a fossil.
- The third way is when traces of an organism are preserved, such as footprints, burrows or rootlet traces.

Why are there not many fossils of the earliest organisms that lived on Earth? What are the consequences of this?

There are not many fossils of the earliest organisms that lived on Earth because most of them were soft-bodied which means that they left few traces behind. Also, most of the traces that they did leave have been destroyed by geological activity. Therefore, scientists cannot be certain about how life began on Earth.