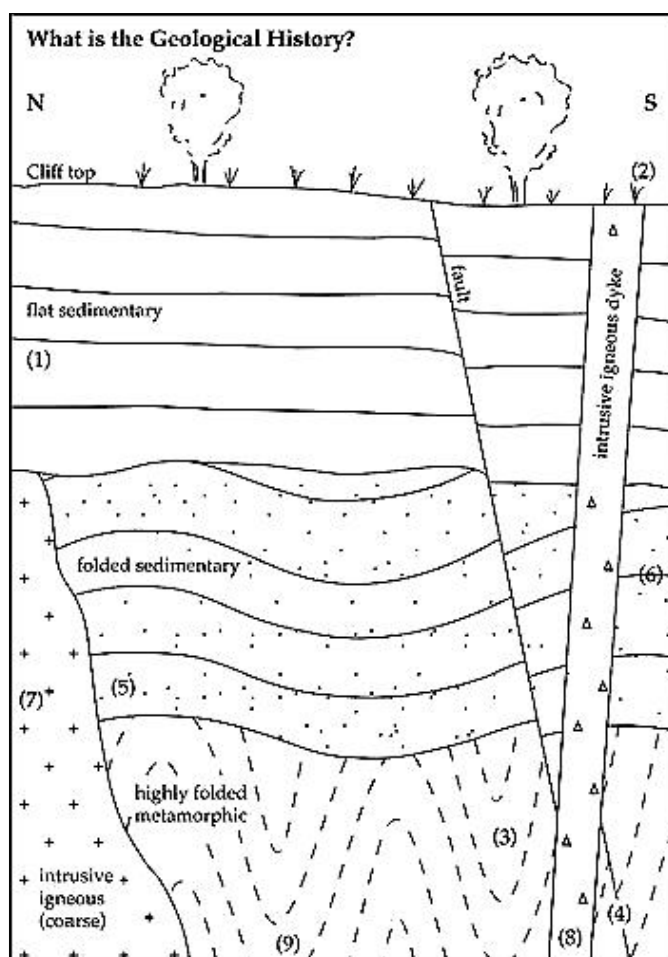


EXTRACT FROM AN EARTHLEARNINGIDEA A ACTIVITY

Chris King

What is the geological history? Sequencing events to reveal a history using simple stratigraphic principles

Stratigraphic principles have long names, but are easy to use. Try using them to work out the sequence of events in this diagram:-



Key sequencing principles are:

- The rocks on top are younger (unless something very unusual has happened to the rock sequence) – this is the **Principle of Superposition of Strata**.
- Anything which cuts across anything else is younger – this is the **Law of Cross-Cutting Relationships**.

- Rocks can only be deformed (folded, faulted or metamorphosed) after they have first been formed.

Reading the geological history of the UK

This cartoon diagram actually shows, in a simple way, the geological history of the UK.

Read the summary of this history below, **from the bottom to the top**.

A simple UK Geological History

- A flattish surface was eroded across the rocks; later erosion formed the cliff – **these were the last events to happen**.
- Magmas rose up some of the cracks forming intrusive igneous dykes.
- As the early Atlantic Ocean began to open, tension pulled the rock apart, it cracked and steep faults formed;
- Erosion produced another flattish surface; then more flat-lying sediments were deposited – and became rocks.
- The collision caused melting of part of the 'UK' plate and the magma rose to form coarse intrusive igneous rock.
- These sediments were compressed and folded as the plate carrying the 'UK' collided with the plate carrying Africa, which was moving north;
- Erosion produced a flattish surface; then more flat-lying sediments were deposited.
- Plate tectonics caused the plate carrying 'Scotland' to move south, colliding with the north-moving plate carrying England – compressing, highly folding and metamorphosing the rocks and forming the 'UK'.
- Sediments were laid down flat on the ocean floor between 'England' and 'Scotland' – **the first event to happen**.

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► Can you write out the geological history shown on the diagram using the numbers?
Send your answers to Elizabeth by the October meeting – small prize!