

Topic: Sedimentary Rock Formation

This topic is designed to develop your pupils' understanding of how sequences of sedimentary rock strata are formed. This understanding is not only necessary for grasping the significance of the rocks exposed at Knockan Crag. Sedimentary rock strata outcrop prominently throughout the NW Highlands and underlie most other parts of Britain. Understanding how the three main rock families (sedimentary, igneous and metamorphic) are formed is also one of the Attainment Targets at Level D within the *Materials from Earth* Science strand of the 5-14 Environmental Studies Guidelines.

The topic will involve your pupils in an information handling exercise which is supported by a number of practical modelling activities. Many of these may be tackled by the pupils themselves while others are more suited as teacher-led demonstrations.

A suitable starting point for the topic would be an exploration of your pupils' pre-knowledge of how local rock strata were formed and/or their understanding of how their local landscape is continually evolving as the passage of time and constant erosion take their toll.

The materials needed for the information handling activity are provided in the file **Sedimentary rock formation diagrams.zip**. A key to the diagrams is contained in the file **Key to diagrams.pdf**. A sequence of ten diagrams and their associated captions illustrates one common way in which sedimentary rocks can be formed. The diagrams and captions can be used flexibly. Three possibilities would be:

1. Sorting a jumbled list of the captions (ie no diagrams) into a meaningful sequence. Pupils could then be given the diagrams and asked to match each caption to an appropriate diagram. On the backs of the pre-printed cards of the captions letters could be added which spell the word SEDIMENTARY when they are correctly sequenced.
2. A less demanding version of this would be to sort out the sequence of diagrams each already captioned.
3. A more demanding version would be for pupils to correctly sequence the ten uncaptioned diagrams and write their own explanation of the processes represented. Note that there are one or two diagrams and captions whose order could reasonably be reversed when they are studied in isolation. Lettering on the reverse of the captions (as above) could give an indication of the intended order.