

Geology Curriculum Vision

Why should students learn your subject?

Geology is the study of planet Earth and Cumbria is an ideal place to do it. We have superb examples all around us of all the main types of earth materials – igneous, sedimentary and metamorphic rocks – and a wide range of minerals and fossils. The landscape is the result of geological processes and provides us with an excellent outdoor laboratory in which to study them, from the high Pennine slopes via the Eden Valley to the magnificent scenery of the Lake District, where huge ancient volcanoes have been carved by rivers and glaciers into the hills and valleys we see today.

As geologists, we look to the present to understand the past. We study the processes taking place in rivers, the environments in which coal forms, the sediment found in deserts and the creatures living in past seas as evidenced in the fossil record. All this is preserved in the rocks around us here in Cumbria, from the coral found at Askham to the lava flows of Eyecott, and all manner of experiences in between, with violent volcanoes and huge periods of mountain building. This tells a story of how our piece of continental crust is the result of a journey across the equator passing through deserts, tropical rainforests and tropical seas as we drifted north until we arrive at our present latitude, where repeated glaciations resulted in the stunningly beautiful landscape we see today in the Lake District. It is a mind-blowing place we live in and to be able to look at and see it differently is a gift.

What is the core knowledge in your subject that all students should understand?

- processes resulting in the formation of rocks
- tectonic pressures which have affected them and the area.
- how to use fossils understand the processes of evolution and evidence of the causes of mass extinction.
- the processes taking place in the earth resulting in hazards, earthquakes, volcanoes, tsunamis and landslides
- how we can reduce the impact of them and monitor such events.
- natural resources: what they are, how they formed and how we use geochemical and geophysical methods to find them.
- how we get them out of the earth with as minimum environmental impact as we can.

What do students do with their knowledge to demonstrate their understanding?

Students will demonstrate their knowledge through a range of activities such as presentations, posters, short response questions up to essay questions. There is a practical requirement to the course where students are expected to identify and test different rock samples. Students will also get the opportunity to go on fieldwork and demonstrate how to accurately collect data, this will then be followed up in school with a project to write this up.