Global learning and the purpose of study in science

The National Curriculum purpose of study points out that pupils must be taught essential aspects of the knowledge, methods, processes, and uses of science. The methods and processes of science are universal. Whilst the questions and concerns of scientists are influenced by culture, their ways of working are largely similar.

The purpose of study highlights the need to excite pupils, and ignite their curiosity about natural phenomena. Pupils from all countries experience similar phenomena, even if in different contexts: light travels in straight lines whether from a laser pointer or candle; combustion reactions are the same the world over; and predator-prey relationships are in evidence in every habitat.

The purpose of study states that science is vital to the world’s future prosperity. Pupils who take up a career in science may need, for example, to learn how to use their foundational knowledge of concepts to help ensure adequate nutrition for everyone, or to prevent and find cures for disease. Only when people are properly fed, and healthy, can they work towards prosperity for all.

The purpose of study exhorts us to allow opportunities for pupils to consolidate their foundational understanding of science through appreciating specific applications of science in society and the economy. There are many applications of science which are global in one way or another: the export of electricity generated by solar panels in warm or windy regions; the design and launch of satellites that transmit data all around the world; and the study of plate tectonics and volcanology with the aim of averting catastrophe.

It is clear that, in order to adequately address the purpose of study, science teaching must have a global dimension.