

Science curriculum skills progression at Eyam

Intent

At Eyam school we believe that a high quality investigative science education provides the foundations for appreciating the world and the impact that science has had on our understanding of it. It is vital that pupils understand how we must act in order to protect that future for generations to come and the significant role that science plays in our everyday lives. As teachers our role is to promote questions and an investigative approach to learning – encouraging inquisitive learning and exploration through each scientific field: Biology; Chemistry and Physics. Through building up a body of foundational knowledge and concepts, pupils should be encouraged to recognize the power of rational explanations and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to use HOTS skills to explain what they can see, predict how things might behave, analyse causes, rate data and refine conclusions.

Therefore **our aim** in science is to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the disciplines of biology, chemistry and physics.
- develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about their world.
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future
- develop a genuine love for science and a curious and investigative nature to engage with and ask questions about the world in which they live.

Staff at Eyam ensure that all pupils experience a curriculum that is relevant to life today (eg learning about plastic remodeling in India) as well as appreciating the history and context behind scientific theory (such as Newton's laws being devised concurrently with the outbreak of the plague in Eyam). We ensure pupils are immersed in technical and scientific vocabulary, which is a big part of our pedagogical approach

Our objectives in the teaching and learning about science are:

- Prepare our children for life in an increasingly scientific and technological world today and in the future
- Help our children acquire a growing understanding of the nature, processes and methods of scientific ideas.
- Help develop and extend our children's scientific concept of their world.
- Build on our children's natural curiosity and develop a scientific approach to problems.
- Encourage open-mindedness, self-assessment, perseverance and refining the skills of investigation – observing, measuring, predicting, hypothesizing, experimenting, communicating, interpreting, explaining and evaluating.
- Develop the use of scientific vocabulary, recording and techniques.
- Develop confidence in using computing to investigate, record and analyse.
- Making links between science and other areas of learning and life.

Skills progression

We refer directly to the 'National Curriculum programmes of study 2014', as well as the 'Understanding of the World' aspects of the early years Foundation Stage Curriculum, using the sequence of skills suggested within each Key stage. We take account of the Non statutory guidance for science. Topics are taught on a two year rolling programme either as part of the whole school theme OR as a discrete subject. Staff plan according to current global issues as well as local interests, the intention is to focus on a STEM approach where possible, linking science, technology, engineering and maths.