



Science Curriculum Rationale

Science Intent

At Glusburn Primary School, we recognise the importance of Science in every aspect of daily life. As one of the core subjects taught in Primary Schools, we give the teaching and learning of Science the prominence it requires. We want all children to: develop their curiosity, observation, questioning and reasoning skills through investigating problems, learning how science works and discovering why science matters in the world.

How is the science curriculum implemented?

Children experience weekly science lessons, this allows them sufficient time to become fluent in their knowledge and skills, and recalls will ensure this is embedded in their long term memory.

We plan using the knowledge matrices from the ASE PLAN document.

We follow an enquiry based approach which focuses on the acquisition of substantive knowledge before 'proving' or inquiring through investigations

During Year 2, children have two half terms to work scientifically and plan investigations relevant to their interests at the time. During this time children are taught to observe closely, use simple equipment, perform simple tests, identify and classify and use their observations to gather and record data to help them answer questions.

We refer to 'science superheroes' which are displayed in each classroom for children to refer to. These include: *classifying, exploration, fair testing, observation, pattern seeking and research*. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers.

Teachers use precise questioning in class to test conceptual knowledge and skills, and assess children regularly to identify those children with gaps in learning, so that all children keep up. Working Scientifically skills are embedded into lessons to ensure these skills are being developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching.

How is Science enabled in the Early Years?

In Early Years Science is taught through the **Specific** area of **Understanding the World: The Natural World** and is enabled through, for example: Using the local area for exploring both the built and the natural environment; providing opportunities to observe things closely through a variety of means, including magnifiers and photographs; provide play maps and small world equipment for children to create their own environments; teaching skills and knowledge in the context of practical activities, e.g. learning about the characteristics of liquids and solids by involving children in melting chocolate or cooking eggs; giving opportunities to record findings by, e.g. drawing, writing, making a model or photographing; providing stories that help children to make sense of different environments; providing stimuli and resources for children to create simple maps and plans, paintings, drawings and models of observations of known and imaginary landscapes; giving opportunities to design practical, attractive environments, for example, taking care of the flowerbeds or organising equipment outdoors.

How does the science curriculum reflect our school's values and ethos?

We aim to inspire and motivate children through increasing pupils' knowledge and understanding of our world, and with developing skills associated with Science as a process of enquiry.

UNCRC ARTICLE 29: Education should help develop every child's personality, talents and mental and physical abilities to the full. It should develop children's respect for their own rights and those of others, for their parents, for their own culture and the cultures of others, and for the natural environment.

How does the Science curriculum impact on children's cultural capital and in becoming well rounded citizens?

Through engaging and varied teaching styles, workshops, trips and interactions with experts, children have the understanding that science has changed our lives and will continue to do so in the future. Children learn the possibilities for careers in science as a result of connection with national agencies such as the STEM association.



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Special Educational Needs and Disability

We recognise that pupils with SEND have a range of different needs and starting points. Some of our pupils have severe, complex or profound needs that have a significant impact on their cognitive development, especially the way that they are able to make alterations to their long-term memory.

Teachers are ambitious for all pupils including those with SEND, developing and adapting the curriculum so that it is coherently sequenced to all pupils' needs, starting points and aspirations for the future; acquiring the knowledge and cultural capital they need to succeed in life.

UNCRC ARTICLE 23: A child with a disability has the right to live a full and decent life in conditions that promote dignity, independence and an active role in the community.