Buckton Vale Primary School

Curriculum Statement for the Teaching and Learning of Science

Our values-based school nurtures curiosity and creativity through an inspiring, broad and engaging curriculum, where learning is at the heart of all that we do. Our children learn to become resilient and self-assured in an environment where safety is paramount. Everyone is challenged and encouraged to thrive and achieve as individuals, preparing them for their role as caring and active citizens in modern Britain.

Intent	At Buckton Vale Primary School, our children see themselves as scientists. Our intent is to give every child a broad and balanced Science curriculum which enables them to confidently explore and discover what is around them, so that they have a deeper understanding of the world we live in. We want our children to love science, be enthusiastic and engaged in their work, find it fun and be fully involved in discovering, exploring, researching, investigating and talking about their work. We want children to recognise the importance of science in their everyday lives and a range of job-roles, and we ensure to foster the realisation that they can aspire to have a STEM related career. Science at Buckton Vale is exciting, with practical hands on experiences that encourage curiosity and questioning. Children ask questions and work together to discover the answers and explore ideas. Our aim is that these stimulating and challenging experiences help every child secure and extend their scientific substantive and disciplinary knowledge, widen their scientific vocabulary; as well as promoting curiosity and a thirst for learning. At Buckton Vale, we have a coherently planned and sequenced curriculum. We want to equip our children with not only the minimum statutory requirements of the science National Curriculum but to prepare them for the opportunities, responsibilities and experiences of later life.

	Science Principle	**Progression**	**Scientific Vocabulary**
Underpinned by	Staff and children were involved in the creation of our science principles. We believe that great science occurs when • Children are enthusiastic and engaged in their work: they find it fun and are involved in discovering, exploring, researching, investigating and talking about their work • Children are curious and learning is practical and hands-on • Children ask questions and work together to discover the answers and explore ideas • Children apply their scientific knowledge and use scientific vocabulary • Science teaching is linked to the children's experiences and the real world • Our learning is enhanced by outdoor learning, visitors and access to relevant resources	Teachers use both the Progression in Working Scientifically Skills and Progression in Knowledge documents to provide progression throughout the school. The Progression in Knowledge (biology, chemistry and physics) document shows the links between the units taught in different year groups, so that teachers can ensure they are covering the correct content for their year group as well as showing what has been taught previously and what is taught in future years. This document and the PLAN resources are reference points to recap prior learning and provide the required beginning and end points.	Explicit teaching of vocabulary and terminology is at the heart of our teaching and learning. New vocabulary is introduced and explained. Children learn to use scientific words verbally, in context, and also in written outcomes. Children are able to apply new vocabulary in a variety of ways so that the new language is retained, understood and stored in their long-term memory. For each unit, children's books have a cover sheet listing the relevant scientific vocabulary to be used. Definitions are discussed and a knowledge harvest/mind-map is completed at the start and end of the unit of work.

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Implementation	PLAN resources	Science Hub	CPD	Enquiry Based learning
	We use the PLAN primary science resources to plan and assess effectively the science National Curriculum for England. These state prior learning, the key learning, vocabulary and working scientifically skills that the children need to acquire. Teachers select activities that will best support the children to become secure in the knowledge and skills.	Buckton Vale is part of the Mossley and Carrbrook School's Partnership (MSCP), a member of the Stalybridge/Mossley Ogden Trust network and the Victorious Science hub. In these collaborations Science leads build links; work together on curriculum, assessment, resources, transitions, science competitions/events and share expertise to develop science for all.	Effective CPD and standardisation opportunities are available to staff to ensure high levels of confidence and knowledge are maintained. The Science lead supports as needed across the school providing in-house and external CPD. This has included online and in person training with SEERIH, Reach Out CPD, Explorify and The Ogden Trust.	Children apply knowledge and skills through the five types of scientific enquiry as set out in the National Curriculum. They ask questions and work together to discover the answers. Children explore, question, predict, plan, carry out investigations and observations as well as conclude their findings. They present their findings and learning using science specific language, observations and diagrams.

Implementation	Resources	Cross Curriculum Links	Enrichment	Sticky Knowledge
	Children have access to a wide range of good quality resources for practical hands-on learning experiences and to support their development of skills and knowledge. They are taught to use resources skilfully and safely.	Cross-curricular links are planned for, as Science has many diverse links with other subjects such as Maths, English, Computing, Design and Technology, History, Geography, P.S.H.E., Music, Art and P.E.	To enrich and enhance the pupil's learning experiences within the Science curriculum, there are varied enrichments, education visits and visitors. The school environment is utilised for outdoor learning including the RSPB Bird Watch. Y5/6 attend a careers fair. Science week is always a highlight of the year.	In order to support children in their ability to 'know more and remember more' there are regular opportunities to review previous learning. Children are encouraged to use scientific vocabulary to talk like a scientist in activities such as on the Explorify website and Concept Cartoons.

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	Pupil Voice	Evidence In Knowledge	Evidence In Skills
Impact outcomes	Our Science curriculum will lead pupils to be enthusiastic Science learners with a curiosity and fascination about the world. Children will have been exposed to a diverse representation of scientists and know that they too can aspire to have a science related career. They will have developed an understanding of the importance of science in shaping the world; in their lives and for the world's future.	Progress is shown at the end of each Science unit through AfL where children add to the knowledge harvest/mind-map. Children make links between their science learning and retain scientific knowledge with a real-life context. They are able to articulate their understanding of scientific concepts and reflect on their knowledge using scientific vocabulary.	Children apply knowledge using their Working Scientifically skills in a range of enquiries. They use their investigative skills when exploring scientific based problems which they strive to find the answer to. They are able to explain the process they have taken and reason scientifically when reporting and presenting findings and drawing conclusions. In essence, they work scientifically, like a scientist!