



Bishop Bridgeman C.E. Primary School

Part of Archbishop Temple Multi Academy Trust

We Work, We Play, We Care, We Pray

“Love God, Love Yourself, Love Your Neighbour” Luke 10:27

SCIENCE CURRICULUM POLICY

At Bishop Bridgeman, we give our children the very best. Through a broad, balanced, supportive and purposeful curriculum linked with National Curriculum objectives, we strive to ensure that all our pupils are able to succeed and find their unique talents and strengths. Our staff are committed to developing a love of learning, whilst developing the knowledge and skills to support the all-round development of every pupil and incorporating the school’s vision into all areas of the curriculum, ‘Love God, Love Yourself, Love Your Neighbour’ Luke 10:27

INTENT

At Bishop Bridgeman Primary School, we provide a substantive and disciplinary knowledge rich curriculum that gives pupils the knowledge and skills needed to take full advantage of opportunities, responsibilities and experiences in later life. Leaders at Bishop Bridgeman have the highest academic ambition for all children and the curriculum is designed to equip pupils with the knowledge and cultural capital needed to succeed.

Leaders have coherently planned and explicitly sequenced the curriculum from EYFS to Year 6. In EYFS, Children embark on Understanding the World around them, learning about the world, technology, and the people and communities that impact their lives. Leaders and staff have ensured that the pupils’ learning environment provides opportunities for challenging and building on their own knowledge of the world, providing them with the foundation required for understanding the science curriculum in KS1 and beyond. Teachers regularly assess pupils’ understanding of the world using insight (our school assessment tool), and address gaps of learning promptly to give our children the best chance to understand science curriculum endpoints.

From year 1, the science curriculum has clear end points that state the knowledge and skills that pupils will gain at each stage. When sequencing the curriculum, leaders have taken prior learning and typical gaps into account so that pupils gain cumulatively sufficient understanding and skills. The logical progression, which has identified the most useful content in science, enables pupils to know more, remember more and be able to do more. Within the planned intent for science, leaders have made explicit links to the five ways of working scientifically – Research and using secondary sources, Identifying, classifying and grouping, Pattern Seeking, Observing over time and Comparative and fair testing - in order to develop pupils’ scientific skills and understanding of scientific practise. As a result, each pupil is provided with examples of what ‘a good scientist’ does at the beginning of and throughout every unit.

Leaders have applied findings of the Hart and Risley landmark study (1995) into our vocabulary use. Key vocabulary has been selected to support pupils develop their conceptual understanding and the work of Isabel Beck (Bringing Words to Life*) informed teachers when making this selection. For



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each science unit, 2 conceptual words have been chosen to develop pupils conceptual understanding alongside 4 key specific words selected to support subject-specific learning.

Science learning enables children to develop their curiosity and sense of enquiry, extending their knowledge and understanding of the world around them. Through building up a body of key foundational knowledge and concepts, pupils will develop a sense of excitement and curiosity about natural phenomena, and further their own understanding of the scientific world around them. By developing their own knowledge and skills, and finding the answers to their own questions about the world, pupils exemplify our vision: Love God, Love yourself and Love your neighbour.

At Bishop Bridgeman, we lay the foundation for a progressively deepening knowledge and understanding of scientific ideas that will be useful to them in later life. The embedding of scientific enquiry skills allows our children to use a variety of approaches to answer relevant scientific questions, bringing more meaning to the world in which they live.

We strive to inspire children by studying the achievements of notable scientists through British history, as identified on the long-term plans, and how they continue to influence the world around us.

IMPLEMENTATION

The science curriculum at Bishop Bridgeman is designed to embed core knowledge and concepts, instilling scientific knowledge alongside the skills of scientific enquiry. Teachers have the expertise necessary to support pupils in learning the intended curriculum and in addressing any gaps in their knowledge.

Teachers present information clearly and check pupils' understanding effectively and systematically. The curriculum is designed to allow pupils to transfer key knowledge into long term memory by having regular opportunities to revisit learning.

The intent for science also clearly identifies opportunities for pupils to follow practical methods, processes and skills. Teachers ensure there are regular opportunities for pupils to work scientifically throughout all units of work. Leaders have invested in high quality resources to support our pupils' scientific enquiry.

Teachers use ongoing assessments to check understanding and inform teaching, for example by marking in the moment and providing clear and direct feedback at the point of learning. An assessment system (Insight) is used by teachers to assess the science knowledge, skills and vocabulary for their pupils. Data is then analysed for key groups to inform priorities for the subject leader.

Leaders have developed knowledge organisers to support pupils in their learning as specified within the subject intent for science. Knowledge organisers ensure that the intended knowledge is presented to children in a clear and structured way to support long term memory. Teachers plan



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spaced retrieval tasks so that pupils regularly retrieve knowledge to ensure key concepts are embedded in their long-term memory and they are able to apply them fluently.

To ensure a broad and balanced curriculum, children will receive weekly, discreet science lessons which will provide practical learning experiences and discussion as well as reading and writing to instil the importance of effective communication and expression of findings. To support pupils with their learning, reading is prioritised and cross curricular links are planned with lessons such as maths. An example of this is where children in year 3 can use their mathematical skills of measurement when accurately measuring shadows within the unit of light.

In order to inspire curiosity and critical thinking, we will develop children’s scientific enquiry skills through practical activities that include the five ways of working scientifically.

All children are made aware of health and safety issues when undertaking work in science. They are encouraged to show respect for living things and the physical environment, which again links perfectly with our school vision.

IMPACT

At Bishop Bridgeman, all children are given equal opportunities to achieve in science through a well-constructed curriculum. Good progress is made in line with the national curriculum objectives and children know more, remember more and are able to do more. This is reflected in their work that is consistently of a high quality and in the outcomes of national tests and assessments.

Children leave Bishop Bridgeman with a positive attitude and enthusiasm for science and are well prepared to continue their education. They will have acquired a solid understanding of the world around them and the skills required to become confident problem solvers and critical thinkers. They will be able to make firm connections between knowledge gained and their experiences in life which will inspire them to question and test new concepts.

*Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York: Guilford Press.

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