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| **Intent, Implementation and Impact for Science** |
| **Intent:**  Our aim at Bridgemere CE Primary School is to provide the foundations for understanding the world through scientific disciplines. Our pupils will also be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes and how these sources give us knowledge and insight about the world. We aim to develop a sense of excitement and curiosity through science. Pupils are nurtured and encouraged to behave like scientists.  **Our Aims:**   * **develop scientific knowledge and conceptual understanding through the specific 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 the world around them** * **are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future**   **Our Objectives:**   * Promote spiritual, moral, cultural, mental and physical development of all pupils. Develop high standards of discipline, social awareness and consideration for others. Encourage all children to take responsibility for their actions and choices. * Subject leader has a clear understanding of the science national curriculum. The subject leader ensures that all teachers are aware of expectations for their own year groups and know starting and end points; enable pupils to build their knowledge and skills towards the agreed end points. * Ensure that teachers provide progressions and sequential learning throughout the school, beginning in EYFS, providing them with the foundations to understand the world around them. * The subject leader ensures the content is taught in a logical progression, systematically and explicitly enough for all pupils to acquire the intended knowledge and skills * Subject lead has ensured colleagues have access to appropriate resources to ensure delivery of a rich and challenging new curriculum. * Teachers plan lessons so that pupils with SEN and/or disabilities can study every National Curriculum subject, wherever possible, and ensure that there are no barriers to every pupil achieving. |
| Pupils will be taught how science has changed our lives and is vital to the world’s future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. Our science curriculum has been designed to cover all of the skills, knowledge and understanding as set out in the National Curriculum, building on experiences from EYFS.  To ensure that pupils develop a secure knowledge that they can build on, our Science curriculum is organised into a progressive model that outlines the skills, knowledge and vocabulary to be taught in a sequentially coherent way. Science will equip pupils with knowledge about the phenomenons of our world and how these impact on our lives.  Science will be taught through scientific knowledge and understanding, the nature, processes and methods of science and working scientifically.  The order of the content taught is provided by Hamilton Trust. Teachers can use the medium term planning provided to plan opportunities for pupils to become increasingly confident in their scientific knowledge and skills. In Science we aim to develop their understanding of scientific ideas by using different types of scientific enquiry to answer their own questions, including observing changes over a period of time, noticing patterns, grouping and classifying things, carrying out simple comparative tests, and finding things out using secondary sources of information. Science is delivered through subject specific teaching organised into blocks The Science units taught aims to broaden pupils’ scientific view of the world. |
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| **Implementation:**  Pupils in Years 1-6 receive at least one hour of science each week. We use the Hamilton Trust mixed age group planning on a two year rolling program as the basis for our planning.  All learning will start by revisiting prior knowledge. This will be scaffolded to support children to recall previous learning and make connections. Staff will model explicitly the subject-specific vocabulary, knowledge and skills relevant to the learning to allow them to integrate new knowledge into larger concepts.  In EYFS, children will begin to build their vocabulary and fascination for a wide range of concepts ready for the National Curriculum. These include a range of objectives for Understanding the World, as well as through other area of the EYFS framework. Children are encouraged to ask questions to build their curiosity and think of ways to find the answers through investigation.  Learning walls in every classroom provide constant scaffolding for children. Subject specific vocabulary is displayed on the learning wall along with key facts and questions, and model exemplars of the work being taught.  ‘Flashback Four’ is used to review learning and check that children know more and remember more. Learning is reviewed also on a termly basis, after a period of forgetting, so that teachers can check whether information has been retained.  Science assessment is ongoing throughout the relevant cross-curricular themes to inform teachers with their planning lesson activities and differentiation. Summative assessment is completed at the end of each topic where science objectives have been covered. Our pupils will be given a variety of experiences both in and out of the classroom where appropriate to create memorable learning opportunities and to further support and develop their understanding. |
| **Impact:**   * At Bridgemere CE Primary School pupil voice shows that pupils are confident and able to talk about what they have learnt in Science using subject specific vocabulary. * Pupil voice also demonstrates that pupils enjoy Science and are able to recall their learning over time. * Pupils work demonstrates that Science is taught at an age appropriate standard across each year group with opportunities planned for pupils working at greater depth. Work is of good quality and demonstrates pupils are acquiring knowledge, skills and vocabulary in an appropriate sequence. * Through close monitoring, the effectiveness of teaching has a positive impact on learning and standards. * The subject lead has an evidence file showing first-hand evidence of how pupils are doing, drawing together evidence from the interviews, observations, work scrutinies and documentary review * The subject lead has successfully evaluated and summarised all aspects of the subject to define next steps for improvement from their action plan. |