| **Intent, Implementation and Impact for Science** |
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| **Intent:**  Our aim at Bridgemere CE Primary School is to provide the foundations for understanding the world through scientific disciplines. Our Geographers will also be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.how these sources give us knowledge and insight about the world, its places and the natural wonders our world displays.  **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, where children can build upon previous knowledge. This includes considering how the intended curriculum will address social disadvantage by addressing gaps in pupils’ knowledge and skills. * 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. The National Curriculum states that ‘They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.’  To ensure that pupils develop a secure knowledge that they can build on, our Science curriculum is organised into a progression 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.  When covering Science stands, the content will be carefully organised by each year group through a long term plan. Content knowledge, vocabulary and skills will then be planned for at a greater level of detail in the medium term plan. 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 and interwoven where possible into foundation subject themes. Meaningful links with other subjects are made to strengthen connections and understanding for pupils. The Science units taught aims to broaden the scientific view of the world. |
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| **Implementation:**  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.  Learning will be supported through the use of knowledge organisers that provide children with scaffolding that supports them to retain new facts and vocabulary in their long term memory. Knowledge organisers are used for pre-teaching, to support home learning and also as a part of daily review.  Consistent learning walls in every classroom provide constant scaffolding for children. Tier three subject specific vocabulary is displayed on the learning wall along with key facts and questions, and model exemplars of the work being taught.  Weekly curriculum quizzes are used to review learning and check that children know more and remember more. These are based on the Kagan research and require children to think deeply. 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; Target Tracker is used to inform leaders of school improvements or skills that need to be further enhanced. Our Scientists 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. |