

**The Jubilee Hub of The Jubilee with Pebblebed Federation**

**Subject Intent Statement for Science**

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| **Our Vision**  ‘Be who God meant you to be and you will set the world on fire.’  St Catherine of Siena |
| **Intent**  In the Jubilee Hub, within The Jubilee with Pebblebed Federation, the aim of science teaching is to encourage and enable students to develop inquiring minds and curiosity about science and nature, thus to acquire knowledge, conceptual understanding, and skills to solve problems and make informed decisions in scientific contexts.  We recognise the importance of Science in every aspect of daily life. Through our science teaching, we want to provide pupils with a breadth of opportunities that will enable them to meet our curriculum intent: to be creative and curious, to respect other people and work together and to value nature and respect it's fragility, while also appreciating how special our surrounding area is. We encourage children to have a wide outlook and wide aspirations, in their learning as in life: working towards being who God meant them to be.    The Scientific area of learning is concerned with increasing pupils’ knowledge and understanding of our world and how it works, as well as developing skills associated with Science as a process of enquiry. Utilising our countryside settings and outdoor space where possible, it will develop the natural curiosity of the child, encourage respect for living organisms and the physical environment and provide opportunities for critical evaluation of evidence.    The National Curriculum provides a structure and skill development for the science curriculum being taught throughout Jubilee Hub, which is now linked, through Cornerstones Curriculum Maestro projects, to the themed topics, to provide a creative scheme of work, which reflects a balanced programme of study.  The Big Ideas, that science within Jubilee Hub allows us to meet, include:   * Understanding what it means to be human and how human behaviour has shaped the world. * Understanding the complexities of the plant and animal species that inhabit the world. * Understanding the many dynamic and physical processes that shape the world. * Understanding the properties of all matter, living and non-living. * Understanding the importance of investigation and how this has led to significant change in the world.   The Science curriculum we provide will give children the confidence and motivation to continue to further develop their skills into the next stage of their education and life experiences. |
| **Implementation**  Teachers across Jubilee Hub create a positive attitude to science learning within their classrooms and reinforce an expectation that all children can achieve high standards in science.  In conjunction with the aims of the National Curriculum, Jubilee Hub’s Science teaching offers opportunities for children to:   * 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; * be equipped with the scientific knowledge required to understand the uses and implications of Science, today and for the future. * develop the essential scientific enquiry skills to deepen their scientific knowledge. * use a range of methods to communicate their scientific information and present it in a systematic, scientific manner, including I.C.T., diagrams, graphs and charts. * develop a respect for the materials and equipment they handle - regarding their own, and other children’s safety. * develop an enthusiasm and enjoyment of scientific learning and discovery.   Children have weekly lessons in Science throughout Key Stage 1 and 2, using various programmes of study and resources to supplement Cornerstones Curriculum Maestro. In Early Years, science is taught through the children learning about the world around them in their learning through play. Additional opportunities are provided in Science, such as links to the science department of the local secondary school, Science days in school and educational visits linked to the science curriculum, such as visits to local areas of interest.  Jubilee Hub’s approach to the teaching and learning of science involves the following;   * Science is based on links with the Cornerstones Curriculum Maestro projects as this ensures relevance and continuity in our cross-curricular projects. Teachers will extend these links using a range of resources to plan a sequence so the children in our schools will cover all the objectives in the National Curriculum. These are taught to an appropriate level depending on the age and ability of the children. * Through our planning, we involve problem solving opportunities that allow children to find out for themselves. Children are encouraged to ask their own questions and be given opportunities to use their scientific skills and research to discover the answers. This curiosity is celebrated within the classroom. Planning involves teachers creating engaging lessons, often involving high-quality resources to aid understanding of conceptual knowledge. 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. * We build upon the learning and skill development of the previous years. As the children’s knowledge and understanding increases, and they become more proficient in selecting, using scientific equipment, collating and interpreting results, they become increasingly confident in their growing ability to come to conclusions based on real evidence. * 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. This is developed through the years, in-keeping with the topics, through differentiation within lessons and projects. * Teachers demonstrate how to use scientific equipment, and the various ‘Working Scientifically’ skills in order to embed scientific understanding. * Teachers find opportunities to develop children’s understanding of their surroundings by accessing outdoor learning within their context and workshops with experts. |
| **Intended Impact**  The successful approach at Jubilee Hub results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world. Our engagement with our superb settings and local environment ensures that children learn through varied and first-hand experiences of the world around them. So much of science lends itself to outdoor learning and so we provide children with opportunities to experience this. Through various workshops, trips and interactions with experts and local charities, children have the understanding that science has changed our lives and that it is vital to the world’s future prosperity. Children learn the possibilities for careers in science as a result of our community links and connection with national agencies such as the STEM association, thus expanding their aspirations. Pupil voice is used to further develop the Science curriculum, through questioning of pupil’s views and attitudes to Science to support the children’s enjoyment of science and to motivate learners.  By the time children leave Jubilee Hub, they will have developed a progression of curriculum skills, such as:   * A knowledge of how scientists have combined evidence from observation and measurement with creative thinking to suggest new ideas and explanations for phenomena. * The following planning skills: *to decide how to turn ideas into a form that can be tested and, where appropriate, to make predictions using scientific knowledge and understanding; • to identify factors that are relevant to a particular situation; • to choose what evidence to collect to investigate a question, ensuring the evidence is sufficient; • to choose what equipment to use.* * The ability to obtain and present information, by: *making a variety of relevant observations and measurements using simple apparatus correctly; deciding when observations and measurements need to be checked, by repeating, to give more reliable data; • using tables, bar charts and line graphs to present results.* * The ability to consider evidence and evaluate through: *making comparisons; evaluating repeated results; • identifying patterns in results and results that do not appear to fit the pattern; • using results to draw conclusions and to make further predictions; • suggesting and evaluating explanations for these predictions using scientific knowledge and understanding; • saying whether the evidence supports any prediction made.* |