**Science**

**Intent**

At Sennen Primary School, we recognise the importance of Science in every aspect of daily life. As one of the core subjects taught in Primary Schools, we give the teaching and learning of Science the prominence it requires.

The Scientific area of learning is concerned with increasing pupils’ knowledge and understanding of our world, and with developing skills associated with Science as a process of enquiry. 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.

At Sennen Primary School, in conjunction with the aims of the National Curriculum, our 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 with regard to their own, and other children’s safety.
* Develop an enthusiasm and enjoyment of scientific learning and discovery.

The National Curriculum will provide a structure and skill development for the science curriculum being taught throughout the school, which is now linked, where possible to the theme topics to provide a creative scheme of work, which reflects a balanced programme of study.

We endeavour to ensure that 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 create a positive attitude to science learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in science. Our whole school approach to the teaching and learning of science involves the following;

* In the EYFS, children are encouraged to explore the world around them, experiment with resources and materials, and ask questions and offer suggestions as to why something has happened or what might happen. Science is promoted regularly through both our continuous provision and through carefully planned, teacher-led activities. The learning environment provides children with rich opportunities both inside and out to follow their own lines of inquiry and curiosity and interested, supportive adults engage children in sustained shared thinking about the world around them.
* Science is taught in planned and arranged topic blocks by the class teacher. This is a strategy to enable the achievement of a greater depth of knowledge.
* We use the Kent Scheme of work as a starting point to ensure coverage and provide exciting hooks for learning.
* 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.
* Lessons are fully inclusive with the needs of all pupils being planned for.
* We build upon the learning and skill development of the previous years. We provide opportunities to revisit previous learning and show the links between previous, current and future learning. 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.
* Formative assessment is used throughout lessons to gauge understanding and move the learning forward. Assessment opportunities will offer a chance to prove learning and spark discussion.
* ‘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.
* 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 and workshops with experts.
* Children are encouraged to use high quality texts to help them to gain information and websites such as Explorify, STEM and Royal Society of Chemistry are used to provide stimulating starters and resources to enhance lessons.
* Famous scientists and STEM role models are celebrated, including women in STEM.
* We work closely with the local secondary school to ensure our pupils are ready for the next stage in their learning. During the transition period, the secondary school provides experience days for biology, chemistry and physics. The children get to use the equipment and be taught by an experienced science teacher.

**Impact**

The successful approach at Sennen Primary results in a fun, engaging, high-quality science education, that provides children with the foundations for understanding the world. Our engagement with the 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 our work with the local secondary school, children are given a window into the exciting possibilities science provides and they begin to learn the possibilities for careers in science as a result of our community links and connection with national agencies such as the STEM association. 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