

Belvedere Infant and Nursery School

Science Curriculum Rationale

Intent:

At Belvedere Infants Science is taught through stimulating hands on lessons, practical experiments, visits, talks and links with our local community. Our Science curriculum builds knowledge and develops children's vocabulary and understanding of the world through first hand experiences and exploration. We strive to provide an environment which will excite and inspire children and give them an opportunity to ask questions and take risks. We will allow them to become independent thinkers, who will use scientific knowledge and skills to develop their understanding of the world in which they live.

At Belvedere Infant School we believe that every child can succeed in Science to become a self-assured and skilled Scientist equipped with the knowledge of the world around them and the ability to investigate scientifically. We teach Science in Years 1 and Year 2 through the International Primary Curriculum (IPC) as well as the Kent Primary Scheme which covers the National Curriculum (2014) year group expectations.

Implementation:

The different aspects to Science teaching at Belvedere Infant School are:

1. Hooks - Within every unit of work there are many suggestions as to strategies that teachers can use to ensure that children are interested and engaged in the content from the very beginning.
2. Working Scientifically - Throughout each unit, the emphasis is on the children learning by doing. The units of work encourage the teachers to provide activities that will enable the children to test their previously held ideas. Children are provided with clear Working Scientifically targets and WALTs which encourages them to develop a bank of skills and an understanding of the processes required to be able to carry out a successful science enquiry.
3. Scientific vocabulary and discussion - Each unit of work contains a section outlining the most appropriate scientific vocabulary to be used when studying that particular area of science. This will help children become familiar with, and use, technical terminology accurately and precisely. At the beginning of each unit, a Vocabulary list is included in the children's books with relevant vocabulary they will come across throughout the unit. Discussion is an important aspect of primary science. Children are fully immersed into their Science topics creating knowledge harvests, taking

part in innovative, exciting experiments and developing their enquiry and observation skills. At the end of each topic, children have the opportunity to share their new knowledge and celebrate their Science topic through an inventive and stimulating 'exit point.'

4. Resources—We have an extensive list of resources that are available to teachers to support the learning that occurs in lessons and across each unit of work. During science lessons children are provided with lab coats which makes science lessons even more of an exciting experience.
5. A range of learning strategies - As well as the full range of practical scientific enquiries outlined, there are plenty of other strategies provided to engage the children in their science learning; drama, deep thinking time, problem-solving in various contexts, videos from web pages, etc. For most lessons, children are seated in groups to enable some element of collaborative learning as we believe children attain more highly when working with their peers. Each classroom has a Science Working Wall reflecting the current learning, key vocabulary, which the children are able to use as a reference point and a prompt for learning and questions to extend thinking further.

Within the Early Years Foundation Stage (EYFS) Science is developed through purposeful play based experiences which are represented in a variety of indoor and outdoor environments. In the Early Years, children learn to recognise similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. Many of the activities planned for 'The World' take place in our outside areas, for example planting, observing seasonal changes, mini beast hunts, plying in the mud kitchen and harvesting herbs and vegetables.

Our Curriculum Impact:

Class teachers are expected to assess children that are working towards the expected standard in each unit. Children are assessed against their knowledge and also their ability to work scientifically. This gives an in depth understanding and overview of the class, whether they are strong at their knowledge of scientific units or ability to carry out an investigation. At Belvedere Infants we strive for all our learners to make rapid progress from their starting points. We use assessment for learning to see where children may have gaps in their learning so we can quickly address this through quality first teaching as well as one to one and small group interventions. We want all children to make progress academically, emotionally, creatively, socially and physically.

Teachers at Belvedere Infant School build on prior learning instead of teaching each unit in isolation. The Reception and Nursery classes assesses Science content through the 'Understanding of the World' strand of the EYFS curriculum. The Long term plan focuses on the expectations from Development Matters / Early Years Outcomes. Children are encouraged to record their scientific thinking and the expectation of formal recording increases during the year. Photographic evidence and discussions with the children are a main aspect of Science learning in EYFS.

