



Aims

We strive for all children at Catshill First School and Nursery to become enquiring scientists who, through 'hands-on' experiences, think about the world in which we live. We believe that our children will develop enquiring minds through collaborative learning experiences which support their curiosity and knowledge in the world around them.

What you will see

We believe that practical science is extremely important to support the knowledge, skills and understanding required to obtain a high-quality science education and expect to see practical science feature in every topic taught in every year group. Pupil voice at Catshill shows that children enjoy learning for themselves through hands-on experiences. The development of substantive and disciplinary knowledge in Science is complementary as children develop their understanding of concepts in the subject alongside the practical exploration of learning.

In the Early Years' Foundation Stage (EYFS), Science is taught through the Understanding the World area of the curriculum. This area supports children in developing the knowledge, skills and understanding to help them make sense of the world around them and the science which underpins this. Learning is child led and planned to capture the interests of the children. Careful questioning assesses and extends the learning of children. Tapestry is used to record and assess children's learning in the EYFS. In Key Stage 1 and 2 (KS1, KS 2), Science is taught where possible linked to topics. As a school, from Yr1 to Yr4, we use the White Rose scheme of learning to support our science teaching. Plans are personalised, adapted and supplemented by teachers to ensure that they meet the specific needs of pupils. This also allows children to engage in reasoning opportunities in science using stem sentences to support their written responses. Children are supported to plan their own investigations and enquiries in response to questions posed about science topics or questions which they may generate themselves. Questioning is used to ascertain children's current understanding which is then built on and developed during the topic. Vocabulary specific to the topic is taught through Word Aware and during the topic in the right context; vocabulary is also clearly displayed on the Science learning walls in each classroom and is expected to be referred to during the lessons. Where topics build upon learning in a previous year group, prior knowledge is carefully assessed to ensure that previous year group's knowledge is recapped. This allows for new learning to build upon previous science knowledge.

Lessons include a mixture of planning and executing practical investigations, making careful observations, recording and showing information collected to ensure that all five areas of 'Scientific Enquiry' are covered. This progresses through the year groups. In KS1, adult led modelling and discussion adapts to adult led modelling using post it planning frames in KS2, where children often work in groups to plan. In KS1 children will explain their observations and results, whereas in KS2 children are supported to make a conclusion based on what their results show. More able children are expected to develop these skills and write their own conclusions using key topic vocabulary. During all lessons, children are challenged to explain their understanding of the science they are learning through careful questioning orally. For those children not attaining age related expectations, a range of strategies are used to support their learning in Science e.g., support with recording responses, use of sentence stems, vocabulary banks, cloze sentences, drawings to represent what is observed.

Ensuring this is put into practice

Science is assessed after each topic of learning using Educater. Science is monitored using a range of tools such as professional discussions, book looks, Progression books for each year group and pupil voice discussions. Progression books show the progression in learning from one year group to the next which helps the Subject Leader to ensure that clear progression is being made. Children across the school are keen to share their work with the Science subject leader and this happens as part of subject monitoring. There are planning guidance documents available for teachers to support planning. To support teacher's subject knowledge they are encouraged to use resources such as ReachOut CPD.

Further appendices

<https://www.reachoutcpd.com/>

<https://www.ase.org.uk/resources>

<https://www.ogdentrust.com/resources-cpd/resources>