

Science at Catshill First School and Nursery

Aims:

We want our children at Catshill to become enquiring scientists who through 'hands-on' experiences prompt them to 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 skills, knowledge 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.

In the Early Years' Foundation Stage (EYFS), Science is taught through the specific learning area of 'Understanding the World'. This area looks at supporting children in developing the knowledge, skills and understanding to help them make sense of the world around them. Children have the opportunity to explore creatures, people, plants and objects and undertake practical investigations. Learning is planned to capture the interests of the children and 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 and 2), Science is taught as a discrete subject each week. Year group appropriate sequences of learning are derived from the National Curriculum; these plans are personalised, adapted and supplemented by teachers to ensure that they meet the specific needs of the pupils in the class. All children have the opportunity to engage in carefully planned lessons which develop their practical science skills. They plan their own investigations and enquiries in response to questions posed about the science topic or questions they may generate themselves. This ensures the range of objectives for 'Working Scientifically' are met. When a new topic is taught questioning is used to assess 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 must 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 KS 1, 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 expected to be able 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 or as part of written feedback in their books. 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 using Educater. Science is monitored using a range of tools such as professional discussions, book looks, Skills Progression books for each year group and pupil voice discussions. Skills 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 on an ongoing basis. 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.planassessment.com/>

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

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

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