Science

Intent

At Willington Primary School, we aim for our children to foster a deep love and understanding of the subject of science and an awareness and knowledge of science in the real world and their everyday lives. We aim to provide a high-quality science curriculum that prepares our children for life in the 21st century.

Our science intent is to provide a progressive and challenging curriculum, which is meaningful, relevant and enjoyable and develops skills for lifelong learning. It is based on the National Curriculum as a minimum entitlement. Wherever possible, enrichment activities (educational visits, visitors to school, interactive resources, etc) are used to capture and 'grow' children's interest in the topic.

We aim to develop the children's science capital so that they feel connected to science, and this is accumulated through the engagement and relationships they have with science. We work towards the following four principles:

- What you know (science-related knowledge)- scientific literacy
- How you think (attitudes, values and dispositions)- see science as part of their everyday lives, transferability of skills and knowledge.
- What you do (experiences)- engaging with scientific-related media (TV, books, internet), museums, clubs.
- Who you know (contacts)- science in the lives of family, friends, peers and the community.

Implementation

Following the National Curriculum (2014), each year group is assigned set programmes of study. These units are sometimes revisited and built upon throughout the key stages, as laid out in the National Curriculum.

Each unit follows a clear sequence of lessons, that are built upon each year, to allow the children to become more confident and proficient in science, through revisiting prior learning and extending it. They are given the opportunity to develop both their scientific knowledge and skills; 'working scientifically' is built into lessons, rather than as a stand-alone lesson.

At Willington Primary School, Quality First Teaching strategies are used to support all learners in developing their science skills and knowledge. Adaptive teaching strategies provide different levels of support, using different resources or adjusting the pace of instruction. Pupils are introduced to the language and vocabulary of science.

Lessons are taught practically, wherever possible, to give children a greater understanding of scientific concepts. Resources used include laptops, iPads, microscopes, magnifying glasses and electrical components. Lessons take place within the classroom, the school environment (including the outdoors) and the wider school community. Learning may also take place within local industry and visits to places of scientific interest, and visitors may also come into school to share their expertise and inspire a future generation of scientists. Opportunities for extending learning at home may be included on the half termly learning logs.

Impact

Formative teacher assessment is used to ascertain attainment and progress in science. This is through effective questioning, plenaries, checks on prior knowledge, live marking, talk partners and low stakes quizzes.

Insight Tracking is used to track progress in the Autumn, Spring and Summer terms.

Learning is shared on the school website through the class pages.

Learning walks, questionnaires, pupil voice and lesson observations are built into the whole school monitoring cycle. CPD opportunities are provided for staff regularly.