

SCIENCE at DULWICH WOOD

Curriculum

At Dulwich Wood, we are a 'Build Learning Power school'; this enables our children to be able to acquire the scientific skills and knowledge that they need to understand concepts and phenomena that occur in the world around them. It equips them with the motivation to ask questions and seek explanations. Children learn the skills required for scientific enquiry and they begin to appreciate the way science will affect their future on a personal, national and global level.



The National Curriculum for Science aims to ensure that all pupils:

- develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics
- develop an 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
- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Intent

Our principles of science are displayed throughout the school and are displayed in the classrooms. The principles are:

Science is good when:

- we explore ideas by questioning, noticing, testing and measuring in fun practical ways.
- discoveries are made...and new scientific skills developed.
- it is related to real life contexts and helps us to understand the world around us.
- it's interactive and challenging.
- the correct scientific vocabulary is used to explain ideas.



Implementation

Planning

At Dulwich Wood, we use planning materials from PLAN, the Association of Science Education, Southwark and a range of other resources to support the teaching and learning of science. We ensure that working scientifically is embedded into each topic so that in addition to the core knowledge and vocabulary, children are developing skills of observing, researching, pattern seeking, classifying as well as comparative and fair testing.



Prior Learning

Every topic of science begins with a prior learning check which is completed before the teacher plans the sequence of learning. This is to ensure that what the children know already is considered and that there are planned opportunities to support all of the learning needs including challenging children who are already secure in their knowledge and understanding of that particular area.

Science Displays & Working Walls

Every classroom has a science working wall. It displays what the children are learning; the scientific enquiry skills that they are developing; key vocabulary; a big question, children's questions and children's work.

Scientific Enquiry

All five types of enquiry: pattern seeking, comparative/fair testing, observations over time, classifications and research are taught throughout each year group. Teachers use a progression map of enquiry skills to select the enquiry that is appropriate to the area of science that is being taught.

Vocabulary

Key scientific vocabulary is taught explicitly with the expectation that the children will use it in their explanations, justifications and their reasoning. Additional resources are provided e.g. word banks/sentence stems to support the children. Dedicated discussion time, provides opportunities to use vocabulary through activities such as PMI, odd one out etc. Teachers model and set high expectations of vocabulary in scientific writing. Every area that is studied is supported by a knowledge organiser that contains key information and vocabulary for the children to use.

Health & Safety

In every aspect of science teaching, teachers will abide by the health & Safety regulations and will research information using the CLEAPSS website.

Trips, Visitors & Outdoor Learning

Teachers organise and plan at least one science trip to support the learning for one of the areas of science that is covered within their year group. Whenever possible, visitors from the science community are invited in to discuss their roles with the children to provide them with the experience of meeting 'real scientists'. These visits aim to represent a range of different ethnic groups, ages and genders. All classes make use of the outdoor learning areas particularly the school pond and wildlife meadow as well as the local wood area and parks.

Impact

Assessment

We use the Southwark Tracking and Assessment Record to assess science. Every child is assessed as either emerging, developing or secure for each area of science that is taught throughout the year including working scientifically. Ideally, we would like every child to be working at secure for each area in science so in order to achieve this teacher will plan additional activities to help children to secure their knowledge.

