Science Curriculum

Vision

At Holly House School, we recognise the importance of Science in every aspect of daily life. We endeavour to create enthusiastic and curious scientific learners who understand that Science has changed our lives and is vital to the world's future prosperity.

Through practical activities and investigation, pupils develop a sense of wonder about the natural world. They are encouraged to ask questions, explore ideas, use evidence and develop higher-order thinking through appropriate stretch and challenge.

We want pupils to become confident, resilient and increasingly independent scientific learners. When pupils leave Holly House School, they will be equipped with the scientific knowledge, understanding and skills needed to succeed in further education and participate in an increasingly scientific and technological world.

Intent

Our Science curriculum develops pupils' curiosity, knowledge and understanding across Biology, Chemistry, Physics and Working Scientifically. Pupils learn through practical and engaging experiences that enable them to observe closely, ask questions, make predictions, investigate ideas, measure accurately, record results and draw conclusions from evidence. The curriculum equips pupils with the knowledge and skills needed to progress to the next stage of education, reintegrate into mainstream provision where appropriate and work towards formal accreditation. Learning is adapted to individual starting points while maintaining ambitious expectations for every pupil.

Implementation

The National Curriculum provides the basis for our Science curriculum, which is carefully tailored to meet the learning needs of pupils at Holly House School. The curriculum is organised through a progressive sequence of Biology, Chemistry, Physics and Working Scientifically units from POD through to Class 5. Practical, hands-on experimentation supports engagement, understanding and the application of scientific ideas.

Pupils revisit and build upon important concepts as they move through the school. Teaching includes explicit scientific vocabulary, modelling, observation, practical investigation, measurement, data recording, analysis, evaluation and scientific communication. Pupils are given opportunities for higher-order thinking and extended writing through stretch and challenge activities. Assessment is ongoing and uses practical work, discussion, questioning, written outcomes and pupils' use of evidence to identify progress and next steps.

Our Science curriculum threads are listed below:

• Biology	• Living things, habitats, plants, animals, human systems, cells, ecosystems, adaptation, genetics and life processes.
• Chemistry	• Materials, states of matter, particles, acids and alkalis, chemical reactions, and pure and impure substances.
• Physics	• Forces, magnets, light, sound, electricity, energy, waves, Earth and space.
• Working Scientifically	• Questioning, predicting, observing, working safely, measuring, investigating, recording, analysing and evaluating.
• Using scientific vocabulary to discuss, explain, record and present ideas, methods, evidence and conclusions.	

Impact

Our Science curriculum supports pupils to become enthusiastic, motivated and increasingly independent scientific learners. Pupils develop secure knowledge across Biology, Chemistry and Physics while applying the skills of Working Scientifically in practical and real-world contexts.

As a result of the curriculum, pupils use scientific vocabulary with increasing confidence, ask relevant questions, carry out investigations safely, make and record observations, interpret results and draw conclusions from evidence. Pupils understand that Science influences everyday life, technology and future prosperity. They leave Holly House School equipped with the scientific knowledge and skills needed for further education, future accreditation where appropriate and life beyond school.