

Science



Science stimulates, excites and gives an understanding of natural phenomena and events in the world around us. It aims to awaken curiosity in discovering why things happen in the way they do, stimulating an eagerness to understand. Linking practical experiences directly with concepts and ideas that encourage learning. Students learn to question scientifically and begin to appreciate the significance of Science on their own lives and the way in which it will affect the future on a personal, national, and global level. Students are given the opportunity to question and discuss the impact of technological developments from the past, on the present and for the future.



They will be taught a range of subject content and skills, equipping them to make and communicate judgements of a scientific and technological nature. They will be encouraged to plan, observe, analyse and evaluate their work, to develop their scientific understanding. Science is used as conduit in teaching enquiry and investigative skills to stimulate creative thought.

Aims of Science

- Science is presented as a creative and fascinating subject. Children are encouraged to use their own initiative, imagination, reasoning and investigative skills to build on their natural curiosity through first hand and practical experiences.
- Students will appreciate the relevance of Science in our society and seeing it as an essential tool for learning, communication, information finding and for controlling and understanding their environment.
- Students learn scientific knowledge which is relevant to and meaningful to them.
- Students are encouraged and enabled, to develop their attitudes towards Science.
- Students are encouraged to communicate their ideas, evaluate their findings and suggest explanations for them using appropriate scientific language.

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- All students receive equal opportunities to develop their scientific understanding, in line with its status as a core National Curriculum subject.
- Differentiation is planned for in each area of the Science curriculum so that children achieve to the best of their ability using all available resources including ICT and visual materials.
- Children learn to work individually and collaboratively.
- Children have a heightened interest and awareness of Science through the regular display of their Science work in the classrooms and around the school.
- All pupils leaving the school in Year 11 will have gained a minimum of an entry level qualification in Science with the possibility of more able students studying a single award GCSE Science.

Present curricular plans.

The school Science curriculum is linked to the requirements of the individual and at which point the National Curriculum meets their needs.

Willow and Hazel classes (reception to approximately year 6) include Science in their cross curricular topics and all work based on the QCA, in house schemes or through visits to centres of scientific interest. Science in the Acorns and Conkers classes is taught as an integral part of the topic work covered during the year. We relate the scientific aspects of the children's work to the objectives set out in the Early Years Foundation Stage (EYFS) which underpin the curriculum planning for early years children.

The pupils in Ash, Beech, Elm, Yew and Oak classes are taught in a designated Science room. Pupils in Ash, Beech and Elm, follow a bespoke curriculum dependent upon their needs. Yew and Oak classes (Years 10 and 11) undertake an Entry Level or Single Science GCSE AQA course depending upon their needs. The KS4 curriculum for the Entry Level certificate in Science is planned using the 2011 AQA specification for Entry Level. Lower school curriculum is in line with the QCA program of study for Science.

The school uses the Science to Raise and Track Achievement (STRATA) Cambridgeshire SEN Science Project scheme of work to base their lessons for Ash, Beech and Elm. This project comprised a group of special schools (Profound and Multiple Learning Disabilities: PMLD, Severe Learning Disabilities: SLD, Moderate Learning Disabilities: MLD, and Emotional and Behavioural Disabilities: EBD), which developed a scheme of work and an assessment and recording framework for science that addresses the particular issues faced by the teachers of children with special needs. The scheme has been adapted to the local circumstances of the school in that we make use of the local environment in our fieldwork.

We have planned the topics in Science so that they build on prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit, and we also build progression into the Science scheme of work, so that the children are increasingly challenged as they move up through the school.

We teach Science in the reception classes as an integral part of the topic work covered during the year. As the reception class is part of the Foundation Stage of the National Curriculum, we relate the scientific aspects of the children's work to the objectives set out in the Early Learning Goals (ELGs) which underpin the curriculum planning for children aged three to five. Science makes a

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significant contribution to developing a child's knowledge and understanding of the world, for example through investigating what floats and what sinks when placed in water.

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