Curriculum Overview & Intent

Subject: Science

Staff: RSW

Intent	
Subject Aims	The broad areas of knowledge and skill being developed in this subject
Our science curriculum aims to: • Inspire and excite children about science and enable them to have a scientific understanding of the world around them. • Develop an awareness of science and the scientific discoveries of our past, present, and future. • Understand the uses and implications of science and explain everyday things with an application of the science they are taught, enabling them to become individuals empowered with a scientific dimension to their thinking (depth).	In Key stage 4 all students will be taught AQA GCSE combined science alongside Entry Level Science with lessons adapted to their needs.

Implementation	
Overview Across All Strands	How formative and summative assessment is used to improve understanding of knowledge and skills.
The science curriculum is a 'learning journey'. A spiralling, yet ever-evolving curriculum where ideas and skills are consistently revisited and logically linked to current learning. Connections between topics and subjects are designed to ensure pupils have a broader understanding of the content being studied, helping them to make progress. Students will be trained to be independent learners. In science this is a key skill as all scientists should be inquisitive and want to find out more information. In order to do this, students will be given opportunities to research information from books and the internet using a number of different reading and research types. This skill becomes essential to allow students to develop an ability for the GCSE where students are often expected to read information and pull out the facts to construct a balanced argument.	Formative assessment is embedded throughout daily teaching to check understanding, identify misconceptions, and guide next steps, including: • Ongoing Checking of Understanding. • Scaffolding and Differentiation. • Immediate Feedback • Practical Skills Assessment • Use of Retrieval Practice Formative assessment ensures teaching is responsive, misconceptions are corrected early, and pupils experience a sense of achievement. It strengthens both knowledge recall and confidence with practical scientific methods. Summative assessment gives a broader view of learning over time, focusing on readiness, independence, and retention rather than high-stakes testing, including:

Biology: Explore and discover local habitats and the animals that live there. Learn about living things. Visit a zoo or local wildlife centre to learn about plants. Do pond-dipping, bird watching with adults. Healthy living and cooking. Discover how to keep germs out by washing/cooking food thoroughly. Chemistry: Talk about clean air whilst walking in the local environments. What is air? Explore different Materials and properties found at home or in nature. Take part in cooking to learn about changing materials. Why do materials change? Insulating materials, what are they? Physics: Visit a funfair, thinking about the rides working as machines. Watch the night sky, or a programme on TV about space. Build Lego models of transport. Read a book on science discoveries. Visit a science or history museum to learn about industrial revolution.	• End-of-Unit or End-of-Topic Tasks • Assessment of Scientific Skills • Summative assessments explicitly measure: • Pathway-Appropriate Progress Measures • Termly Review and Moderation Summative assessment provides a clear picture of long-term progress, supports curriculum planning, and informs next-term teaching priorities.
How is enrichment (clubs, trips etc.) implemented to enhance the components of this subject?	**How are spiritual, moral, social and cultural values developed in this subject?**
At Wightwick Hall School, enrichment in Science is carefully planned to bring learning to life, strengthen curiosity, and develop pupils' practical understanding of the world around them. Opportunities are adapted to meet the needs of all pathways so every pupil can participate meaningfully. Enrichment approaches include: • Educational Visits • Outdoor Learning & Local Environment Activities • Practical Science Clubs • Cross-Curricular Opportunities • Guest Visitors / Workshops	Spiritual, moral, social and cultural development is woven naturally throughout the Science curriculum at Wightwick Hall School and is tailored to the needs of pupils across all pathways. Spiritual Development • Encouraging curiosity, awe and wonder through studying living things, space, forces, light and natural phenomena. • Opportunities for reflection during investigations, outdoor learning and sensory experiences. • Understanding the fragility of life, environmental responsibility and the interconnectedness of ecosystems. Moral Development • Exploring ethical questions such as pollution, conservation, animal welfare, healthy living and the responsible use of technology. • Teaching pupils about safe behaviour, personal responsibility in practical science, and risk awareness. • Promoting honesty, fairness and accuracy when carrying out experiments and recording results. Social Development

	• Group investigations that build teamwork, communication, turn-taking and problem-solving. • Developing cooperation during practical tasks, sharing equipment safely and respectfully. • Supporting pupils to express their ideas, listen to others, and develop social confidence through scientific discussion. Cultural Development • Learning about scientific discoveries from different cultures and periods in history. • Understanding how advances in science shape society, medicine, transport, communication and everyday life. • Celebrating diversity by exploring contributions from scientists around the world and recognising Science as a global discipline.

Impact - Top 5!	
1	Pupils develop secure, meaningful scientific knowledge
2	Pupils become confident, safe and increasingly independent practical learners
3	Pupils improve communication, vocabulary and scientific language
4	Pupils make strong progress from their individual starting points
5	Science contributes to preparation for adulthood