Science Statement

🎯 Our Curriculum Intent

At Great Arley, our science curriculum is designed to spark curiosity, encourage investigation, and deepen students' understanding of the world around them. We provide a rich variety of hands-on, practical, and multisensory experiences that promote thinking, questioning, and discovery.
We aim to make science exciting, relevant, and accessible to all. Through real-life contexts and engaging challenges, students develop:

- A strong foundation of scientific knowledge and understanding
- Curiosity about how and why things happen
- The ability to ask thoughtful questions and explore answers
- Skills in scientific enquiry, communication, and analysis
- Confidence in applying science to everyday life and future careers
-

🔄 Curriculum Overview

The journey begins in the **Early Years Foundation Stage (EYFS)**, where children explore science through play, observation and practical investigation as part of *The World About Me* section of the semi-formal Equals Curriculum. As students move through Key Staes 1 and 2 they develop an understanding of science though *The World About Us* section of the formal Equals curriculum. In **Key Stage 1 and beyond**, scientific knowledge and skills are systematically developed. Each key stage builds upon prior learning. The Year 7 students follow the Primary National Curriculum. The Year 8 and 9 students learn aspects of the Key Stage 3 National Curriculum. By **Key Stage 4**, students pursue externally accredited Science qualifications. Some students follow the *AQA ELC Science Single Award* and others work on the science based *Life Skills Challenges.*

In **Key Stages 3 and 4**, science is taught in fully equipped laboratories by a specialist teacher, ensuring high-qualiity instruction and practical experience.
As a result of our science curriculum:

- Students make strong progress in scientific knowledge and skills.
- They develop a spirit of enquiry, asking meaningful questions, conducting investigations, and communicating their findings effectively.
- Students show resilience when predictions are inaccurate, learning to reflect and improve.

- They demonstrate good safety awareness when using scientific equipment.
- Students gain knowledge of significant scientists, past and present, and understand their contributions to society.
- They develop strong communication and teamwork skills, enabling effective collaboration and independent work.
- Students can apply their scientific knowledge to real-world situations.
- They understand a range of science-related careers and industries.
- Students achieve external accreditations in science, supporting their future educational and career pathways.

Our goal is for all students to leave school as scientifically literate individuals, confident in their abilities, and prepared for the challenges of the modern world.

🛠️ Skills and Knowledge Students Develop

Our science curriculum is designed to provide students with a wide range of practical, multisensory experiences that challenge and inspire them. Through engaging, real-life contexts, students develop deeper thinking skills and a strong understanding of the world around them. Learning is carefully sequenced from Early Years through to Key Stage 4, ensuring that knowledge and skills build progressively and purposefully across all phases.

We aim to ignite curiosity and a lifelong love of science in our students. We want them to be excited by the subject, motivated to ask questions, and inspired to discover more. Our curriculum encourages students to apply their scientific knowledge while developing essential enquiry, communication, and reasoning skills.

Our students learn to:

- **Apply science to real life** – enabling them to make informed, mindful decisions about health, safety, and their environment, and to see themselves as part of a global community.
- **Work scientifically** – explaining natural phenomena, making predictions, testing ideas, evaluating results, analysing causes, and suggesting improvements.
- **Feel confident and secure** – in asking questions, proposing ideas, and sharing their understanding.
- **Develop investigative skills** – including following instructions, risk assessment, collaboration, and independent working.
- **Transfer key skills** – such as interpreting data, justifying conclusions with evidence, and working methodically, which are valuable in both life and future careers.

🌍 Careers and Cross-Curricular Connections

We aim to raise awareness of science-related careers throughout each topic we teach, ensuring that students understand how scientific knowledge and skills are applied in a variety of professional contexts. By embedding career links into lessons, we help students make meaningful connections between classroom learning and real-world opportunities, fostering aspirations and broadening their understanding of the relevance of science in everyday life, the workplace, and society at large. Additionally, we actively identify and incorporate cross-curricular links within lessons to enrich learning, promote interdisciplinary thinking, and support the development of transferable skills across subjects.