

Science Statement of Intent – Revised in the Style of the Music Statement of Intent

Intent

At RFHCS, our intention is to deliver a broad, balanced and inclusive Science curriculum that builds scientific understanding, strengthens cultural capital and supports the diverse learning needs of all students, including those with SEN. Students arrive with varied prior experiences of KS3 Science, so our curriculum is designed to address these inconsistencies by deliberately revisiting core knowledge and making explicit links to the AQA GCSE Biology (8461), Chemistry (8462) and Physics (8463) specifications, including required practicals.

Our curriculum aims to:

- Strengthen science capital by integrating current scientific issues, wider world examples, invited speakers and educational visits wherever appropriate.
- Provide technology-assisted and differentiated learning experiences so that every student, regardless of starting point or ability, can develop confidence, curiosity and scientific literacy.
- Make social, cultural and moral outcomes explicit, ensuring that Science is accessible, meaningful and relevant for all learners.
- Build knowledge cumulatively by revisiting content every lesson, ensuring that key ideas recur regularly so that learning is embedded over time.
- Promote the systematic development of scientific skills—including experimentation, interpretation, evaluation and exam technique—with structured opportunities to practise and refine these skills.
- Support GCSE students through the use of an exam-board-endorsed practical journal and sequenced practical work that maximises recall and retention.

The Thomas Group

In line with whole-school practice, Science in the Thomas Group is delivered by subject specialists, allowing for a strong focus on fundamental scientific principles and practical competencies. Lessons prioritise hands-on learning, interpretation of results and the application of essential procedures such as graph plotting, variable identification, accuracy and reliability, fair testing, drawing conclusions and evaluating experimental outcomes. These foundations prepare students thoroughly for the demands of GCSE Science.

Implementation

With Single Science no longer offered and insufficient curriculum time to deliver a full Combined Science GCSE across two terms, only one Separate Science GCSE can be taught at a time. This is most commonly GCSE Biology, chosen in consultation with students during their induction period. Students wishing to pursue an additional GCSE receive guided support during study periods, facilitated through Google Classroom, which is updated weekly.

Stages of Practice

Students engage regularly with exam-style questions of increasing difficulty, beginning with traffic-lighting prior knowledge and progressing through structured practice across six units within each AQA specification. We expect students to attempt examination questions in every lesson to build confidence and reinforce science-specific skills.

Questioning

Questioning is a deliberate and carefully structured element of our practice. Students are encouraged to discuss answers with a partner before sharing with the wider class, promoting participation, reasoning, peer support and clarification of misconceptions. This approach builds resilience and enhances scientific dialogue. Encouraging discussion to elicit curiosity is also used to identify gaps in understanding and target future teaching: Who agrees with this answer? Who can explain how they arrived at that answer? I don't know the answer to that, what do you think? Tell us how you worked that out? Show me how he got the answer? Are they correct? Why are they correct? What do you think about that answer and why? Can you make sense of her answer? Please explain it in your own words? Do you agree with that answer and why? Who agrees with him? What is the reason for this answer? What is similar in how you arrived at the answer? How could you improve that answer? Why is this a better answer than that? Which of those answers do you think is right? So, if this is the answer, then what was the question? You're not sure, who can help us out?

Sequencing and Modelling

Content is sequenced to ensure small, manageable steps that support steady progression. Modelling—through demonstrations, visualisation, and WAGOLL examples compared with weaker responses—is used frequently. Strategies such as Point–Evidence–Explain (PEE) guide students in tackling extended 6-mark questions. We reinforce the principle that scientific progress is rooted in questioning, refutation and curiosity: there are no “silly questions” in science.

Feedback and Assessment

Consistent with whole-school priorities, feedback is regular and constructive. Light-touch, open-book assessments help build confidence, while summative assessments deepen retention and recall of taught material. The Science department is developing feedback sheets for each assessment to further support targeted improvement.

Literacy in Science

Literacy underpins every lesson. Students engage with the definitions and etymology of key terms, use modelling and “what a good one looks like” examples, and follow structured writing and speaking frames aligned with those found in student planners. Reading is integrated meaningfully into teaching at every opportunity.

Learning Platforms

Google Classroom is a vital tool, particularly for students with inconsistent attendance due to physical or mental health needs. It enables flipped learning, independent review of lessons, and access to endorsed videos, PowerPoints, past papers and model answers. Weekly updates are posted, and a summary is emailed to parents to support continuity and home engagement.

Impact

Careful curriculum design and sequencing have strengthened students' readiness for the demands of GCSE Biology, Chemistry and Physics. Science outcomes consistently exceed predictions based on CATs data, with students demonstrating strong knowledge recall, secure foundational skills and growing confidence. Many progress successfully to science-related Level 2 or Level 3 courses, including BTEC and A-Level pathways.