

Kettlethorpe High School

'Together, be the best we can be.'

Present

Achieving

Excelling

Science Curriculum

Subject Quote	<p><i>"Don't let anyone rob you of your imagination, your creativity, or your curiosity. It's your place in the world; it's your life."</i></p> <p><i>Dr. Mae Jemison</i></p>
Curriculum Summary	<p>At Kettlethorpe High School, we have a whole-school holistic curriculum model which seeks to plan for, teach, and assess progress against our core mission for pupils, our vision and ethos, as well as our cross-curricular 'golden threads' and our identified subject-specific knowledge and skills. Through our carefully planned curriculum maps, knowledge and skills are explicitly planned and taught in coherent and progressive steps. As pupils make progress through the curriculum, this is the main measure of success in Science. In Science, we have devised a 5-year spiral curriculum model which follows a sequential strand approach. Our vision is to inspire pupils with the scientific world and to develop the knowledge and skills to thrive within, but also contribute to the development of scientific knowledge within, a rapidly evolving planet and beyond. In Science, our curriculum commits to fulfilling the 7 whole-school curriculum principles ensuring that what we deliver, and pupils receive is:</p> <ul style="list-style-type: none">• Broad and Balanced• Engaging• Personalised• Transformational• Inclusive• Aspirational• Values-Based
Links to Life and Future Destinations (Careers)	<p>Our science curriculum provides students with a broad range of transferable skills that are valuable for both further study and future employment. At the heart of our subject, we ensure that all pupils develop curiosity through investigative opportunities. Thematic weeks linking to global and national celebrations are embedded throughout the KS3 and KS4 curriculum, enhancing pupil understanding of how their science curriculum links to the real world.</p>

Science Learning Journey



**Kettlethorpe
HIGH SCHOOL**

Science – Curriculum Overview

The purpose of science at Kettlethorpe: To develop students' understanding of the natural world, critical thinking, and practical skills. It fosters curiosity, scientific literacy, and prepares students for further study, careers, and informed citizenship.

Aims:

- **Develop Scientific Knowledge:** Provide students with a solid understanding of key scientific concepts across disciplines like biology, chemistry, physics, and earth science.
- **Build Scientific Skills:** Teach students how to think scientifically by developing skills in observation, experimentation, data analysis, critical thinking, and problem-solving.
- **Promote Scientific Literacy:** Help students understand the impact of science on society and everyday life, enabling them to make informed decisions.
- **Encourage Curiosity and Inquiry:** Foster curiosity and a questioning mindset that encourages students to explore, investigate, and understand the natural world.
- **Prepare for Further Education and Careers:** Equip students with the foundational knowledge and skills necessary for higher education in science-related fields or science-based careers.
- **Develop Ethical Understanding:** Introduce ethical considerations and responsible use of scientific knowledge and technology.

Overview:

From Year 7 to Year 11, science at Kettlethorpe progressively builds students' understanding across biology, chemistry, and physics. Early years focus on fundamental concepts such as cells, simple chemical reactions, forces, and energy. As students advance, they explore more complex topics including genetics, chemical bonding, electricity, and ecosystems. By Key stage 4, the curriculum deepens to include detailed study of bioenergetics, atomic structure, rates of reaction, inheritance, homeostasis, organic chemistry, and electromagnetism. Throughout, students develop key scientific skills like planning investigations, analysing data, evaluating evidence, and applying scientific knowledge to solve problems, preparing them for more advanced studies or practical applications.

Science Department Knowledge Expectations

Year 7

Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Experimental Skills Cells & Movement	Particles & Separating Mixtures Light & Sound	Energy Cost & Transfer Acids & Alkalies, Metals & Non-Metals	Variation & Reproduction British Science Week Challenges	Earth Structure & The Universe	Plant Reproduction Electricity, Voltage & Current

Year 8

Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Breathing & Digestion Speed & Gravity	Elements & The Periodic Table Wave Effects & Properties	Work, Heating & Cooling Chemical Energy & Types of Reactions	Evolution & Inheritance British Science Week Challenges	Climate & Earth Resources Respiration & Photosynthesis	Contact Forces & Pressure Magnets & Electromagnetism

Year 9

Term 1	Term 2	Term 3
Cells & Organisation Atomic Structure & The Periodic Table Energy Chemical Changes 1	Bioenergetics Particle Model of Matter British Science Week Challenges	Energy Changes Required Practical Skills Ecology 1

Year 9 STEM					
Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
CREST AWARD – BRONZE STEM CAPITAL X3			CREST AWARD SILVER STEM CAPITAL X3		

Year 10		
Term 1	Term 2	Term 3
Cells & Movement (B)	Infection & Response (B)	Ecology 2 (B)
Chemistry of the Atmosphere (C)	Bonding, Structure & Properties (C)	Quantitative Chemistry (C)
Using Resources (C)	Forces (P)	Chemical Changes 2 (C)
Electricity (P)		Atomic Structure & Radiation (P)

Year 11		
Term 1	Term 2	Term 3
Homeostasis & Response (B)	Inheritance & Variation (B)	Paper 1 Revision
Rates of Reaction (C)	Chemical Analysis (C)	Paper 2 Revision
Organic Chemistry (C)	Magnets & Electromagnets (P)	
Waves (P)		
Inheritance & Variation (B)		

KS3 Assessment of Skills

Skill Area	What It Involves	Purpose
Working Scientifically	Planning investigations, using scientific methods, recording and interpreting data, evaluating reliability and validity	Builds practical and analytical skills
Knowledge & Understanding	Core concepts in biology, chemistry, and physics (cells, particles, forces, etc.)	Establishes the foundation for GCSE content
Application of Knowledge	Applying science to unfamiliar contexts, solving problems, using maths in science	Prepares students for AO2 at GCSE
Analysis & Evaluation	Interpreting outcomes, identifying errors, drawing conclusions, comparing evidence with predictions	Mirrors AO3 skills at GCSE

KS3 students progress from **recall** → **application** → **evaluation**, directly aligning with GCSE assessment objectives (AO1, AO2, AO3).

KS4 Assessment of Skills

Assessment Objective	What It Means	Weighting (%)
AO1 – Knowledge & Understanding	Recall facts, definitions, concepts, and scientific techniques	40%
AO2 – Application	Apply knowledge and understanding to new situations, solve problems, and use calculations	40%
AO3 – Analysis & Evaluation	Interpret data, evaluate methods, draw conclusions, and judge evidence	20%

Science – Golden Threads Mapping

SMSC				
Year 7	Year 8	Year 9	Year 10	Year 11
<p>Spiritual: Encourage awe and appreciation of the complexity of the human body.</p> <p>Social: Team-based microscopy investigations.</p> <p>Spiritual: Inspire awe at the vastness of the universe and the possibility of life elsewhere.</p>	<p>Spiritual: Reflect on the continuity of life and human development.</p> <p>Spiritual: Develop a sense of wonder about ecosystems and biodiversity.</p> <p>Social: Understand the social implications of global warming and resource use.</p>	<p>Moral: Discuss the ethics of organ donation or stem cell use.</p> <p>Moral: Discuss the implications of renewable vs non-renewable energy sources.</p> <p>Cultural: Compare how different cultures use and value energy resources.</p> <p>Spiritual: Inspire awe in transformations at the molecular level.</p>	<p>Spiritual: Develop a sense of wonder about ecosystems and biodiversity.</p> <p>Moral: Debate issues like vaccination, antibiotic use, and access to healthcare.</p> <p>Social: Understand how diseases impact communities and economies</p> <p>Moral: Discuss responsibility for conservation and sustainability.</p> <p>Cultural: Compare global perspectives on conservation and environmental protection.</p> <p>Moral: Consider the environmental impact of industrial reactions (e.g., acid rain, pollution).</p> <p>Spiritual: Reflect on Earth's uniqueness and the fragility of its atmosphere.</p>	<p>Moral: Consider the ethics of IVF, genetic screening, and cloning.</p> <p>Social: Explore how reproductive health education supports well-being.</p> <p>Spiritual: Foster appreciation for the natural world and our place within it.</p>
Personal Development				
Year 7	Year 8	Year 9	Year 10	Year 11
<p>The secondary science curriculum (Key Stages 3 and 4) offers rich opportunities for personal development alongside academic learning. Through enquiry-based investigations, data analysis, and critical thinking tasks, students build resilience, problem-solving skills, and independent learning habits. Practical work fosters teamwork, communication, and responsibility, while ethical discussions on topics such as climate change, genetics, and sustainability develop moral awareness and global citizenship. The curriculum also broadens students' cultural capital by highlighting the work of diverse scientists and linking science to real-world careers, supporting personal growth and readiness for life in modern society.</p>				

Numeracy

Year 7	Year 8	Year 9	Year 10	Year 11
Numeracy is integrated throughout the Key Stage 3 science curriculum, with students applying measurement, calculation, data analysis, and graphing skills across biology, chemistry, and physics topics. They use formulas to calculate speed, energy, and force, interpret and construct graphs and charts, work with scales and units, and apply statistical concepts such as averages and percentages. These skills support scientific enquiry and help reinforce core mathematical understanding in real-world contexts.		In the AQA Science Key Stage 4 curriculum, numeracy skills are closely linked to specific topics across biology, chemistry, and physics. For example, in Physics , students calculate speed, acceleration, force, energy transfer, and electrical power using standard formulas, and interpret graphs of motion and circuits. In Chemistry , numeracy is applied when working with concentrations, moles, gas volumes, rates of reaction, and balancing equations. In Biology , students use statistics to analyse genetic probability, population size, and enzyme activity rates. Across all topics, students engage with data handling skills such as graph plotting, unit conversions, percentages, and averages, supporting rigorous scientific analysis and practical investigations.		

Cultural Capital

Year 7	Year 8	Year 9	Year 10	Year 11
Pupils are introduced to key historical scientists from diverse backgrounds and explore how early discoveries shaped the modern world. They connect science to everyday technology and start considering simple ethical questions, such as environmental impact.	Pupils study topics including energy transfers, and reproduction, alongside learning about diverse scientists such as Rosalind Franklin. They consider global issues like pollution and renewable energy sources, linking these to the chemistry of acids and energy topics. STEM careers related to these areas are introduced.	Students deepen their understanding of scientific breakthroughs and their ethical implications, such as organ donation and generating electricity. They engage with modern research, discuss climate change, and develop communication skills through presentations and debates.	Pupils study topics such as atomic structure, forces and investigating the cultural context of discoveries like the atomic model. They explore real-world applications in medicine and industry, considering ethical debates around topics such as stem cells and energy production, while linking content to STEM careers in physics, chemistry, and biology.	Learning is consolidated within topics on inheritance, chemical analysis, and electricity, reflecting on science's societal impact, including medical advances and sustainable development. They prepare for citizenship through understanding science-related policies, and develop leadership and collaboration skills via required practical tasks.

Substantive Knowledge

Year 7	Year 8	Year 9	Year 10	Year 11
Foundational concepts in biology (cells, classification, ecosystems), chemistry (particles, states of matter, simple reactions), and physics (energy, light, electricity). This builds essential scientific understanding and vocabulary for future study.	Builds on earlier learning with topics including the human body systems evolution (biology), the structure and reactions of atoms and molecules (chemistry), and forces, energy transfer, and waves (physics). Students deepen their understanding of chemical reactions, energy efficiency, and sound and light properties, strengthening core scientific concepts and vocabulary.	The AQA Science curriculum at Key Stage 4 covers essential biology, chemistry, and physics concepts. Biology includes cell biology, organisation, infection and response, bioenergetics, homeostasis, inheritance, and ecology. Chemistry covers atomic structure, bonding, quantitative chemistry, chemical changes, energy changes, the periodic table, rates of reaction, organic chemistry, and chemical analysis. Physics topics include energy, electricity, particle model, atomic structure, forces, waves, magnetism, and electromagnetism. Students gain a broad and balanced understanding of scientific principles, processes, and applications, preparing them for further study or careers in STEM fields.		
Disciplinary Knowledge				
Year 7	Year 8	Year 9	Year 10	Year 11
The Key Stage 3 science curriculum builds disciplinary knowledge by teaching students how to carry out scientific investigations, identify and control variables, and gather accurate data. They develop skills in analysing results, interpreting graphs and tables, and evaluating the reliability of methods. Students also learn to apply scientific reasoning to explain observations and draw conclusions. Clear communication using correct scientific language, symbols, and units is emphasised throughout, laying the groundwork for working scientifically at Key Stage 4 and beyond.		The AQA Science curriculum develops students' disciplinary knowledge by teaching them how to plan and carry out investigations, collect and analyse data, and evaluate scientific methods critically. Students learn to interpret results using graphs and statistics, draw evidence-based conclusions, and apply scientific concepts to solve problems. The curriculum also emphasizes clear communication of scientific ideas through accurate use of terminology, structured explanations, and effective presentation of data. These skills enable students to think and work like scientists, preparing them for further study and real-world applications.		
Subject-specific Skills				

Year 7	Year 8	Year 9	Year 10	Year 11
Pupils ask simple scientific questions, follow basic practical instructions, use common equipment safely, and record results in tables or graphs. They begin using scientific language and learn foundational concepts across biology, chemistry, and physics.	Pupils plan fair tests, form basic hypotheses, and interpret simple patterns in data. They improve their practical technique, use scientific terms more accurately, and apply knowledge in familiar contexts.	Pupils design investigations, analyse data for patterns and anomalies, and justify conclusions. They work more independently in practicals and start linking concepts across scientific disciplines.	Pupils continue to complete required practicals, evaluate methods, and interpret data using statistics. They write structured required practical reports and apply scientific ideas with greater depth and accuracy.	Pupils critically evaluate experiments, calculate uncertainties, and apply scientific knowledge to new situations. They communicate ideas fluently and solve problems using advanced conceptual understanding.
British Values				
Year 7	Year 8	Year 9	Year 10	Year 11
Pupils understand the importance of rules and procedures for ensuring safe, fair, and reliable experiments, mirroring legal principles in wider society.	Emphasis on respectful collaboration, listening to others' ideas, and working effectively in teams during experiments and group tasks.	Students take part in group decisions, share ideas during practical planning, and engage in class discussions that value all contributions.	Students are encouraged to think independently and make informed choices, such as considering their environmental footprint or lifestyle impacts.	Teachers handle sensitive topics with care, encouraging respectful discussion and awareness of different cultural and religious perspectives.
Life Skills				
Year 7	Year 8	Year 9	Year 10	Year 11
The secondary science curriculum equips students with essential life skills such as critical thinking, problem-solving, and effective communication. Through practical work and group tasks, students build teamwork, resilience, and time management. They develop numeracy and data-handling skills, digital literacy, and the ability to make informed, ethical decisions on issues like health, the environment, and technology. Science also promotes personal responsibility by fostering awareness of sustainability, health, and global challenges, preparing students for everyday life and future careers.				
Careers				
Year 7	Year 8	Year 9	Year 10	Year 11

<p>Topics such as cells, forces, chemical reactions, and ecosystems help students explore roles in healthcare, engineering, environmental science, and laboratory work. Through practical investigations and problem-solving, students develop transferable skills valued in a wide range of professions. Career links are made explicit through discussions, enrichment activities, and real-life contexts, helping to raise aspirations and prepare students for future STEM opportunities.</p>	<p>The Key Stage 4 science curriculum builds on foundational knowledge and clearly connects learning to a wide range of career pathways. Topics such as genetics, chemical analysis, energy, and electricity link directly to fields including medicine, engineering, forensics, pharmacology, environmental science, and technology. Students develop key employability skills such as data analysis, problem-solving, critical thinking, and communication. Careers education is supported through real-world applications, STEM-related examples, and exploration of future qualifications and job roles, helping students make informed decisions about post-16 education and career options.</p>
---	---

Literacy				
Year 7	Year 8	Year 9	Year 10	Year 11
<p>Subject-Specific Vocabulary</p> <p>Introduction and use of key scientific terms such as <i>cells, particles, force, energy, ecosystem, reaction</i></p> <p>Emphasis on correct spelling, meaning, and use in context</p> <p>Structured writing in practical reports using headings like aim, method, results, and conclusion</p>	<p>Comprehension of scientific texts, diagrams, instructions, and results</p> <p>Skimming and scanning for key information in practical tasks and investigations</p> <p>Structured writing in practical reports using headings like aim, method, results, and conclusion</p>	<p>Developing clear explanations and extended answers using scientific reasoning</p> <p>Using precise language to explain findings and reasoning during practicals.</p>	<p>Reading and analysing articles about scientific discoveries or real-world applications (e.g. climate change, technology)</p> <p>Writing detailed practical reports, structured exam answers, and extended responses using scientific reasoning and evidence</p> <p>Justifying conclusions, analysing data, and explaining processes clearly and logically</p>	<p>Mastery of complex scientific terminology such as <i>homeostasis, electrolysis, ionisation, kinetic energy, biodiversity</i></p> <p>Interpreting exam-style questions, scientific texts, data sheets, and practical instruction</p>

Digital Literacy (to engage confidently with technology, the various digital platforms, and the vast amount of online information which now exists)				
Year 7	Year 8	Year 9	Year 10	Year 11
<p>SPARX Science</p> <p>Using technology to research scientific topics and access reliable online information</p>		<p>SPARX Science, GCSEpod.</p> <p>Collecting and analysing data using spreadsheets and digital</p>	<p>SPARX Science, GCSEpod.</p>	<p>SPARX Science, GCSEpod.</p>

Explore interactive simulations and virtual experiments/demonstrations to better understand concepts like cells, forces, and energy.	data-loggers during practical work. CREST research (STEM).	Online revision resources. Guiding pupils to access useful sources and platforms. QR codes in SOL.	Online revision resources. Guiding pupils to access useful sources and platforms. QR codes in SOL.
--	---	--	--

Science – KS3 Assessment

Aims of Assessment at KS3

- Assess students' understanding of key scientific concepts across biology, chemistry, and physics
- Evaluate practical skills including planning, conducting, and analysing investigations
- Measure ability to apply scientific methods and problem-solving techniques
- Encourage development of critical thinking and scientific reasoning
- Provide feedback to support learning progress and identify areas for improvement
- Prepare students for the transition to GCSE science assessments and expectations

Context

- Previous assessment structures in science have led to over testing modular content, resulting in data inaccuracies and attainment prediction errors.
- The new format ensures that linear retention and synoptic assessment is prioritised.
- All assessments are inclusive and accessible to all pupils. Every child can succeed.
- Sign Post Marked Tasks (SPMT) incorporate varying levels of challenge; bronze/silver/gold and cover a wide range of content and skill.
- The working scientifically framework is a key focus of all assessment mapping.
- Termly summative assessment provides an opportunity to develop exam skill through exposure to exam style questions.

Assessment

Topic Assessment

SPMT 'Sign-Post-Marked-Tasks'

- Within each topic, pupils complete an assessed task. Format A3 yellow paper.
- Tasks cover a broad range of knowledge, skill and application, incorporating AO1, AO2 and AO3 assessment criteria.
- Tasks are accessible to all and are NOT tiered in Key stage 3.
- Each SPMT contains three distinct sections highlighting challenge level: Bronze, Silver, Gold.
- Tasks are teacher assessed and scored out of a possible 15 marks.
- Marking matrices are used to provide diagnostic feedback.
- SEND pupils are given extra time, additional access to materials for prompts and LSA support where appropriate.

- SPMT are completed in the Red Zone.

SPMT Tracking

- All SPMT data is recorded centrally.
- Scores out of 15 are converted to a %.
- A cumulative average % is generated.
- SPMT average feeds into an overall % attainment percentage.
- Weighting 25%, compared to termly testing carrying 75% of the overall attainment percentage.

Formal Assessment

- 3 Formal Exam Assessments, 1 each term.
- Assessment builds linear retention, synoptically assessing previous material.
- Extra time and LSA support given for SEND pupils that meet access arrangement requirements.

Formal Assessment Tracking

- Assessments are 50 marks and 50 minutes.
- Raw scores are converted to a %.
- A cumulative average % is generated.
- Weighting 75%, compared to SPMT assessment carrying 25% of the overall attainment percentage.

Feedback

- Whole class feedback (WCF) is provided following each SPMT and each termly assessment.
- WCF format is on A3 purple paper. Templates are shared.
- Staff populate WCF sheet with specific misconceptions, literacy errors and QR codes relating to developing skill/content.
- Diagnostic questions are provided to support pupils to level-up. Extension questions are provided on purple paper.
- WCF is completed in the Purple Zone.
- QLA RAG sheets are completed following termly assessments. Pupils systematically reflect on each question in their test paper.
- Purple-post it note task is completed following teacher-led input. Pupils reflect on WWW/EBI throughout their test paper. Scaffolding is provided to guide commentary.

Preparing for assessment

- Structured approach to revision.
- Evidence the learning journey A3 sheets completed prior to topic assessment (SPMT).
- Skills drills continuously recall prior learning.

Home-learning

- SPARX science (New to 25/25)
- Pupils complete weekly home learning following prepopulated centralised planners.
- Home learning planners complement in lesson learning, sequentially following the programme of study.
- TLR holders and class teachers monitor the completion of home learning.
- Sanctions are issued to pupils that do not meet homework expectations.
- SPARX Scientists are celebrated and rewarded.

A change in whole school assessment reporting will mean that staff now monitor attainment by referring to overall predicted % attainment. Trackers will clearly indicate this, avoiding ambiguity at each report entry.

Targets for 2025-2026

- To quality assure all SPMT and termly test assessment resources to support the new wider school assessment systems.
- To monitor the effectiveness and usefulness of SPARX science as a home learning portal.

Science – KS4 Assessment

Aims of Assessment at KS4

Key Stage 4 Science Assessment Aims – Aligned with AQA GCSE Combined & Separate Science Specifications

Assessment within the Science Department at Key Stage 4 is designed to support student progress, guide effective teaching, and prepare learners for success in AQA GCSE examinations.

Aims of Assessment:

1. Support Curriculum Progression

Ensure students develop a secure understanding of the AQA GCSE Combined Science or Separate Sciences content across Biology, Chemistry, and Physics.

2. Inform Teaching and Intervention

Use assessment data to identify misconceptions and tailor teaching to individual and group learning needs.

3. Focus on AQA Assessment Objectives

Design assessments that reflect the full range of AQA assessment objectives:

- **AO1** – Recall and demonstrate knowledge and understanding
- **AO2** – Apply knowledge and understanding in different contexts
- **AO3** – Analyse, interpret, and evaluate information and evidence

4. Prepare for External Examinations

Familiarise students with AQA exam structure, question types, and required practical skills to build exam confidence and competence.

5. Track Progress and Attainment

Monitor students' progress using assessment outcomes mapped against AQA grade boundaries and performance in AO1–AO3.

6. Deliver Clear, Targeted Feedback

Provide students with constructive feedback that highlights strengths and areas for improvement, supporting independent learning.

7. Promote Scientific Literacy and Progression

Encourage critical thinking, curiosity, and resilience to prepare students for further study and careers in science-related fields.

Context

- Assessment is an essential part of teaching and learning. At Key Stage 4, it ensures that students make sustained progress through the AQA GCSE Combined Science or Separate Sciences curriculum by regularly checking understanding, identifying misconceptions, and guiding targeted support.
- Assessment in science addresses the three AQA Assessment Objectives (AO1, AO2, AO3).

- A structured assessment model is in place to support this:
- **Signposted Marked Tasks** are embedded within each topic. These are designed to assess specific knowledge or skills and provide timely, formative feedback to students and teachers. They act as checkpoints to ensure key content and concepts have been understood before moving forward.
- **Termly Tests** are used as summative assessments, assessing content from across multiple topics in exam-style conditions. These mirror the AQA format and are used to track progress against national expectations, inform predicted grades, and identify students in need of further intervention.
- Assessment not only supports exam preparation but also develops broader scientific thinking, resilience, and literacy. A well-sequenced combination of formative and summative tasks enables students to take ownership of their learning, refine exam technique, and build the skills needed for further study and science-based careers.

Assessment

COMMON APPROACH ACROSS BOTH KEYSTAGES

Topic Assessment

SPMT 'Sign-Post-Marked-Tasks'

- Within each topic, pupils complete an assessed task. Format A3 on yellow paper.
- Tasks cover a broad range of knowledge, skill and application, incorporating AO1, AO2 and AO3 assessment criteria.
- Each SPMT contains three distinct sections highlighting challenge level: Bronze, Silver, Gold.
- Tasks are teacher assessed and scored out of a possible 15 marks.
- Marking matrices are used to provide diagnostic feedback.
- **Tasks are tiered.** A higher tier and foundation tier version are available for each task. Teachers select the appropriate tier for their pupils based on exam entry and target grade,
- SEND pupils are given extra time, additional access to materials for prompts and LSA support where appropriate.
- SPMT are completed in the Red Zone.

SPMT Tracking

- All SPMT data is recorded centrally.
- Scores out of 15 are converted to a %.
- A cumulative average % is generated.

Formal Assessment

- 3 Formal Exam Assessments, 1 each term.

- Y10 and Y11 PPE's calendared on the POS.
- Assessment builds linear retention, synoptically assessing previous material.
- Extra time and LSA support given for SEND pupils that meet access arrangement requirements.

Formal Assessment Tracking

- Termly assessments are 50 marks and 50 minutes.
- Raw scores are converted to a %.
- A cumulate average % is generated.
- PPE assessment follows the format of a previous exam series.
- PPE content is indicated on the POS and is directed by TL.
- PPE assessment is tracked using more detailed QLA tracking tools.
- QLA trackers generate individual pupil progress reports and provide a class feedback overview.
- Intervention groups are determined following assessment data input.
- Setting is fluid. Assessment data guides pupil movement.

Feedback

- Whole class feedback (WCF) is provided following each SPMT and each termly assessment.
- WCF format is A3 purple. Templates are shared.
- Staff populate WCF sheet with specific misconceptions, literacy errors and QR codes relating to developing skill/content.
- Diagnostic questions are provided to support pupils to level up. Extension questions are provided on purple paper.
- WCF is completed in the Purple Zone,
- QLA RAG sheets are completed following termly assessments. Pupils systematically reflect on each question within their test paper.
- Purple-post it note task is completed following teacher-led input. Pupils reflect on WWW/EBI throughout their test paper. Scaffolding is provided to guide commentary.

Preparing for assessment

- Structured approach to revision.
- Evidence the learning journey A3 sheets completed prior to topic assessment (SPMT).
- Skills drills continuously recall prior learning.

Home-learning

- SPARX science (New to 25/25)
- Pupils complete weekly home learning following prepopulated centralised planners.
- Home learning planners complement in lesson learning, sequentially following the programme of study.
- To support PPE preparation, Y10 and Y11 home learning planners recall previous content from all specification units.
- Y10 and Y11 complete SPARX on a three-week discipline cycle (1. *Biology*, 2. *Chemistry*, 3. *Physics*).
- TLR holders inform staff of the discipline calendar to enable teachers to monitor completion of their discipline.
- TLR holders and class teachers monitor the completion of home learning.
- Sanctions are issued to pupils that do not meet homework expectations.
- SPARX Scientists are celebrated and rewarded.

Targets for 2025-2026

- Changes to the programme of study have created a necessity to rewrite formal assessments.
- Standardise and quality assure all SPMT assessments for every topic.
- Monitor the effectiveness and usage of SPARX science. Is it a better platform than GSCEpod at KS4?