SCIENCE DEPARTMENT HANDBOOK 2025-26

HONESTY, FAITH AND COURAGE

Introduction to the Science Department

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King's Academy Prospect

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Vision

Our vision for the Science Department at King's Academy Prospect is to create a dynamic and inclusive learning environment that fosters curiosity, critical thinking, and academic excellence for all pupils, regardless of their background or abilities. By ensuring the curriculum's intent, implementation, and impact are both aspirational and appropriate, we aim to inspire a genuine love for science and equip students with the knowledge and skills necessary to succeed in an increasingly scientific and technological world.

Curriculum Intent

We are committed to delivering a curriculum that is ambitious, well-sequenced, and challenging for all students. Our curriculum not only covers essential scientific knowledge but also promotes higher-order thinking, problem-solving, and real-world application of knowledge. Our intent is to offer a broad and balanced curriculum that engages all learners, from disadvantaged students and those with special educational needs and disabilities (SEND) to more able students, providing them with the tools and confidence to reach their full potential.

Implementation

The implementation of our curriculum is centred around high-quality teaching, where lessons are carefully planned to be accessible, challenging, and engaging. At KAP, we ensure the curriculum is adaptable to meet the diverse needs of our learners, with teachers utilising differentiated instruction to support all students, including SEND and more able learners, in making meaningful progress.

Impact

Our aim is for the impact of this curriculum to be measurable through improved outcomes for all students, including closing the attainment gap for disadvantaged students, raising progress levels, and ensuring that all students are prepared for further academic or vocational study in science.

Improving Student Outcomes and Progress

Our focus is on ensuring every student achieves their best, regardless of their starting point. We implement strategies that specifically address the needs of disadvantaged, SEND, and more able students to ensure they have the support necessary to thrive. By utilising targeted interventions, data-driven instruction, and personalised learning approaches, we work earnestly to close gaps in achievement and raise the overall level of progress across the department. We pride ourselves in celebrating the success of all students, while also continually seeking opportunities to stretch and challenge the more able students in every aspect of their learning.

Adaptation of Teaching for SEND Students

Recognizing that every student learns differently, we are committed to making our teaching adaptable and inclusive. Our teachers employ a wide range of strategies, including scaffolding, multisensory instruction, and tailored feedback, to ensure that SEND pupils can access and engage with the curriculum. We will also effectively use relevant information that has been provided about the specific learning needs of each pupil on Class Charts, thereby ensuring that we support differentiated learning and create an inclusive environment where all students feel valued and capable.

Improving the Quality of Teaching

A cornerstone of our vision is improving the quality of teaching across the department through continuous professional development and reflective practice. In Science, one of our priorities is creating a culture of excellence, where teachers are encouraged to collaborate, share best practices, and remain engaged with the latest pedagogical research. Coaching, lesson observations in the form of DDIs, in collaboration with Teaching Walkthrus and constructive feedback are integral to our commitment to ongoing improvement. DDIs are six times a year, timetabled with one member of staff for the year and linked to each teacher's personal WalkThru foci. By fostering a growth mindset among staff, we ensure that every teacher is equipped with the knowledge and skills to inspire and challenge students effectively.

Robust Use of Assessment and Data

Key assessments are strategically designed to assess student knowledge, understanding, and progress at critical points throughout the curriculum. We ensure these assessments are rigorous and aligned with our curriculum goals. In the Science department, we make robust use of assessment data to identify strengths and areas for development for individual students and classes. This data informs our planning and interventions, allowing us to tailor instruction to meet the needs of all learners and help them consolidate their knowledge. Regular, timely feedback is provided to all students, empowering them to take ownership of their learning and make sustained progress. DIRT is a key aspect of our classrooms. This culture of reflection allows for effective use of all forms of assessments.

Literacy in Science

Science literacy is fundamental to student success, and as such, we are committed to implementing effective reading strategies across the department. We promote scientific reading by embedding subject-specific literacy tasks within lessons, encouraging students to engage with scientific texts, journals, and articles to deepen their understanding of concepts and enhance their vocabulary. By teaching students how to

critically analyse scientific texts, we aim to improve their ability to interpret data, evaluate evidence, and build stronger arguments, all of which are essential skills for success in science.
Our vision is to create a science department that sets high standards for all students, while ensuring that every learner, regardless of their starting point or background, is supported to reach their full potential. Through a carefully designed and aspirational curriculum, high-quality teaching, targeted support for SEND and disadvantaged students, and robust use of assessment and data, we will empower our students to achieve academic success and foster a lifelong passion for science. By continually improving the quality of instruction and embedding effective reading strategies, we will ensure that our students ***aspire, believe and achieve.***

Curriculum Information

KS3 Science

Year 7

For Year 7, follow the King's Academy's Key Stage 3 Curriculum of Excellence, a structured and rigorous program that pinpoints essential scientific knowledge and builds on it progressively. This curriculum ensures that students acquire the foundational concepts and skills they need to succeed in their studies and beyond. By focusing on the core principles of Biology, Chemistry, and Physics, the curriculum prepares students for more complex topics at Key Stage 4, while fostering curiosity, critical thinking, and problem-solving skills.

The King's Academy curriculum emphasises knowledge retention and understanding, with a strong focus on ensuring that students master key scientific ideas. This approach ensures that our learners develop a deep, interconnected understanding of science, which lays the groundwork for future academic success. Through this curriculum, students are well-prepared to tackle the demands of the GCSE syllabus and any further studies in science.

It is important to note that this curriculum has only recently been introduced, and as a result, there is a slight variation for students currently in Year 8. These students are following the previous Key Stage 3 curriculum, which differs slightly from the newly implemented structure. Similarly, at Key Stage 4, some adaptations have been made to align with the broader curriculum goals and ensure a smooth transition for students as they prepare for their GCSEs. While these variations exist, the core principles of building essential knowledge and ensuring student success remain central to our teaching and curriculum design at both key stages. Our ultimate aim is to provide a coherent and challenging curriculum that equips all students with the knowledge and skills they need to excel in science and in their future academic and career pathways.

Year 8

As previously mentioned, the Year 8 Science Curriculum differs slightly from the newly introduced Year 7 Curriculum Plan. This Year 8 curriculum follows the previously used scheme of work, that is, the Collin's Scheme of Work, which is closely linked to the AQA specification. It is designed to cover all the essential knowledge that students are required to learn at Key Stage 3, thereby ensuring they are fully prepared for the more advanced content they will encounter at Key Stage 4. The Year 8 curriculum covers key topics across biology, chemistry, and physics, providing a solid foundation in scientific concepts. It also places a strong emphasis on developing key scientific skills such as analytical thinking, data interpretation, practical experimentation, and problem-solving. These skills are essential for students to succeed in their GCSE exams and beyond. By following this well-structured program, our Year 8 students are not only gaining the foundational knowledge necessary for Key Stage 4, but they are also building the confidence and competence to apply these skills in a variety of contexts, both in and outside the classroom. This curriculum ensures that students are well-equipped to meet the demands of the AQA GCSE Science specification when they move into Key Stage 4.

KS4 Science

Our Key Stage 4 Science curriculum begins in Year 9, marking the transition to a more specialised and focused approach to science education. At this stage, students are taught three distinct subjects—Biology, Chemistry, and Physics—by specialist teachers who are experts in their respective fields.

This allows for deeper, subject-specific learning, ensuring that students gain a comprehensive understanding of each discipline. The curriculum follows the AQA specification, carefully designed to build on the foundational knowledge acquired during Key Stage 3. There is a clear and cohesive progression throughout the curriculum, with lessons and topics in Biology, Chemistry, and Physics interlinking to create a well-rounded understanding of science. This cohesiveness ensures that students are fully prepared for their GCSE exams in Year 11.

Our approach ensures that, by the time students sit for their external exams, they are not only familiar with the key scientific concepts but have also developed critical thinking, practical, and analytical skills that are essential for success. Regular assessment and feedback are integral parts of the curriculum, helping students consolidate their knowledge and refine their exam techniques. Ultimately, our Key Stage 4 curriculum equips students with the scientific knowledge and skills they need to excel in their GCSE exams and prepares them for further study or careers in science.

KS5 Science

At Key Stage 5, our Science curriculum offers A-Level courses in Biology, Chemistry, and Physics, all following the AQA exam board specification. These A-Level courses provide students with an in-depth and advanced understanding of each subject, building on the foundational knowledge gained at Key Stage 4. Through a combination of theoretical lessons, practical experiments, and independent study, students are equipped with the critical thinking and analytical skills required for success in higher education and scientific careers.

AQA A-Level Biology Content

The A-Level Biology course covers a range of topics that explore the complexity of living organisms, their structures, and the systems that govern life. Key content includes:

-Biological Molecules: Structure and function of carbohydrates, proteins, lipids, and nucleic acids.
- Cells: Cell structure, transport mechanisms, and immune response.
- Organisms Exchange Substances with Their Environment: Gas exchange, digestion, and circulation.
- Genetic Information, Variation, and Relationships Between Organisms: DNA, inheritance, evolution, and biodiversity.
- Energy Transfers in and Between Organisms: Photosynthesis, respiration, and energy cycles.
- Organisms Respond to Changes in Their Environment: Nervous system, hormonal responses, and homeostasis.
- Genetics, Populations, Evolution, and Ecosystems: Natural selection, population genetics, and ecosystem dynamics.
- The Control of Gene Expression: Mutations, genetic engineering, and gene technologies.

AQA A-Level Chemistry Content

A-Level Chemistry is split into three core areas—Physical, Inorganic, and Organic Chemistry. The course content includes:

- Physical Chemistry: Atomic structure, bonding, thermodynamics, kinetics, and equilibrium.
- Inorganic Chemistry: Periodicity, transition metals, and reactions of metals and non-metals.
- Organic Chemistry: Hydrocarbons, alcohols, polymers, and mechanisms of organic reactions.
- Further topics: Acids and bases, electrode potentials, and thermodynamics. The practical element is also central, with students conducting a variety of experiments that reinforce theoretical concepts and help them develop laboratory skills.

AQA A-Level Physics Content:

The A-Level Physics course provides students with a deeper understanding of the fundamental laws of nature and the universe. Key content includes:

-Measurements and Their Errors: Precision, accuracy, and standard units in scientific measurements.
-Particles and Radiation: Atomic structure, particle physics, and quantum phenomena.
- Waves: Wave properties, interference, diffraction, and optics.
- Mechanics and Materials: Forces, energy, motion, stress, and strain in materials.
- Electricity: Electric circuits, current, voltage, and resistance.
- Further Mechanics and Thermal Physics: Circular motion, simple harmonic motion, and thermodynamics.
- Fields and Their Consequences: Gravitational, electric, and magnetic fields, capacitors, and electromagnetism.
- Nuclear Physics: Radioactivity, fission, fusion, and the structure of the nucleus.
- Optional Unit: Options include topics such as Astrophysics, Medical Physics, Engineering Physics, or Turning Points in Physics.

Each course includes a significant practical component, with required practical activities that develop students' investigative skills and ensure they are proficient in experimental techniques. The assessments are designed to rigorously test both theoretical knowledge and practical competence, preparing students for higher education in STEM fields or careers in science-related industries. Overall, our Key Stage 5 Science curriculum challenges students to develop a deep understanding of Biology, Chemistry, and Physics, fostering the skills needed for success at university and in scientific careers.

Science Curriculum Overview 2024 - 2025

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	KGA Readiness Module and Introducti on to Science	Organisms 1 Matter 1	Forces 1 Electricity 1 Chemical Reactions 1	Ecosystems 1 Genes 1	Energy 1 Waves 1	Consolidating key concepts from previous terms
8	Forces 2 Matter 2	Organisms 2 Magnets	Chemical Reactions 2 Ecosystems 2	Energy 2	Earth Genes 2	Waves 2
9 Biology	Chapter 1: Cell Biology	Chapter 1: Cell Biology	Chapter 2:Photosynthesis	Chapter 2: Photosynthesis **Year 9 Exams**	Chapter 3: Moving and Changing Materials	Chapter 3: Moving and Changing Materials
9 Chemistry	Chapter 1: Atomic Structure and the Periodic Table	Chapter 1: Atomic Structure and the Periodic Table	Chapter 2: Structure, Bonding and the Properties of Metal	Chapter 2: Structure, Bonding and the Properties of Metal **Year 9 Exams**	Chapter 3: Chemical Quantities and Calculations	Chapter 3: Chemical Quantities and Calculations
9 Physics	Chapter 1: Energy	Chapter 1: Energy	Chapter 1: More on Energy	Chapter 3: Particle Model of Matter **Year 9 Exams**	Chapter 3: Particle Model of Matter	Chapter 3: Particle Model of Matter and Revision
10 Biology	Chapter 4: Health Matters	Chapter 4: Health Matters	Chapter 5: Coordination and Control	Chapter 5:Coordinatio n and Control	Chapter 6: Genetics **Year 10 Exams**	Chapter 7: Variation and Evolution

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10 Chemistry	Revisit and consolidate Chapter 1: Atomic Structure and the Periodic Table	Revisit and consolidate Chapter 1: Atomic Structure and the Periodic Table	Revisit and consolidate Chapter 2: Structure, Bonding and the Properties of Metal	Revisit and consolidate Chapter 2: Structure, Bonding and the Properties of Metal	Chapter 4: Chemical Changes **Year 10 Exams**	Chapter 5: Energy Changes
10 Physics	Chapter 2: Electricity	Chapter 2: Electricity	Chapter 4: Atomic Structure	Chapter 4: Atomic Structure	Chapter 5: Forces **Year 10 Exams**	Chapter 5: Forces
11 Biology	Chapter 8: Ecology in Action	Chapter 8: Ecology in Action **Year 11 Exam 1**	Revision **Year 11 Exam 2**	Revision	Revision	Revision **External Exams**
11 Chemistry	Chapter 6: The Rate and Extent of Chemical Reactions	Chapter 6: The Rate and Extent of Chemical Reactions **Year 11 Exam 1**	Chapter 7: Organic Chemistry **Year 11 Exam 2**	Chapter 9: Chemistry of the Atmosphere	Chapter 8 & 10: Using Resources and Chemical Analysis	Revision **External Exams**
11 Physics	Chapter 6: Waves and Light	Chapter 6: Waves and Light **Year 11 Exam 1**	Chapter 7: Electromagnetism **Year 11 Exam 2**	Chapter 7: Electromagnetism	Revision	**External Exams**

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Biology A Level

YEAR: 12

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Biological molecules Cells and microscopy Enzymes Cell cycle and mitosis	Cell transport DNA/RNA Water and inorganic ions Digestion and absorption Immunity Protein synthesis	Gas exchange Genetic diversity and natural selection	Mass transport in animals Species and taxonomy Biodiversity	Mass transport in plants Populations and ecosystems PPEs.	Succession Sampling techniques Statistical tests FIELD TRIP Ecosystems and nutrient cycles Farming practices
Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts
Key Themes	Key Themes	Key Themes	Key Themes	Key Themes	Key Themes
Assessment Method: CPAC + End of topic test	Assessment Method: CPAC + End of topic test	Assessment Method: CPAC + End of topic test	Assessment: CPAC + End of topic test	Assessment Method: CPAC + End of topic test	Assessment Method: CPAC + End of topic test Exam (year 1 content)

YEAR: 13

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Photosynthesis Stimuli and response Nervous coordination Respiration	Respiration (continued) Muscle structure and contraction Homeostasis Inheritance and genetics	Control of gene expression Regulation of transcription and translation Populations – Hardy Weinberg PPEs	Regulation of transcription and translation (continued) DNA technology	DNA technology (continued) Revision and required practical catch ups.	
Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts	

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Key Themes	Key Themes	Key Themes	Key Themes	Key Themes
Assessment Method: CPAC + End of topic test	Assessment Method: CPAC + End of topic test PPE 1 (paper 1 content)	Assessment Method: CPAC + End of topic test	Assessment: CPAC + End of topic test PPE 2 (paper 2 and 3 content)	Assessment Method: External EXAMS

Chemistry A Level

YEAR: 12

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Bonding, Atomic Structure and Amount of Substance	Amount of substance, Kinetics and Organic Chemistry (Alkanes)	Chemical Equilibria and Organic Chemistry (Halogenoalkanes)	Energetics and Organic Chemistry (Alcohols)	Periodicity and Organic Analysis	Oxidation, reduction (redox) equations and Organic Chemistry (carboxylic acids and derivatives)
Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts
Atomic structure and the periodic table; Bonding structure and properties of matter; Quantitative Chemistry	Quantitative Chemistry; Organic Chemistry; Rate and extent of chemical reaction	Quantitative Chemistry; Rate and extent of chemical reaction; Organic Chemistry	Quantitative Chemistry; Energy changes; Organic Chemistry	Atomic structure and the periodic table; Chemical changes; Chemical analysis	Atomic structure and the periodic table; Chemical changes; Organic Chemistry
Key Themes	Key Themes	Key Themes	Key Themes	Key Themes	Key Themes
Assessment Method: Exam End of topic Test+ Exam Questions (Exampro) + Prac+ Exam+ EOTT	Assessment Method: End of topic Test+ Exam Questions (Exampro) + RP1 +RP3+EOTT	Assessment Method: End of topic Test+ Exam Questions (Exampro) +Prac+ EOTT	Assessment Method: End of topic Test+ Exam Questions (Exampro) + RP2+RP5+EOTT	Assessment Method: End of topic Test+ Exam Questions (Exampro) + RP4+RP6+ Exam	Assessment Method: End of topic Test+ Exam Questions (Exampro) + RP8+EOTT

YEAR: 13

Term 1	Term 2	Term 3	Term 4	Term 5
Rate Equation and Optical Isomerism and Organic Chemistry (Aldehydes and Ketones; Carboxylic acids and derivatives)	Thermodynamics and Organic Chemistry (Amines and Polymers) and Aromatic Chemistry	Transition Metals and Amino Acids, Proteins and DNA	Acids and Bases and Organic Synthesis (Chromatography) and NMR Spectroscopy	**Revision**
Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts
Bonding structure and properties of matter / Quantitative Chemistry / Rate and extent of chemical reaction	Quantitative Chemistry / Energy changes / Organic Chemistry	Atomic structure and the periodic table / Chemical analysis / Using resources	Bonding structure and properties of matter / Chemical analysis	
Key Themes	Key Themes	Key Themes	Key Themes	Key Themes
Assessment Method: End of topic Test+ Exam Questions (Exampro) + RP7+RP10+EOTT	Assessment Method: End of topic Test+ Exam Questions (Exampro) Prac (making nylon)+ EOTT	Assessment Method: End of topic Test+ Exam Questions (Exampro) + RP11+ Mock Exam	Assessment Method: End of topic Test+ Exam Questions (Exampro) + RP9 +RP12+EOTT	Assessment Method:

Physics A Level

YEAR: 12

Teacher 1

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6

Measurements & Errors (Including GCSE to A-Level Transition) Big Question: How does Science Work?	Mechanics Big Question: How can we use mathematical concepts to explain motion and forces?	Mechanics & Materials Big Question: How can we use mathematical concepts to explain motion and forces? How can we use mathematical concepts to explain the behaviour of materials?	Waves Big Question: How does the behaviour of waves help create the world which we experience?	Waves & REVISION Big Questions: How does the behaviour of waves help create the world which we experience?	Further Mechanics Big Question: How do various mechanical concepts enable advancements in our world?
Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts
Key Themes	Key Themes	Key Themes	Key Themes	Key Themes	Key Themes
Assessment Method: End of topic test	Assessment Method: End of topic test	Assessment Method: End of topic test	Assessment: End of topic test	Assessment Method: EXAM	Assessment Method: End of topic test

Teacher 2

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Measurements & Errors (Including GCSE to A- Level Transition) Big Question: How does Science Work?	Electricity How is current flow affected by resistivity, potential difference dividers and the electromotive force?	Electricity How is current flow affected by resistivity, potential difference dividers and the electromotive force?	Particles & Radiation (Including GCSE to A-Level Transition) Big Question: What are the fundamental particles, and the forces that form atoms and lead to observable phenomena?	Particles & Radiation & Revision Big Question: What are the fundamental particles, and the forces that form atoms and lead to observable phenomena?	Revision Big Question: Revision Particles & Radiation Big Question: What are the fundamental particles, and the forces that form atoms and lead to observable phenomena?
Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts	Key Concepts
Key Themes	Key Themes	Key Themes	Key Themes	Key Themes	Key Themes
Assessment Method: End of topic test	Assessment Method: End of topic test	Assessment Method: End of topic test	Assessment: End of topic test	Assessment Method: EXAM	Assessment Method: End of topic test

YEAR: 13

Teacher 1

Term 1	Term 2	Term 2	Term 3	Term 4	Term 5	Term 6
Further mechanics Big Question: How do various mechanical concepts enable advancements in our world?	Gravitational and Electric Fields Big Question: How do fields impact modern society?	Gravitational and Electric Fields Big Question: How do fields impact modern society?	Capacitors and Magnetic fields Big Question: How do magnetic fields and devices impact life?	Nuclear Physics Big Question: What is the physics that underpins nuclear energy production and what is the potential impact on society?	Revision	
Key Concepts		Key Concepts		Key Concepts		
Key Themes		Key Themes		Key Themes		
Assessment Method: End of topic test		Assessment Method: PPE EXAMs		Assessment: End of topic test	Assessment Method: EXAMs	

Teacher 2

Term 1	Term 2	Term 2	Term 3	Term 4	Term 5	Term 6
Thermal Physics Big Question: How do the properties of materials affect their uses? What	Engineering (optional module) How does engineering impact our	Engineering (optional module) How does engineering impact our everyday lives?	Engineering (optional module) How does engineering impact our everyday lives?	Nuclear Physics Big Question: What is the physics that underpins nuclear energy production and what is the potential impact on society?	Revision	

are the gas laws?	everyday lives?			
Key Concepts		Key Concepts	Key Concepts	Key Concepts
Key Themes		Key Themes	Key Themes	Key Themes
Assessment Method: End of topic test		Assessment Method: PPE EXAMs	Assessment: End of topic test	Assessment Method: EXAMs

Assessment and Marking Policy

The Science Department follows a comprehensive and structured assessment and marking policy to ensure consistent feedback and progress tracking for all students. Our approach is designed to align with the King's Academy Prospects Four Quarters marking system, ensuring that marking and feedback practices are standardised and meaningful across all key stages.

Marking Policy

At the core of our marking policy is the expectation that all classwork and activities for learning are marked either by the students themselves or through peer-assessment. This encourages active engagement with the learning process and helps students reflect on their understanding. Self-Assessment: Students are expected to assess their own work using a red pen, allowing them to take ownership of their learning and recognize areas for improvement. Peer-Assessment: Students may assess each other's work using a purple pen during peer-marking activities. This process helps develop critical thinking and collaborative learning skills.

Teachers are responsible for overseeing both self-assessment and peer-assessment activities. They ensure that the marking is being carried out accurately and provide guidance where necessary. Teachers also review the self-marked and peer-marked work to ensure quality and understanding. Teacher Feedback: All formal feedback provided by teachers is given in blue pen. This feedback is specific, constructive, and actionable, providing clear steps for improvement.

In both Key Stage 3 and Key Stage 4, students are expected to complete a required practical write-up or extended question response in their Science Practical Booklet. These are assessed by the teacher, who provides detailed feedback to help students improve their scientific writing, experimental understanding, and critical thinking. Extended written answers are similarly marked and assessed by the teacher, focusing on the student's ability to apply scientific concepts in a written format. Once the teacher has provided feedback, students will engage in DIRT (Directed Improvement and Reflection Time) sessions. During these sessions, students are expected to reflect on the feedback, make necessary corrections, and respond to teacher comments. The teacher will then review the improvements made and take note of the progress for further guidance.

End-of-Topic Assessments

Every topic across Key Stage 3, Key Stage 4 and 5 concludes with an end-of-topic assessment. These tests are marked by the class teacher and provide an opportunity to evaluate student comprehension of the material. After each assessment, a DIRT session is conducted where the teacher reviews the results with the class. This allows students to identify their areas for improvement, understand their mistakes, and make necessary corrections. The DIRT process ensures that students are continuously improving and consolidating their knowledge. All feedback provided by teachers is aimed at helping students identify their strengths and areas for improvement. DIRT sessions are integral to this process, as they allow students to actively engage with teacher feedback and demonstrate their commitment to improving their understanding and performance. Teachers will keep a record of the improvements made, and this will inform future lesson planning and interventions.

The Science Department's assessment and marking policy promotes a culture of self-reflection, continuous improvement, and active learning. By engaging students in self-assessment and peer-assessment, providing constructive teacher feedback, and ensuring that students have the opportunity to respond to that feedback, we aim to develop independent learners who are well-prepared for future scientific study and assessments.

Homework Policy

The Science Department is committed to fostering a supportive and effective learning environment both inside and outside the classroom. Homework plays a crucial role in reinforcing classroom learning, developing independent study habits, and preparing students for their assessments. This policy outlines the procedures and expectations regarding homework assignments to ensure consistency, accountability, and academic excellence across all key stages.

Homework Assignment Schedule

- Assignment Day: Homework is assigned every **Monday of Week One** for all key stages.
- Submission Deadline: All homework must be completed and submitted by **Monday of Week Two**.

Homework Posting and Accessibility

- Platform: All homework assignments are posted on **Sparx Science**, our designated online learning management system.
- Parent Access:
  - Parents are invited to visit Google Classrooms as an opportunity to monitor and support their child's homework completion.

Homework Completion and Deadlines

1. Initial Deadline (Week Two Monday):

- Due Date: Homework is due by the end of the day on Monday of Week Two.
- Late Submission Consequence: If homework is not submitted by this deadline, the student will receive a **warning (C1)** and be granted a grace period to complete the assignment.

2. Grace Period:

- Duration: Students have until Tuesday of Week Two to complete and submit their homework after receiving a warning.
- Late Submission Consequence: If homework remains incomplete by Tuesday, the student will be required to attend homework detention.

3. Repeated Offenders
- Action: For students who consistently fail to complete homework assignments, the school will initiate a phone call home to engage with parents. This communication aims to address the recurring issue and collaborate on strategies to support the student.

- Severe Cases: In instances of repeated non-compliance, the school may arrange a meeting with the Head of Science to discuss further actions and support mechanisms for the student.

Please note, the school does offer homework exemption, where it is absolutely necessary.

Support and Resources for Home Study

To aid students in completing their homework and preparing for assessments, the Science Department provides access to a variety of useful resources:

1. Preparation for AQA GCSE Combined Science and Separate Sciences:

- **AQA Official Website**: [AQA GCSE Science](https://www.aqa.org.uk/subjects/science/gcse)

- **BBC Bitesize**:[GCSE Science](https://www.bbc.co.uk/bitesize/subjects/z2pfb9q)

- **Physics & Maths Tutor**: [GCSE Science Resources] (https://www.physicsandmathstutor.com/gcse-science-revision/)
- **Seneca Learning**: [GCSE Science Courses](https://www.senecalearning.com/en-gb/courses/gcse/science/)
- **Khan Academy:** [GCSE Science](https://www.khanacademy.org/science)
-**YouTube:** https://www.youtube.com/channel/UCBgvmal8AR4QIK2e0EfJwaA
- **Primrose Kitten**

https://www.youtube.com/channel/UCqbOeHaAUXw9Il7sBVG3_bw

2. Accessing Information and Additional Support:
- Revision World: [Free GCSE Revision Resources](https://revisionworld.com/gcse-revision)
- Chemguide: [Chemistry Guides](https://www.chemguide.co.uk/)
- Biology Online: [Biology Resources](https://www.biologyonline.com/)
- Physics Classroom: [Physics Lessons](https://www.physicsclassroom.com/)
- Quizlet: [Science Flashcards and Quizzes](https://quizlet.com/subject/gcse-science/)

3. Interactive Learning Tools:
- PhET Interactive Simulations: [Free Science Simulations](https://phet.colorado.edu/en/simulations/category/subject/science)
- Quizizz: [Interactive Science Quizzes](https://quizizz.com/admin/search/gcse%20science)