

The Curriculum Vision for Science

The school's mission is **Together Everyone Achieves More**. Our values are built on the four principles of Trust, Excellence, Ambition, Motivation: we are a community built on Trust, we strive for Excellence in everything we do, we are Ambitious in our aims and we are Motivated to help all succeed.

With these values and principles in mind, we need to ensure that learners can achieve both currency and character. Our learners must be able to achieve qualifications that will support life chances, whilst being able to develop as individuals who have the characteristics that will allow them to integrate successfully into a Modern Britain.

Ormiston Beachcroft Programme of Education (Science)

Intent

Our curriculum intent in Science is a balanced curriculum that provides our learners access to the same experience as mainstream through being taught Biology, Chemistry and Physics, and equip them with the scientific skills required to understand the uses and implications of Science, today and in the future.

We aim to provide an offer that allows all learners to experience the link between Biology, Physics and Chemistry and more rounded understanding of Science as a whole.

The opportunities arising from this is that our learners achieve their GCSEs in Science and prepare them for Post 16.

Implementation

At Key Stage 3 we have 3 lessons of Science per week ensuring that the long-term plan includes Chemistry, Biology and Physics topics.

At Key Stage 4 we have 5 lessons for Year 11, and 4 for Year 10 to incorporate the Synergy Combined Science curriculum.

Impact:

Understanding Science prepares you for the future. Students will learn how to think logically and critically through seeing the relationship between theory and evidence which can be applied to many areas of study.

It will open doors to various disciplines in terms of Science careers but also other careers such as History and even writing.
Understanding Science is learning about how things were understood in the past compared to now.

Assessment in Science

We formally assess in terms 2, 4 and 6.

Key stage 3 are assessed using GL assessment. The reason for this is because it is standardised and measured against the National Curriculum.

Key Stage 4 are assessed using exam past papers. The reason for this is to assess where they are at and for our learners to be familiar with the exam format for AQA.

We moderate assessment in the following ways: GCSE criteria and with other Science teachers within the trust.

Within each topic there are opportunities to develop Scientific Communication skills, application of practical, enquiry and mathematical skills.

Curriculum Map/Programme of Study.

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Key Stage 3	<p>Forces and Motion</p> <p>Key skills: Construct free body diagrams, Collect data, Analyse patterns, draw conclusion, calculate</p>	<p>Electricity, Magnetism and Electromagnets</p> <p>Key skills: Communicate ideas, plan variables and test hypothesis, evaluate</p>	<p>Periodic table Atoms, Elements and Compound</p> <p>Key skills: Analyse patterns, discuss limitations, creating abstract models</p>	<p>Chemical Reactions</p> <p>Light</p> <p>Keyskills: Estimate risks, construct diagrams, construct explanation, calculate angles</p>	<p>Inside cells Reproduction</p> <p>Keyskills: Observation, labelling, modelling, constructing explanation</p>	<p>Photosynthesis</p> <p>Nutrition/ Digestion</p> <p>Key skills: Planning, predicting, evaluate, analyse pattern</p>
Year 10	<p>Building blocks</p> <p>Key skills: Sequencing, Pattern analysis, construct diagrams</p>	<p>Building blocks for understanding</p> <p>Key skills: Constructing chemical formulae, predicting possible reactions, extended writing</p>	<p>Building blocks for understanding</p> <p>Key skills: Constructing chemical formulae, predicting possible reactions, extended writing</p>	<p>Transport over large distances</p> <p>Key skills: Interpret data, calculate and compare surface area and volume ratio, research</p>	<p>Interaction with the environment</p> <p>Key skills: Collect, present and analyse data, research and carry out surveys, evaluate models</p>	<p>Interaction with the environment</p> <p>Key skills: Collect, present and analyse data, research and carry out surveys, evaluate models</p>
Year 11	<p>Interactions over small and large distances</p> <p>Transport over large distances</p> <p>Keyskills: interpret data and draw conclusions, Interpret graphs. Construct free body diagram, calculating and rearranging equations.</p>	<p>Guiding Spaceship Earth towards a sustainable environment</p> <p>Key skills: Evaluate environmental implications of the applications of science, evaluate different types of energy resources</p> <p>Explaining Change</p> <p>Key skills: Research, extended writing, draw and interpret diagrams, evaluate given information</p> <p>Mock Exams</p>	<p>Movement and interactions</p> <p>Key skills: Investigate speed of vehicles, research, analysis of graphical data, chemical analysis, calculate data</p>	<p>Interactions with the environment</p> <p>Keyskills: interpret data and draw conclusions, Interpret line graphs and spirometer tracings</p> <p>Revision : revision tips for preparation of GCSE exams</p>	<p>Building blocks</p> <p>Building blocks for understanding</p> <p>Key skills: Sequencing, Pattern analysis, construct diagrams</p> <p>Revision : revision tips for preparation of GCSE exams</p>	<p>Revision : revision tips for preparation of GCSE exams</p>

Qualifications offered:

Level	Exam Board	Specification Code	Qualification title
GCSE	AQA	8465	Combined Science Synergy