

A warm welcome to Y6...

Science

Head of subject: Mrs. Kamil

Our Team

The Science team at High Storrs consists of 16 science teachers and 3 technicians. We have a mixture of experienced and recently qualified teachers and includes specialist teachers in Biology, Chemistry and Physics. We are a knowledgeable and supportive team and teach across all key stages. The Heads of Crucible and Merlin House also teach science and we have one colleague on the Senior Leadership Team.

Our Curriculum

Through the exploration of the big ideas in Science, students discover the principles and models which connect concepts that are at the heart of Science.

Our curriculum provides students with an understanding of individual concepts, ensuring they can apply their knowledge to unfamiliar contexts. We believe this is how students learn to see the world analytically, to explain phenomena and make predictions – all skills they need for their next stage of scientific learning.

This table shows how the Big Ideas are organised across KS3 and the topics we study within each idea.

Big Idea	Year 7		Year 8	
Forces	Speed	Gravity	Contact forces	Pressure
Electromagnets	Voltage and resistance	Current	Electromagnets	Magnetism
Energy	Energy costs	Energy transfer	Work	Heating and cooling
Waves	Sound	Light	Wave effects	Wave properties
Matter	Particle model	Separating mixtures	Periodic table	Elements
Reactions	Metals and non-metals	Acids and alkalis	Chemical energy	Types of reaction
Earth	Earth structure	Universe	Climate	Earth resources
Organisms	Movement	Cells	Breathing	Digestion
Ecosystem	Interdependence	Plant reproduction	Respiration	Photosynthesis
Genes	Variation	Human reproduction	Evolution	Inheritance

Assessment and Setting

- Y7: short in-class tests. They will cover the latest Big Idea. Usually these will be self-assessed.
- Y8: three end of term Block Assessments. During the second to last week of term.
- Y7 and Y8 have Skills Assessments in each topic based on in-class practical work.
- Regular retrieval activities and quizzing of knowledge.
- Developing Scientific Vocabulary.
- Y7 students are in mixed ability classes.
- Y8 students are placed in mixed ability bands. Based on teacher assessment & test scores.
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Resources for Homework & Independent Learning



- Students will be given login details via class teachers.
- Homework quizzes. Students can set their own quizzes.
- www.educake.co.uk

BBC (KS3)

BITESIZE

- Free web access. Useful for revision.
- www.bbc.co.uk
- Useful to enhance learning at home

Next steps

The skills developed at KS3 level will support students as they move on to study AQA Biology, Chemistry and Physics at GCSE level. Students are then ideally placed for further study in all three of these subjects at A level.

Our Legacy

At High Storrs, KS3 Science supports the development of scientific thinking through investigation. There is a large emphasis on working scientifically through practical work and making connections to the wider world. Working scientifically enthuses and engages students as they operate in similar ways to professional scientists in our specialist laboratories. These are the key skills we will develop:

Analyse

- Analyse patterns
- Discuss limitations
- Draw conclusions
- Present data



Communicate

- Communicate ideas
- Construct explanations
- Critique claims
- Justify opinions



Enquire

- Collect data
- Devise questions
- Plan variables
- Test hypotheses



Solve

- Estimate risks
- Examine consequences
- Review theories
- Interrogate sources

