



**YORK HIGH
SCHOOL**

“Science and technology revolutionise our lives, but memory, tradition and myth frame our response.”

Arthur M. Schlesinger

SCIENCE: KS4

KS4 SUBJECTS ON A PAGE

OUR AIMS AND INTENTIONS

To inspire scientists who can apply their knowledge and skills to a variety of scientific and real-world challenges to make an impact on the world.

CURRICULUM KNOWLEDGE:

The KS4 Curriculum in Science follows the AQA specifications. Students can choose from Trilogy or Separate Sciences.

Topics taught are:

- BIOLOGY** Cells, Cell Organisation, Infection and response, Bioenergetics, Homeostasis and Response, Inheritance Variation and Evolution, Ecology
- CHEMISTRY** Atomic Structure (Chem), Structure and Bonding, Quantitative Chemistry, Chemical Changes, Energy Changes, Rate and Extent of Chemical Change, Organic Chemistry, Chemical Analysis, Chemistry of the Atmosphere, Using Resources
- PHYSICS** Energy, Electricity, Particle Model, Atomic Structure (Phys), Forces, Motion, Waves, Electromagnetism and Space

SUBJECT SPECIFIC SKILLS:

All specification skills (Working Scientifically) are covered through teaching content. Specific skills have been assigned to certain lessons to ensure coverage. All AQA required practicals are also covered throughout the course.

IMPLEMENTATION:

- The Science POS is written and reviewed by subject staff, based on specialisms.
- Resources for every lesson are included in a central folder and are added to and amended by staff. These are differentiated by HT and FT content.
- Topic assessments provide updates on progress and skills, and are used by staff to fill in gaps in learning.
- Formal feedback is given at least twice per half term and identifies WWW and EBI for each pupil, which they then build upon in CHIMP time

INTENDED IMPACT:

- The KS4 Curriculum in Science allows all students full coverage of the KS4 National Curriculum.

SCIENCE: KS4 IMPLEMENTATION OF THE WIDER YHS CURRICULUM

RESILIENCE	ASPIRATION	SUCCESS
<ul style="list-style-type: none"> ■ Problem solving activities including trial and error in practical work. ■ Half termly assessments with feedback to advance learning. ■ Engaging positively with CHIMP time and feedback to identify next steps in learning. ■ Providing well planned peer assessment to support the learning of others. 	<ul style="list-style-type: none"> ■ Careers links throughout SOW. ■ Challenge tasks embedded and scaffolding available for some pupils. ■ Employability skills – problem solving, application, etc... ■ A level taster lessons delivered by staff to support post 16 uptake and transition. 	<ul style="list-style-type: none"> ■ Exposure to new careers and language in order to equip students to be capable scientists. ■ Links to famous scientists and scientific works (Origin of Species, Principia Mathematica) ■ GCSE Science Live! trip delivered to high-attaining pupils ■ Access to a range of extra curricular opportunities for all students.

- Knowledge is taught through direct instruction then tested termly, which is used alongside CHIMP time and feedback to fill in any gaps in knowledge.
- Content is regularly reviewed both within lessons and through a homework schedule to embed knowledge in students' long-term memory.
- Pupils will have a practical and working knowledge of

- science and its impact on society.
- Pupils are encouraged to seek out opportunity for further and post-16 study, and we hope to increase the percentage of students going on to study science post-16.
- We aim for GCSE outcomes to improve year-on-year (relative to FFT and national figures).