

Science Curriculum

Why is Science Important?

At Workington Academy the Science curriculum is designed to stimulate pupils' curiosity of the phenomena that surrounds them. We aim to develop students' scientific skills and knowledge, so they are able to question and discuss scientific issues that affect their lives and develop their scientific literacy so that they are able to clearly communicate these ideas.

Summary of the department

At Workington Academy Science Department, the curriculum is delivered in 7 purpose-built science labs and 2 Science seminar rooms. After laying a solid foundation of understanding at Key Stage 3, our curriculum is designed to spiral through concepts with increasing complexity as students' progress through the school, each time increasing their depth of knowledge and understanding.

At Key Stage 4 we deliver both AQA GCSE Combined Science and AQA GCSE courses in each of the separate science qualifications (Biology, Chemistry and Physics) to meet the needs of our learners. Key Stage 5 we continue following the AQA specification in Biology Chemistry and Physics at A-Level, and complement this with Level 3 BTEC vocational qualifications in Applied Science.

Staff:

Mr J Savage – Curriculum Leader for Science
 Mrs Angela Homer – Assistant Curriculum Leader
 Mr M Bedford (SLT)
 Mr J Burns
 Dr D Crosdale
 Miss J Daulby (SLT)
 Mrs S Foster
 Mrs J Goddard
 Mrs R Hegarty
 Mr B Hendren (SLT)
 Mrs H Ward

Curriculum allocation

Year group	Allocation
7	3 x 1-hour lessons per week
8	3 x 1-hour lessons per week
9	3 x 1-hour lessons per week
10	5 x 1-hour lessons per week (6 for Separates)
11	5 x 1-hour lessons per week (6 for Separates)
12	5 x 1-hour lessons per week per Science option
13	4 x 1-hour lessons per week per Science option

Key Stage 3

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

Year 9 GCSE Transition

Biology	Chemistry	Physics
Cell Biology	Atomic Structure and The Periodic Table	Waves
Photosynthesis	Structure, Bonding and the Properties of Matter	Atomic Structure

Key Stage 4

Year 10

Biology	Chemistry	Physics
Health matter	Energy Changes	Electricity
Moving and changing materials	Chemical Changes	Particle model of matter
Coordination and control	Chemical quantities and calculations	Energy

Year 11

Biology	Chemistry	Physics
Coordination and control	The rate and extent of chemical change	Forces
Genetics	Hydrocarbons	Electromagnetism
Variation and evolution	Chemical Analysis	Space
Ecology in action	The Atmosphere	
	Sustainable development	

Post-16

We run the following courses at post 16, as part of the West Coast Sixth form:

BTEC – Applied Science

A Level Biology

A Level Chemistry

A Level Physics

More information on them can be found here: <https://www.westcoastsixthform.org>
