

All Hallows RC High School

Specialising in Business, Enterprise & Sports



SCIENCE CURRICULUM OVERVIEW

HOD: M. BEACOM

September 2022



WE AIM FOR ALL HALLOWS RC
BUSINESS, ENTERPRISE AND SPORTS COLLEGE TO BE A
CATHOLIC SCHOOL
TO WHICH CHILDREN WISH TO COME
TO WHICH PARENTS WISH TO SEND THEIR CHILDREN
AND WHERE TEACHERS
WISH TO TEACH

OUR MISSION IS TO OFFER A
HIGH QUALITY
CATHOLIC EDUCATION
FOR ALL, IN AN ENVIRONMENT WHERE
GOSPEL VALUES ARE CENTRAL
TO TEACHING AND LEARNING
AND IN WHICH THE
UNIQUE VALUE
OF EACH PERSON IS
RECOGNISED AND RESPECTED

Curriculum Intent

Our Intent

At All Hallows Science Department, we aim to give our pupils a KS3 & KS4 curriculum that is broad, balanced and relevant. We want to promote a love for learning and enquiry, as well as making science engaging and intellectually challenging. We strive for our pupils to learn and master skills which will help them understand and process the Science of yesterday, today and the future.

- **We aim** to create engaging lessons that promotes teaching for understanding rather than covering fragmented content.
- **We aim** to teach the pupils the KS3 National curriculum and use a logical order of objectives which uses big ideas to equip students for success at GCSE later on and in life.
- **We aim** to group topics so they are in a sequenced and logical order; a spiral idea where topics have a natural progression in order of increasing difficulty and understanding.
- **We aim** to have a bigger focus on practical skills in each topic so pupils are better prepared for 'working scientifically' type questions
- **We aim** for assessments to be interleaved so pupils are constantly revisiting previous topics to ensure their learning is holistic and not in a modular format.
- **We aim** to use various strategies to make sure pupils remember what they need to learn and retain it in their long term memory.

How will we do it?

- To develop scientific **knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics.
- To develop critical **thinkers** by understanding the **nature, processes** and **methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them.
- To be equipped with the scientific knowledge required to understand the uses and **implications** of science, today and for the future.
- To be **scientifically literate (fundamental and derived)** and therefore make informed decisions about everyday life and have an understanding of how science is practised by being able to describe, analyse and evaluate scientific charts, texts and graphs.
- To have an **appreciation for the natural world** around them and how to maintain a balanced lifestyle
- To have **fundamental experimental skills** to develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience.

KS3 Order of Teaching 2022/2023

Year	Term 1	Term 2	Term 3
Year 7	Matter - Particle model and separating mixtures Reactions - metals, non-metals and acids-alkali (a) Earth - structure	3. (b) Earth: Universe Energy - energy costs and energy transfer Forces - Speed and Gravity	Electromagnetism - Voltage, resistance and current Waves - Sound and light Ecosystems - interdependence and plant reproduction
Assessment(s) completed by	1 (2nd Nov) and 2+3a (16th Dec)	3b* (end Jan) and 4+5 (29th Mar)	6+7 (mid-Jun) and 8 (14th Jul)
Year 8	Organisms - Movement and cells Genes - variation and human reproduction Matter - Periodic table and elements	Reaction - chemical energy and types of reaction Earth - climate and Earth's resources Electromagnetism - magnetism and electromagnetism	Waves - wave effects and wave properties Energy - work, heating and cooling Forces - contact forces and pressure
Assessment(s) completed by	9 (2nd Nov) , 10 and 11* (16th Dec)	12+13 (mid-end Feb) and 14 (29th Mar)	15+16 (mid-Jun) and 17 (14th Jul)
Year 9	Organisms - breathing and digestion Ecosystems - respiration and photosynthesis Genes - Evolution and inheritance	Matter: Atoms and Periodic Table Reactions: Bonding between elements Reactions: Energy changes in Chemistry	Energy: Changes in Energy Energy: Density, Particles and Pressure Waves: Uses of waves, lenses and radiation
Assessment(s) completed by	18 (2nd Nov) and 19+20 (16th Dec)	21, 22 and 23 (29th Mar)	24, 25 and 26 (14th Jul)

KS4 Order of Teaching 2022/2023

Year		Term 1			Term 2			Term 3		
10	B4: Bioenergetics Assessments Keywords	C2: Structure & Bonding Assessments Keywords	P1: Energy Assessments Keywords	B3: Infection & response Assessments Keywords	C4: Chemical Change Assessments Keywords	P5: Forces and Motion Assessments Keywords	B5a: Homeostasis & Response (Nerves) Assessments Keywords	C3: Quantitative Chemistry Assessments Keywords	P4: Radioactivity Assessments Keywords P8: Space Assessments Keywords	
Practical	Photosynthesis		Thermal insulation	Microbiology	Making salts Electrolysis Neutralisation	Extension of a spring Acceleration	Reaction time			
11	5b. Homeostasis & Response (Hormones) Assessments Keywords	C7: Organic Chemistry Assessments Keywords C9: Chem of the Atmosphere Assessments Keywords	P2: Electricity Assessments Keywords	B6: inheritance, variation and Evolution Assessments Keywords	C10: Using Resources Assessments Keywords C8: Chemical Analysis Assessments Keywords	P7: Magnetism and electro-magnetism Assessments Keywords	Revision			
Practical	Plant responses		Resistance I-V Characteristics		Water purification Chromatography Identifying ions					

KS4 Order of Teaching 2022/2023

Year		Term 1		Term 2			Term 3		
10		B7: Ecology Assessments Keywords	C4: Chemical Change Assessments Keywords	P5: Forces and Motion Assessments Keywords	B1: Cell Biology Assessments Keywords	B4: Bioenergetics Assessments Keywords	B3: Infection & response Assessments Keywords	C7: Organic Chemistry Assessments Keywords	P4: Radioactivity Keywords
		B2: Organisation Assessments Keywords	C6: Rates keywords				B5a: Homeostasis & Response (Nerves) Keywords	C8: Chemical Analysis Keywords	
	Practical	Quadrats Decay Osmosis Enzymes Food tests	Making salts Electrolysis Neutralisation Rates	Extension of a spring Acceleration	Microscopy	Photosynthesis	Microbiology Reaction time	Water purification Chromatography Identifying ions	
11		5b. Homeostasis & Response (Hormones) Assessments Keywords	C9: Chem of the Atmosphere Assessments Keywords	B6: inheritance, variation and Evolution Assessments Keywords	C10: Using Resources Assessments Keywords	P7: Magnetism and electro-magnetism Assessments Keywords	Revision		
			C3: Quantitative Chemistry Assessments Keywords						
	Practical	Plant responses							
									Resistance I-V Characteristics

#TheAllHallowsWay



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