



SAINT JOHN WALL CATHOLIC SCHOOL
A Catholic School For All



Departmental Schemes of Work

Curriculum Intent: “To educate each and every unique child in our care to hear and respond to what God calls them to be”.

KS4 Triple Science Y9

Science Curriculum Intent

Mission Statement	School Curriculum Intent	Science subject Curriculum Intent
To educate	Our skilled teachers and support staff live out their vocation to serve and teach children and young people at Saint John Wall Catholic School	<i>The Science team consists of four Biology Specialists; two Chemistry/Physics Specialists and one Chemistry Specialist. The team is supported by two Laboratory Technicians. The Rosenshine Principles and the Science of Learning are weaved throughout our five-year Science Curriculum model to ensure that all pupils make links with prior knowledge and enables them to 'Know and Remember more'. All teachers make explicit through their teaching, where previous knowledge and understanding can be transferred and recalled, building schema as part of the EBacc and STEM curriculum.</i>
each and every	We are 'A Catholic School For All' and we welcome pupils from each and every diverse background, faith and culture into the Saint John Wall community.	<i>As a team we have consistent high expectations based on an ambitious sequenced curriculum, designed for all learners to experience the joy and wonder of Science. Our curriculum has been designed and driven by principles of the Catholic faith. Pupils have multiple opportunities to develop and showcase SJW values through using their enquiry skills, literacy and numeracy skills (Maths in Science) and also through their practical skills. We aim to inspire our pupils to become the Scientists of the future.</i>
unique child	We value human dignity and recognise every child as a unique individual made in the image of God.	<i>Our Science curriculum ensures equity of access through our curriculum planning and design so that no pupil is disadvantaged because of their background. Through curriculum planning, each topic taught provides opportunities for pupils to develop their literacy and numeracy skills. Pupils need to be able to use scientific key words in the correct context, when they are explaining their understanding. Pupils develop the skills to answer challenging questions, building their quality of written communication. Within the Science GCSE qualifications, a percentage of each paper is awarded for the Maths in Science. As a team we ensure that we expose the pupils to a vast array of mathematical questions within a science context, ensuring that pupils can apply their learning to demonstrate their knowledge and skills.</i>
in our care	We provide high levels of care within a respectful and disciplined environment to safeguard children's wellbeing, welfare and safety.	<i>The Science team have very high expectations of all pupils that we teach in terms of behaviour and outcomes. No pupils are limited in what they can achieve as all pupils have access to the same curricular throughout KS3 and KS4. Teachers ensure through planning, to adapt their lessons for the pupils within their classroom. When working in the laboratory and carrying out practical work, all pupils are nurtured in how to work safely. Science curriculum planning builds pupils' practical skills, including health and safety knowledge of hazards with certain chemicals that we use; this safeguards all pupils within the classroom.</i>
to hear	We instil SJW values and encourage spiritual, moral, social, cultural and emotional personal development so that our young people are open to hear God's calling.	<i>All pupils have the opportunity to build scientific knowledge, and understanding of the three sciences and develop their skill set. Through the teaching of our curriculum we enable pupils to be aware of how Science is used in the real world so that they can develop their aspirations for STEM subjects. Pupils are encouraged to read about science in the news. We make pupils aware of articles and programmes they can view to foster their scientific enquiry skills.</i>

<p>and respond</p>	<p>We foster our young people's gifts and talents so they are equipped with skills, knowledge and qualifications to create opportunities to be able to respond to God's calling.</p>	<p><i>At Saint John Wall Catholic School pupils have the opportunity to expand their scientific knowledge by selecting Triple Science GCSE where they will gain three Science GCSE qualifications. If pupils do not follow the Triple Science pathway they will complete the Combined Science pathway where they will achieve two science GCSE qualifications in the three science disciplines. Pupils learn about the key fundamentals of Biology - the core topics of Cells and the organisation of organism; in Chemistry - Atoms, elements and the Periodic table and Physics Energy and Electricity. This builds foundational knowledge to increasingly complex topics in KS4. Pupils also build their teamwork and leadership skills through a vast array of practical work in KS3 developing the skills ready for the KS4 Core practicals required for the GCSE Qualification.</i></p>
<p>to what God calls them to be'</p>	<p>Taking Jesus Christ as a role-model we help pupils understand what God calls them to be; informed and responsible citizens whose vocation in life contributes to peace, tolerance, justice and service in both our local community and wider society.</p>	<p><i>Our Science Curriculum is designed to encapsulate the enjoyment of the three Sciences through our teaching with the aim to inspire our pupils to continue their scientific education for future learning and employment. All of the Science teachers talk to the pupils about careers in science and through this discussion draw awareness to what is required in terms of qualifications. We encourage pupils who enjoy and excel in Science to continue their scientific education to A-Levels and Level 3 qualifications. We teach science within the framework of the Catholic ethos as stated by Pope St John Paul II that "there is no conflict between science and the doctrine of faith regarding man and his vocation."</i></p>

Year 9 Triple Science Scheme of Work Overview

Sequencing of topics	Autumn term 1: Physics and Biology Autumn term 2: Physics and Biology Spring term 1: Physics and Biology	Spring term 2: Chemistry and Biology Summer term 1: Chemistry and Biology Summer term 2: Chemistry and Biology
Calendared assessments	Topic Tests are undertaken at the end of each topic within the subject. Whole school assessments; Physics and Biology Autumn Term 2 Biology and Chemistry Summer Term 2	
Personal Development <i>(Cross curricular, SJW Values, SMSCV, cultural capital)</i>	Cross curricular links with maths SJW values are assigned to each topic SMSCV - Throughout lessons and working together in practical work. Vocations are assigned to each topic Cultural Capital – Trips to Martineau gardens	
Progression model	What knowledge will pupils develop? (Including key terminology)	What skills will pupils develop? (Including literacy & Numeracy)
	Pupils will develop their knowledge of Key concepts in biology and chemistry, cells and control, genetics, Natural selection and genetic modification, health, disease, development of medicines, states of matter, separating techniques, atomic structure, periodic table, ionic & covalent bonding acids and alkalis, calculations, electrolytic process, reversible reactions, motion and forces, conservation of energy, waves, light, electromagnetic spectrum, radioactivity.	Pupils will develop practical skills, working with scientific equipment and learning to work in teams. Pupils will develop literacy skills using the departmental initiative of IDEAL. Pupils will learn numeracy skills from table reading, making different types of graphs, calculations and equations. Pupils will develop an understanding of examination preparation including integrating specific scientific terminology in work.
Development homework	Developmental homework will reinforce concepts taught in class and also stretch pupils with independent study on concepts not taught in class. This can be interactive programmes such as Active learn, GCSEpod, Focus Learning and Senca. In addition to exam papers and exam style questions.	