



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 Maths – Year 11 (22/23)

Mathematics Curriculum Intent

Mission Statement	School Curriculum Intent	Maths 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	We have a team with over 90 years combined experience teaching secondary mathematics. We are a forward-thinking department, who have recently undergone training in 'mastery within maths'. Our work using modelling and key representations, moving from concrete to pictorial to abstract maths, helps to support staff in delivering the logically sequenced scheme of work, ensuring that there are many opportunities for interleaving and retrieval practice.
each and every	We are ' <i>A Catholic School For All</i> ' and we welcome pupils from each and every diverse background, faith and culture into the Saint John Wall community.	Every child deserves to be able to access the mathematics curriculum, and our department aims to develop in each and every pupil an understanding of the universal language of mathematics. Our curriculum intent is to actively support each and every student in developing positive productive dispositions towards mathematics, through enjoyment of the subject. We aim to enable pupils to have confidence in its everyday uses. We show inclusivity within our lessons, and try to have representation for our pupils at any possible opportunity.
unique child	We value human dignity and recognise every child as a unique individual made in the image of God.	As a school with a high number of EAL pupils, our curriculum has been chosen and adapted to support the literacy needs of our pupils, with a lot of emphasis spent on reading and understanding each question. All pupils have access to the same 5-year curriculum. Our 'Small Step' approach ensures access to the curriculum for all of our pupils, with lessons tailored to support individual pupils via the use of stretch and scaffolding strategies. our unique school, each child grows with confidence and mathematical ability at different speeds. To support this, pupils can move between the foundation and higher examination all the way until year 11.
in our care	We provide high levels of care within a respectful and disciplined environment to safeguard children's wellbeing, welfare and safety.	The maths department have high expectations of behaviour, attitudes to learning and presentation of work. The maths department are caring individuals' who will go above and beyond to support the mathematical growth and development, as well as the safety, of all of our pupils.
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.	We intend to encourage the fluency of mathematics, as well as help the pupils to be able to interpret, explain, predict and represent events and to solve problems independently. We also teach perseverance and resilience, alongside the numeracy skills that are needed daily, ensuring that each child is well prepared for the next stage in their education.
and respond	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.	We want learners to have a positive attitude to solving problems with independent and resilience, encouraging them to be Curious and Active as lifelong learners. The study of mathematics helps pupils to become logical thinkers, giving them the best preparation for their lives. We offer the opportunity for pupils to sit a foundation (grade 1-5) or higher (grade 5-9) examination, dependent on their ability, and extra entry level qualifications are offered to our SEND pupils.
to what God calls them to be'	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.	As a department, we want our pupils to leave confident with their use and application of number. Pupils who have flourished in the subject may go on to complete A level, and maybe a degree, in mathematics. Some may use their mathematical talents in applied fields like engineering and accounting. All pupils will use maths when working with their own finances. Each topic has real life links, as well as cross curricular links, ensuring that pupils can see the real uses of maths in their lives. We aim for as many pupils as possible to achieve their potential in mathematics by achieving grades 9-1, although a few SEND pupils may be entered for Entry Level to enable them to have the best possible choices in hearing and responding to their vocational calling.

Year 11 Maths Scheme of Work Overview (22-23)

Sequencing of topics	Autumn term 1:	<p>Foundation: (12) Right-angled triangles: Pythagoras and trigonometry, (13) Probability, (14) Multiplicative reasoning.</p> <p>Higher: (12) Similarity and congruence in 2D and 3D, (13a) Graphs of trigonometric functions, (13b) Further trigonometry, (14a) Collecting data, (14b) Cumulative frequency, box plots and histograms.</p>	Spring term 1:	<p>Foundation: (18a) Fractions and reciprocals, (18b) Indices and standard form, (19a) Similarity and congruence in 2D, (19b) Vectors, (20) Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations.</p> <p>Higher: (19a) Reciprocal and exponential graphs; Gradient and area under graphs, (19b) Direct and inverse proportion.</p>
	Autumn term 2:	<p>Foundation: (15a) Plans and elevations, (15b) Constructions, loci and bearings, (16a) Quadratic equations: expanding and factorising, (16b) Quadratic equations: graphs, (17) Circles, cylinders, cones and spheres.</p> <p>Higher: (15) Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics, (16a) Circle theorems, (16b) Circle geometry, (17) Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof, (18) Vectors and geometric proof.</p>	Spring term 2:	Exam preparation.
			Summer term 1:	Exam preparation. Exams.
			Summer term 2:	Exams.
Calendared assessments	<ul style="list-style-type: none"> • Two Mock Exams (November and March). • 8 Topic Tests for their Learning Journals. 			
Personal Development <i>(Cross curricular, SJW Values, SMSCV, cultural capital)</i>	<ul style="list-style-type: none"> • The departmental focuses on promoting "Active and curious" on a daily basis through problem solving by developing effective questioning through explicitly encouraging the pupils to ask 'what if..', 'what do you think..', 'how do you know...' so they remaining active and curious in their search for new methods and solutions. Teamwork through peer assessment and group work underpins the schemes of learning. • Students learn cross curricular skills which they will need to use appropriately in other subjects including tables, graphs, reading scales, units, equations, shapes and measures. • Students work together in all areas of Mathematics to support each other and build mutual respect for one another in an environment where they are allowed to make mistakes and learn from them. This fosters confidence and builds self-esteem, encouraging students to take risks and become active and curious lifelong learners whilst using their mathematical skills in all aspects of life. 			
Progression model	What knowledge will pupils develop? <i>(Including key terminology)</i>		What skills will pupils develop? <i>(Including literacy & Numeracy)</i>	
	<p>The knowledge developed will depend on the starting level for different pupils. The aim is to build on the knowledge pupils bring to each topic by the use of diagnostic activities at the start of each unit of work to ensure that pupils are taking the appropriate next steps in their learning from their individual starting points. The Scheme of work ensures that every pupil progresses during each topic.</p>		<ul style="list-style-type: none"> • Literacy – This is embedded into lessons at various locations in the form of starters, Frayer models as well as conversations about key words and command words. • Representing – making correct use of symbols, words and diagrams • Analysing – identifying and describing relationships, making generalisations • Interpreting – interpreting general statements or conclusions, evaluating different approaches 	
Development homework	<p>Online developmental homework is set on Maths Watch each half term with a selection of practice questions on the topics which pupils have covered in lessons. Staff steer the pupils to appropriate sections at suitable times during the course.</p>			