Curriculum Overview

MATHS

Curriculum Intent Statement
Department of Mathematics
Ballakermeen High School

Curriculum vision: We believe that all students deserve a creative and ambitious mathematics curriculum with breadth, stretch and depth that is rich in skills and knowledge, which ignites interest and prepares them well for everyday life. We aim to create success in Mathematics for every child - learners who are confident, enthusiastic, and inquisitive with the skills to achieve their aspirations. Our goal is to provide a foundation for understanding the world, the ability to reason mathematically, whilst encouraging a culture of questioning, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. Our intention is to deliver high quality teaching by professionals who have the knowledge and understanding to demonstrate a love of their subject. We aim to offer opportunities and challenge for all students to achieve their full potential in examinations, further studies, and future employment. We hope that our students will become strategic problem solvers, with the skills required to be financially and numerically literate to make sound mathematical decisions in their personal life and the ever-changing world of work.

Our Maths curriculum will provide students with the opportunity to:

- Become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically – make connections and develop arguments.
- Solve problems and be able to break questions down into a series of simpler steps and persevere in seeking solutions.
- Communicate, justify, argue, and prove using mathematical vocabulary.
- Develop their character, including resilience, confidence, creativity, and independence, so that they can contribute positively to the life of the school, their local community, and the wider environment.
- Ask and answer 'why' and make connections between ideas and topics.
- Experience quality teaching which ensures students understand underlying Mathematical principles and can apply them in a variety of familiar and unfamiliar contexts. Whilst also trying to draw out misconceptions and achieve greater success.

- Foster a growth mind-set and become resilient learners who understand the importance of making and learning from incorrect answers.
- Experience a spiral curriculum with the aim being for learning to 'stick', in that each time students revisit an area, they are exposed to more complex content, building on what they have already learnt. We ensure the level of challenge is high enough for the most able, with scaffold and support available for students who need it.
- Have high expectations that drive up academic achievement and enable students to become more aspirational, confident, and self-assured in their mathematical thinking.

Years 7 – 10:
We are currently running a spiral curriculum with the aim being for learning to 'stick', in that each time students revisit an area, they are exposed to more complex content, building on what they have already learnt. We ensure the level of challenge is high enough for the most able, with scaffold and support available for students who need it.

Year 11:
We complete the GCSE course at the end of Year 10. Therefore, teachers have the freedom to deviate from the below and can use assessment to inform planning throughout year 11. Teachers also ensure that students are regularly seeing and working through past exam questions. Please note only the intermediate course is stated below – the higher and foundation courses differ slightly.

Curriculum Overview - Maths					
	YEAR 7	**YEAR 8**	**YEAR 9**	**YEAR 10**	**YEAR 11**
AUTUMN 1	1. Calculations 2. Rounding 3. Power and roots 4. Angles	1. Calculations 2. Rounding 3. Power and roots 4. Angles	1. Calculations 2. Rounding 3. Power and roots 4. Angles	1. Calculations 2. Rounding 3. Power and roots 4. Angles	1. Number skills 2. Area, perimeter, volume 3. Algebra skills
AUTUMN 2	1. Collecting data 2. Processing data 3. Representing data 4. Place value and ordering numbers 5. Types of number	1. Collecting data 2. Processing data 3. Representing data 4. Place value and ordering numbers 5. Types of number	1. Collecting data 2. Processing data 3. Representing data 4. Place value and ordering numbers 5. Types of number	1. Collecting data 2. Processing data 3. Representing data 4. Place value and ordering numbers 5. Types of number	1. Equations and inequalities 2. Angles 3. Coordinates and transformations 4. Standard form 5. Probability 6. Venn diagrams 7. Nets and shape 8. Types of chart
SPRING 1	1. Units of measure 2. Measuring 2D shapes 3. Measuring 3D shapes 4. Manipulating expressions	1. Units of measure 2. Measuring 2D shapes 3. Measuring 3D shapes	1. Units of measure 2. Measuring 2D shapes 3. Measuring 3D shapes	1. Units of measure 2. Measuring 2D shapes 3. Measuring 3D shapes	1. Drawing graphs and y=mx+c 2. Pythagoras and trigonometry

	4. Manipulating expressions	4. Manipulating expressions	4. Manipulating expressions	3. MMMR Volume and surface area 4. Rounding, estimation, and reciprocals
SPRING 2	1. Working with formulae 2. FDP equivalence 3. Calculating with fractions 4. Working with percentages	1. Working with formulae 2. FDP equivalence 3. Calculating with fractions 4. Working with percentages	1. Working with formulae 2. FDP equivalence 3. Calculating with fractions 4. Working with percentages	1. Working with formulae 2. FDP equivalence 3. Calculating with fractions 4. Working with percentages	1. Simultaneous equations 2. Sequences 3. Trial and improvement 4. Expanding brackets and factorizing 5. Congruence and similarity 6. Constructions 7. Conversions 8. Circle theorems 9. Questionnaires
SUMMER 1	1. Properties of shapes 2. Constructions and Loci 3. Transformations 4. Equations and inequalities 5. Probability	1. Properties of shapes 2. Constructions and Loci 3. Transformations 4. Equations and inequalities 5. Probability	1. Properties of shapes 2. Constructions and Loci 3. Transformations 4. Equations and inequalities 5. Probability	1. Properties of shapes 2. Constructions and Loci 3. Transformations 4. Equations and inequalities 5. Probability	
SUMMER 2	1. Ratio notation 2. Proportional relationships 3. Sequences 4. Coordinates and graphs	1. Ratio notation 2. Proportional relationships 3. Sequences 4. Coordinates and graphs	1. Ratio notation 2. Proportional relationships 3. Sequences 4. Coordinates and graphs	1. Ratio notation 2. Proportional relationships 3. Sequences 4. Coordinates and graphs	