Intent for the Year 7 Mathematics Curriculum 2021-2022

All children will experience a well-balanced and comprehensive curriculum that enhances informed, intellectual, developmental and moral character. As a result, this will improve life chances, inter-personal relationships, social mobility and preparedness for employment. Our curriculum will encourage everyone to have a positive impact on society.

Intention:

Students develop knowledge, understanding and skills in all 6 strands of the Mathematics curriculum – number, algebra, proportional reasoning, geometry, probability and statistics, building upon their experience from KS2. All students will develop numeracy skills and be able to apply these to everyday situations and acquire tools to help understand the world around them. They will begin to have an appreciation of the contribution maths makes to the world of work. Through the year students will develop problem solving strategies and enhance their creative thinking skills. They will be encouraged to develop a curiosity and an appreciation of the subject and understand that the study of mathematics is an intellectual endeavour in its own right.

Implementation:

Considering prior learning and stage of development students are taught in three ability pathways - Plus, Core and Star. Maths is delivered in 4 hour long lessons each week. The content for this year group, in all pathways, progresses on from KS2 and each unit provides opportunities to consolidate, retrieve and fill gaps in prior learning as well as introducing new learning. The maths curriculum has a spiral nature where students frequently re-visit and extend learning in all aspect of the curriculum, during the year and across all 5 years at Haygrove.

Curriculum adaptations as a result of the pandemic:

Students will be taught in mixed ability tutor groups for the first week or so to support transition but will then be moved into ability groups based on a short assessment of their skills. The results of the assessment and content from KS2 programmes of study will form the basis of space retrieval starters which will be used to review, revise and practice key skills from year 6 and the current year 7 as the year progresses.

Pathway	Term	Topics and skills:	Key Outcomes:	Character Education:	Assessment:	Vocabulary:	Home-Learning:
Plus	1a	• Integers, powers, roots and prime factors • Simplifying algebraic expressions • Ratio • Construction • Properties of shapes	Consolidate their numerical and mathematical capability from KS2 and extend understanding of the number system and place value.	Through the delivery of our Maths curriculum we endeavour to develop	**Interleaving** every lesson will start with a spaced retrieval starter which aims to identify gaps in knowledge, aid memory retrieval and to close learning gaps.	Tier 3 vocabulary (maths specific vocabulary) is taught in	Students will have a weekly home learning task which will either consolidate or extend current learning, revise prior learning

	1b	• Rounding to decimal places and significant figures • Calculations with decimals • Collecting and representing data • Brackets in algebra • Percentages	Select and use appropriate calculation strategies to solve problems Start to use algebra to generalise arithmetic and express relationships Use language and properties to analyse shape and statistics Begin to reason deductively in geometry Develop problem solving strategies	the following character traits: • Responsible • Curious • Respectful • Honest • Compassionate • Creative • Resilient • Confident • Reflective	**Formative assessment** takes every lesson as part of good quality teaching using a variety of assessment for learning techniques. End of unit questions are used to check understanding and application skills taught. **Summative assessment** - For the first 4 half terms students will have a written assessment covering the content of the preceding half term and will contain interleaving questions on prior learning. There will be an end of year exam which will assess all content and application of learnt maths skills.	each individual unit of work. Tier 2 vocabulary is defined and explained to promote greater understanding of texts used in contextual questions.	(interleaving task) or be a flipped learning task. The home learning task may be a written task or may be a task completed on an online learning platform (e.g. Hegarty maths)
	2a	• Directed numbers • Perimeter and area of polygons and circles • Sequences and nth term rules					
	2b	• Averages • Stem and leaf diagrams • Substitution					
	3a	• Manipulating fractions • Calculations with fractions • Angle rules – parallel lines • Pie charts					
	3b	• Solving linear equations • Surface area and volume of prisms • Probability – single event • Personal Finance					
Core	**1a**	• Integers, powers, roots and prime factors • Simplifying algebraic expressions • Properties of 2D and 3D shapes • Congruency	Consolidate their numerical and mathematical capability from KS2 and extend understanding of the number system and place value. Select and use appropriate calculation strategies to solve problems Start to use algebra to generalise arithmetic	Through the delivery of our Maths curriculum we endeavour to develop the following character traits: • Responsible • Curious • Respectful • Honest • Compassionate	**Interleaving** every lesson will start with a spaced retrieval starter which aims to identify gaps in knowledge, aid memory retrieval and to close learning gaps. **Formative assessment** takes every lesson as part of good quality teaching using a variety of assessment for learning techniques.	Tier 3 vocabulary (maths specific vocabulary) is taught in each individual unit of work. Tier 2 vocabulary is defined and explained to	Students will have a weekly home learning task which will either consolidate or extend current learning, revise prior learning (interleaving task) or be a flipped learning task. The home learning task may be a written task or may be a task
	1b	• Rounding to decimal places • Ordering decimals • Calculations with decimals • Collecting and representing data • Sequences and the nth term					
	2a	• Directed numbers • Perimeter and area of polygons					

	2b	• Averages and range • Substitution • Coordinates and graphs	Use language and properties to analyse shape and statistics Begin to reason deductively in geometry Develop problem solving strategies	• Creative • Resilient • Confident • Reflective	End of unit questions are used to check understanding and application skills taught. **Summative assessment** - For the first 4 half terms students will have a written assessment covering the content of the preceding half term and will contain interleaving questions on prior learning. There will be an end of year exam which will assess all content and application of learnt maths skills.	promote greater understanding of texts used in contextual questions.	completed on an online learning platform (e.g. Hegarty maths)
	3a	• Angle rules – basic • Fractions decimals and percentages • Properties of quadrilaterals					
	3b	• Solving linear equations • Surface area and volume of cuboids • Probability – single event • Personal finance					
Star	**1a**	• Integers, factors, multiples and primes • Simplifying algebraic expressions • Properties of 2D and 3D shapes • Symmetry	Consolidate their numerical and mathematical capability from KS2 and extend understanding of the number system and place value. Select and use appropriate calculation strategies to solve problems Start to use algebra to represent arithmetic Use language and properties to analyse shape Develop problem solving strategies	Through the delivery of our Maths curriculum we endeavour to develop the following character traits: • Responsible • Curious • Respectful • Honest • Compassionate • Creative • Resilient • Confident • Reflective	**Interleaving** every lesson will start with a spaced retrieval starter which aims to identify gaps in knowledge, aid memory retrieval and to close learning gaps. **Formative assessment** takes every lesson as part of good quality teaching using a variety of assessment for learning techniques. End of unit questions are used to check understanding and application skills taught.	Tier 3 vocabulary (maths specific vocabulary) is taught in each individual unit of work. Tier 2 vocabulary is defined and explained to promote greater understanding of texts used	Students will have a weekly home learning task which will either consolidate or extend current learning, revise prior learning (interleaving task) or be a flipped learning task. The home learning task may be a written task or may be a task completed on an online learning
	1b	• Rounding • Ordering decimals • Calculation with decimals • Collecting and representing data • Coordinates in the 4 quadrants					
	2a	• Directed numbers • Perimeter and area of rectangles and compound shapes using rectangles					
	2b	• Calculation • Order of operations • Substitution					

3a	• Types of angles and lines • Angle rules – straight line and around a point • Fraction of amounts • Properties of triangles and quadrilaterals			**Summative assessment** - For the first 4 half terms students will have a written assessment covering the content of the preceding half term and will contain interleaving questions on prior learning. There will be an end of year exam which will assess all content and application of learnt maths skills.	in contextual questions.	platform (e.g. Hegarty maths
3b	• Using word formula • Volume and surface area of cuboids • Probability scale • Personal finance					

Impact:

Students will have consolidated prior learning, closed gaps in lost learning and deepened their knowledge of mathematics. They will have experienced a variety of contexts showing where maths is used in the world around them including the workplace. They will have had the opportunity to apply their skills to both familiar and unfamiliar situations and improved their problem-solving skills.