Hallfield Primary School

Growing, Learning, Achieving Together

Year 6 Maths Curriculum Overview

A Structure for Mathematics

The sequence for teaching builds skills over time with a deep understanding of mathematical concepts that can be applied to a range of concepts. Throughout a lesson, teachers should plan to include opportunities to practice, use and apply, problem solve and reason and explain. As per the Curriculum, Teaching and Learning policy, the teaching of mathematics embeds the principles of mastery and quality first teaching. Teachers use the practices of metacognition and self-regulation as well as managing cognitive load when planning and teaching. The following framework offers practical guidance and should be referred to in planning.

Prior knowledge

Teachers should be clear about the children's prior learning before entering the new teaching unit and how they are building on these to move children forward, as well as introducing new skills and concepts. The overview below shows how in each year group concepts are revisited and built on throughout a year.

Vocabulary

At the beginning of each new unit, children will be introduced to key vocabulary relevant to the unit. Throughout the unit these words will be learned and revisited. The vocabulary progresses throughout the year groups and is revisited within similar units from Year 1-6.

Discover

Within a lesson, a 'Discover Challenge' is introduced to the students linked to the main learning of the lesson. Here the children explore new maths problems and have a chance to tackle a challenge applying the maths knowledge they already know. The teacher encourages any strategies and children should not be afraid to make mistakes as a culture of learning from mistakes is embedded into lessons.

Share

Following on from the Discover, the children and teacher have a chance to share their strategies for how they approached the Discover questions. Often there are multiple solutions- this encourages different ideas, thinking and approaches within the class.

Think together

Next in the 'Think together' section the children and teacher have a go at some similar problems together. The children use what they have learnt to approach new but similar challenges. The main teaching input takes place in this section and the children have a chance to practise methods and strategies using models before doing their independent work.

Independent task

Having received the teaching input, the children progress onto their independent learning. The learning in books is designed to develop fluency of their knowledge and skills. The tasks set follow a pattern of practice to use and apply which aim to develop fluency of a skill involving a range of representations. Having practiced the skill, the following challenges aim to develop problem solving and reasoning skills and develop a deeper understanding of key ideas and concepts.

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End of unit check

Having covered a unit in a block of lessons, the children complete an 'End of Unit' check, which involves a set of questions covering all the knowledge, skills and concepts that have been taught. This is useful for teachers to address any misconceptions and gaps in learning that can be planned for in future lessons.

Term	Mathematical strand	Key coverage
Autumn	Number- place value	Numbers to 1,000,000 Numbers to 10,000,000 Comparing and ordering numbers to 10,000,000 Rounding numbers Negative numbers
	Number- the four operations	Problem solving – using written methods of addition and subtraction Multiplying numbers up to 4 digits by a 1-digit number Multiplying numbers up to 4 digits by a 2-digit number Dividing numbers up to 4 digits by a 2-digit number Dividing numbers up to 4 digits by a 2-digit number Common factors Common multiples Recognising prime numbers up to 100 Squares and cubes Order of operations Brackets Mental calculations (1) Perform mental calculations, including with mixed Reasoning from known
	Number - fractions	Simplifying fractions Fractions on a number line Comparing and ordering fractions Adding and subtracting fractions Multiplying a fraction by a whole number Multiplying a fraction by a fraction Dividing a fraction by a whole number Four rules with fractions Calculating fractions of amounts

	Geometry- position and direction	Plotting coordinates in the first quadrant Plotting coordinates Plotting translations and reflections Reasoning about shapes with coordinates
Spring	Number- fractions, decimals and percentages	Multiplying by 10, 100 and 1,000 Dividing by multiples of 10, 100 and 1,000 Decimals as fractions Fractions as decimals Multiplying decimals Dividing decimals Percentage of Finding missing values Converting fractions to percentages Equivalent fractions, decimals and percentages
	Algebra	Finding a rule Using a rule Formulae Solving equations
	Measurement	Metric measures Converting metric measures Miles and km Imperial measures
	Geometry- properties of shape	Shapes with the same area Area and perimeter Area of a parallelogram Area of a triangle Volume of a cuboid
	Ratio	Ratio Scale drawing Scale factors Similar shapes
Summer	Angles- properties of shapes	Measuring with a protractor Drawing shapes accurately Angles in triangles Angles in polygons Vertically opposite angles Equal distance Parts of a circle Nets
	Statistics	The mean Introducing pie charts Reading and interpreting pie charts Fractions and pie charts Percentages and pie charts Interpreting line graphs Constructing line graphs