Curriculum Leadership – Subject Vision

Subject / Curriculum Area: **Maths**

Vision

Mathematics is essential to everyday life. We would like for all our children, to master the mathematics curriculum, where they acquire a deep, long-term, secure and adaptable understanding of the subject. We want them to become fluent in the fundamentals of mathematics, where they can quickly and accurately recall and apply their knowledge. We want them to be able to reason mathematically, and make connections, explaining their thinking using mathematical language. We want them to experience a sense of awe and wonder as they solve problems for the first time. At Dovers Green, we believe that a high quality mathematics education provides a foundation for understanding the world, gives children an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. Mathematics has its own unique place within our curriculum, and we want to provide the children with powerful ways to describe and investigate our ever changing world.

What does your subject area offer the Dovers children?

The children at Dovers Green are provided with an exciting, creative mathematical curriculum, and are taught to explore and understand important mathematical concepts, in a practical and hands on way. They develop their skills of fluency and problem solving, and are encouraged to explain their thinking and make connections between concepts learnt. Through our mathematical provision, children are given opportunities to make mistakes and take risks, and learn a wide range of mathematical vocabulary.

How does your subject enhance the curriculum?

Maths enhances the whole curriculum, as so many of the skills and knowledge are transferable into other subject areas. Problem solving encourages the children to show initiative in a wide range of contexts, including the new or unusual and gives them confidence to keep trying when tackling difficult situations. Mathematics gives the children the ability to reason, generalise and make sense of solutions and the ability to embrace the value of learning from mistakes and false starts.

What use is it to children later in life?

People use maths every single day! Knowledge of mathematical concepts provides the children with skills, which will be needed to function throughout their lives. Maths helps people to solve problems and persevere when faced with challenges, and being proficient in maths will ultimately provide the children with a wider range of career prospects.

What are the main skills and knowledge (overarching objectives) you want teachers to focus on?

- Fluency – so that children develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reasoning – so that children can follow a line of enquiry and develop an argument, justification or proof using mathematical language.
- Problem Solving – so that children can apply their mathematics to a variety of problems and learning to persevere when seeking a solution.
- Number and Place Value – Counting, Ordering, Recognising, Matching, Writing, Number Patterns, Number Bonds
- Addition and Subtraction, Multiplication and Division
- Fractions of shapes, objects and quantities
- Measurement – length, height, weight, mass, capacity, volume, time, money, temperature
- Geometry – 2D and 3D shapes, symmetry and position and direction
- Statistics – interpret, construct and ask and answer questions about tally charts, block diagrams and simple tables

Intent

- At Dovers Green our intent for mathematics is to teach a rich, balanced and progressive curriculum using maths to reason, problem solve and develop fluent conceptual understanding in each area. Our curriculum allows children to better make sense of the world around them, helping them make links between mathematics and everyday life. Lessons are child-focused and maths is kept fun, active and current.
- Our policies, resources, training and schemes support the vision e.g. White Rose Maths, I See Reasoning and TRG Maths Mastery programme. Teachers are supported and aided in their roles ensuring confidence in the skills and facts they are required to teach. For example, CPD training on the importance of following the CPA approach for achieving mastery. Staff are encouraged to raise any issues they have within mathematics in order to ensure everyone is confident in what they teach. For the last two years, the maths subject leaders have been participating in the Teaching for Mastery Teacher Research Group (TRG). This development opportunity has deepened our own understanding of mastery and it has helped us to identify key processes and resources which really benefit the children's mathematical learning. Dovers Green is well resourced but each year group has an allocated budget and can therefore buy additional mathematical resources which can support the children's learning. This year, the two subject leaders and a year 2 teacher are taking part in the Mastering Number programme, which will support all of our children to develop good number sense, and an improved fluency with calculation.
- The mapping of mathematics across the school shows clear progression in line with age-related expectations. Progression documents have been created to demonstrate how each skill is developed throughout the child's time at Dovers Green. There are end of year statements for each skill including greater depth statements. These progression documents also outline 'Dovers Green' statements. These additional statements have been suggested by the year group leaders and consist of skills which we feel will benefit the child's learning. For example, learning to write numbers correctly in Reception, or doubling to 20 in year one.
- Teachers can use the progression documents to gain a thorough understanding about how individual skills are developed and to help the children make links with previous learning.
- Maths working walls are used in every KS1 classroom to support both the skills being taught each week and recapped from the previous week.
- Key vocabulary is displayed and is taught at the beginning of a new topic. Vocabulary is regularly referred to, to help the children learn key mathematical terms (e.g. addition/ add/ plus/ more than).

How does it cater for PP/SEND and higher attainers?

- Interventions are in place for children who struggle with mathematics such as First Class@Number, Precision Teaching and basic skills booster groups. Children who have a special educational need in mathematics will have targets on their ISP linked with this. They are supported with visual resources, oracy discussions and activities are broken down into manageable tasks. The use of concrete resources on the carpet during an input is consistently provided as a means of support throughout the school.
- Pupil Premium children are closely monitored throughout the school and data is analysed every term. A member of SLT oversees their progress and the support provided for them. Pre-teaching sessions are planned for those children who need it.
- Higher attainers are planned for carefully to ensure that they are suitably challenged. They are also challenged through higher level questioning and encouraging deeper thinking when making mathematical links or when solving problems.

Implementation

We plan our mathematics curriculum using The National Curriculum and the EYFS Framework. Progression grids have been carefully mapped out to show which areas should be taught in each term, in each year group. The progression statements outline how each skill is developed though EYFS and KS1, which allows teachers to recap and make links to previous learning. A report on mathematics across the school is written termly by the subject leaders to monitor progress and mathematics observations review how the subject is being delivered. Maths Subject Leaders regularly review the approaches we are using to teach maths and we use feedback from observations, book looks and pupil voice to create action plans. Teachers are provided with training when new approaches are brought into school, e.g. use of CPA. In EYFS children are given opportunities to develop basic maths skills through continuous provision which is carefully planned for and set up by the teachers. They are also taught in groups by the class teacher. The children in EYFS also develop their maths skills through Big Maths, which involves teaching maths in a fun, engaging and lively way. The progression grid below details when each skill is taught and built on. Within KS1 maths is taught as discrete lessons throughout the week, however maths skills are revisited and consolidated throughout the year in many ways such as mental maths sessions, maths challenges set at the start of the day, within a forest school/PE session and during filler activities such as chanting in multiples of 10 as the children walk to assembly. Opportunities for retrieval are carefully planned for and in year one and year two, we use Flashback 4 questions from White Rose, to continually reinforce different areas of mathematics.

EYFS Maths Progression

Autumn Term Progression				
Getting to Know You	Just Like Me!	It's Me 1 2 3!	Light and Dark	Consolidation
→ Baseline Assessment (RBA) → Opportunities for settling in, introducing the areas of provision and getting to know the children.	→ Match and Sort → Compare Amounts	→ Representing 1 2 & 3 → Comparing 1 2 & 3 → Composition of 1 2 & 3	→ Representing Numbers to 5 → One More and Less	→ Teacher judgement based on assessments
	→ Compare Size, Mass & Capacity → Exploring Pattern	→ Circles and Triangles → Positional Language	→ Shapes with 4 Sides → Time	→ Teacher judgement based on assessments

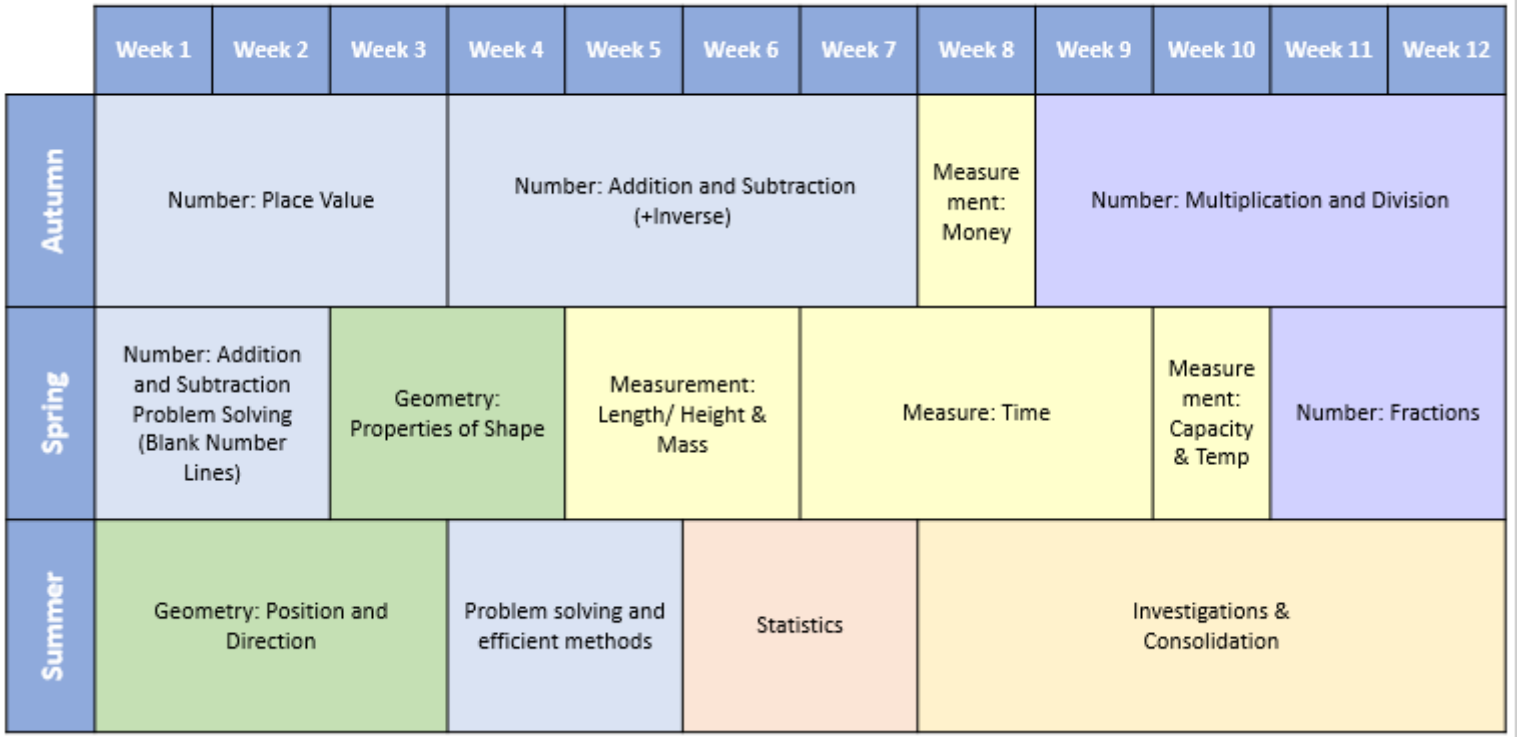
Spring Term Progression			
Alive in 5!	Growing 6,7,8	Building 9 and 10	Consolidation
→ Introducing zero → Comparing numbers to 5 → Composition of 4 & 5	→ 6 7 & 8 → Comparing 2 amounts → Making pairs	→ Counting to 9 & 10 → Comparing numbers to 10 → Bonds to 10	→ Teacher judgement based on assessments
→ Compare Mass (2) → Compare Capacity (2)	→ Length & Height → Time	→ 3D Shapes → Patterns	→ Teacher judgement based on assessments

Summer Term Progression			
To 20 and Beyond	First Then Now	Find My Pattern	On the Move
→ Building Numbers Beyond 10 → Counting Patterns Beyond 10	→ Adding More → Taking Away	→ Doubling, Sharing & Grouping → Even & Odd	→ Deepening Understanding → Patterns and Relationships
→ Spatial Reasoning (1) → Match, Rotate, Manipulate	→ Spatial Reasoning (2) → Compose and Decompose	→ Spatial Reasoning (3) → Visualise and Build	→ Spatial Reasoning (4) → Mapping

Year 1 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value				Number: Addition and Subtraction				Geometry: Shape	Number: Place Value		Number: Addition and subtraction
Spring	Measure: Time		Number: Place Value		Number: Addition & Subtraction	Measurement: Length and Height	Number: Multiplication & Division				Number: Fractions	
Summer	Number: Place Value		Geometry: Position & Direction	Number: Addition, Subtraction, Multiplication & Division			Measure: Money		Measurement: Weight & Volume		Consolidation	

Year 2 – Yearly Overview



	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction (+Inverse)				Measurement: Money	Number: Multiplication and Division			
Spring	Number: Addition and Subtraction Problem Solving (Blank Number Lines)		Geometry: Properties of Shape		Measurement: Length/ Height & Mass		Measure: Time			Measurement: Capacity & Temp	Number: Fractions	
Summer	Geometry: Position and Direction			Problem solving and efficient methods		Statistics		Investigations & Consolidation				

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