Mathematics in the Stanton Bridge Primary Curriculum

Intent

Stanton Bridge Primary School's Curriculum Statement of Intent has been constructed to reflect and incorporate each curriculum subject whilst ensuring that each subsequent content designed meets the intent at every opportunity.

Thus, the context – past, present and future – are factored in. The past – family influences, social experience and how that may contribute to their new experiences. The present – school and expanding social networks, and how this can positively shape their future given the right environmental and social factors. Finally, the future – in search of what awaits them in a fast evolving technological world.

Hence the premise upon which our pupils will grow:

- High ambition.
- Rich in language with a passion for learning.
- Habits of Mind that serves to support achievement across all areas of learning.
- Strong basis for continuous academic growth beyond their primary years.
- Ability to regulate their social, emotional well-being, with knowledge & skills to tap into a bank of resources that enable them to be flexible in their approach to problem-solving.
- Stand shoulder to shoulder and thrive with others in a range of different roles, exhibiting leadership qualities and skills.
- Acknowledge and appreciate their heritage in world where accepting themselves as individuals and celebrating who they are is key in steering a complex and ever-changing environment.
- Having a voice and knowing that they can make a difference to the world in which they live, changing things for the better.
- Positive relationships and social networks from which they can thrive and excel, seeking and working to include others.
- Belonging to the House of Values, focused on developing character, competence and connectedness. (Relationships, Equality, Care, Thinking Flexibly, and Listening)

Character	Our pupil are taught to learning with a sense of **honesty**, coming to know, acknowledge and appreciate both strengths and areas for further growth learning. They are then taught to **respect** the learning ahead of them and to appreciate this opportunity to learn where this is not the case for many across the world.
Competence	Pupils will have high **aspiration** for learning, demonstrate **confidence** in key concepts learned, use subject specific vocabulary, working both **independently** and interconnected dependent on task set.
Connectedness	Pupils will work in **harmony** with others, within familiar and unfamiliar surroundings.

Implementation:

Pedagogy: The understanding of how concepts are taught.

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Pedagogy is the 'method of teaching'. At Stanton Bridge, we use the Barak Rosenshine's Principles of Instruction to establish Effective Teaching Practice. This is further strengthened by the use of Thinking Frames that support in the development of Metacognition. Our school's approach to Teaching and Learning is rooted in the Science of Learning and as such, all staff members are routinely engaged in school improvement activities to develop pedagogy and specific CPD to ensure subject content is expertly delivered. This of course sits alongside individualised mentoring and coaching to support continuous improvements in practice. Responsive coaching also serves to ensure each adult knows the relevant next steps to maximise learning opportunities for all groups of pupils.

Core concepts

Year 1

Core Concept in Mathematics			
Number & P. Value	Addition & Subtraction	Multiplication & Division	Measurement
Geometry	Fractions	Statistics (Years 2- 6)	Algebra (Year 6)

Mathematics Delivery:

Lesson timings	Type of delivery
Maths is taught weekly for 60 mins per lesson. Topics are taught within a time scale of different weeks depending on how many weeks there are each 1/2term.	The lessons are predominantly discrete to enable focus on the core concepts of maths, although vocabulary is continually developed using sentence stems and tiers universally across the subject areas. Each maths lessons compromises of time to consolidate core number facts for the first section before focussing on the new learning taking place in the subsequent section.

Mathematics Planning:

Lesson Structure

Lesson Structure	Notes
1. Starter	Key skills focussed.
2. Review	Pupils review prior learning (previous lesson, previous topic, previous year) in the form of low-stake quizzes.
3. Learning Intention Learning Outcomes Vocabulary	Teacher to share learning intention, learning outcomes and key vocabulary including definitions and images.

4. Main Teach	Didactic teaching of the key concepts.
5. Teacher Model	Teacher to verbalise thinking out loud, with no pupil input.
6. Shared Model	Pupil input using directed questions.
7. Independent	White board work and teachers check through questioning and observation.
8. Main Task	Independent/pair/groups – pupils practice and embed new concept/consolidate through scaffolded tasks designed tasks by their teacher. Teacher facilitates learning through teacher live marking and checks on progress throughout the lesson, intervene and question for understanding, furthering knowledge.
9. Plenary/Reflection	Check in at the end or during the lesson, flexible, as and when best suited.

Annual Organisation

Y1 Mathematics Overview			
Weeks	**Autumn**	**Spring**	**Summer**
1	Assessment/ Number & Place value	Number & Place value	Number & Place value
2	Number & Place value	Addition & Subtraction	Number & Place value
3	Number & Place value	Addition & Subtraction	Addition & Subtraction
4	Addition & Subtraction	Multiplication & Division	Addition & Subtraction
5	Addition & Subtraction	Multiplication & Division	Half Term
6	Multiplication & Division	Fractions – halves/quarters/thirds/equal parts of shapes	Multiplication & Division
7	Multiplication & Division	Fractions – halves/quarters/thirds/equal parts of amounts, objects - **see PKA's 1 & 2**	Multiplication & Division
8	Half Term	Half Term	Fractions - halves/quarters/thirds/equal parts of shapes
9	Measurement – compare & measure (using objects), lengths & heights	Measurement - recap compare & measure (using objects), lengths & heights. - recap compare mass/weight/capacity/volume	Fractions - halves/quarters & 3 quarters/thirds/equal parts of amounts (objects see PKA's 3 & 4)
10	Measurement – compare mass/weight/capacity/volume	Measurement - Time	Measurement – Recap of prior objectives
11	Measurement – recognise coin values	Geometry properties of shape (re-cap 2D/3D)	Geometry properties of shape (Recap all previous teaching – see all PKA's)
12	Geometry – properties of shapes (2D)	Geometry – properties of shape (3D/position & direction - coordinates)	**Assessment Week**
13	Geometry – properties of shape (2D)	**Assessment Week**	Summer Holidays
14	Geometry – position & direction	Go through test papers/PS & Investigation week	
15	**Assessment Week**	Easter Holidays	
16	Go through test papers/PS & Investigation week		
17	Christmas Holidays		
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Y2 Mathematics Overview			
Weeks	**Autumn**	**Spring**	**Summer – SATs Prep**
1	**Assessment/** Number & Place value	Number & Place value	**Arithmetic Re-cap:** ☐ PV, Addition and subtraction ☐ Multiplication and division ☐ Fractions **Reasoning:** Application of knowledge of all topics.
2	Number & Place value	Addition & Subtraction	
3	Number & Place value	Addition & Subtraction	
4	Addition & Subtraction	Multiplication & Division	
5	Addition & Subtraction	Multiplication & Division	Half Term
6	Multiplication & Division	Fractions – Recognise & find thirds and three quarters of a length, shape, objects and quantity	Number – compact method (prep for year 3)
7	Multiplication & Division	Measurement – money /capacity	Measurement - Time
8	Half Term	Half Term	Measurement – Recap of prior objectives Capacity/mass etc
9	Fractions – Recognise & find halves and quarters of a length, shape, objects and quantity	Measurement – capacity/ time	Geometry properties of shape (Recap all previous teaching – see all PKA's/testbase)
10	Fractions - Recognise & find thirds and three quarters of a length, shape, objects and quantity	Geometry – properties of shape (re-cap 2D & use knowledge to learn about 3D shapes) Position & direction	PS & Investigations
11	Measurement – money	Geometry – properties of shape (3D/position & direction - coordinates)	
12	Measurement – length/temperature	Statistics	**Assessment Week**
13	Measurement - time	**Assessment Week**	Summer Holidays
14	Geometry – properties of shapes (2D)	Go through test papers/PS & Investigation week	
15	**Assessment Week**	Easter Holidays	
16	Go through test papers/PS & Investigation week		
17	Christmas Holidays		
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Y3 Mathematics Overview			
Weeks	**Autumn**	**Spring**	**Summer**
1	Assessment/ Number & Place value	Number & Place value	Number & Place value
2	Number & Place value	Addition & Subtraction	Number & Place value
3	Number & Place value	Addition & Subtraction	Addition & Subtraction
4	Addition & Subtraction	Multiplication & Division	Addition & Subtraction
5	Addition & Subtraction	Multiplication & Division	Half Term
6	Multiplication & Division	Fractions – halves/quarters/thirds/equal parts of shapes	Multiplication & Division
7	Multiplication & Division	Fractions – halves/quarters/thirds/equal parts of amounts (objects see PKA's 1 & 2)	Multiplication & Division
8	Half Term	Half Term	Fractions - halves/quarters/thirds/equal parts of shapes
9	Fractions – recognise and use : - unit and non unit fractions -diagrams equivalent fractions	Measurement - recap compare & measure (using objects), lengths & heights. - Introduce mass/weight	Fractions - halves/quarters & 3 quarters/thirds/equal parts of amounts (objects see PKA's 3 & 4)
10	Fractions – - add and subtract fractions with same denominator - compare and order unit fractions and fractions with same denominator	Measurement - Time	Measurement – Recap of prior objectives & capacity/volume
11	Measurement – measure, compare, add and subtract, lengths. Measure & Calculate perimeter.	Geometry properties of shape (re-cap 2D/3D)	Geometry properties of shape (Recap all previous teaching – see all PKA's)
12	Measurement – add and subtract money	Geometry – properties of shape (3D/position & direction - coordinates)	**Assessment Week**
13	Measurement – tell and write times from an analogue clock Inc. roman numerals	**Assessment Week**	Summer Holidays
14	Geometry – draw 2D shapes and make 3D shapes	Statistics/Go through test papers/PS & Investigation week	
15	**Assessment Week**	Easter Holidays	
16	Statistics/Go through test papers/PS & Investigation week		
17	Christmas Holidays		

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Y4 Mathematics Overview			
Weeks	**Autumn**	**Spring**	**Summer**
1	Assessment/ Number & Place value	Number & Place value	Number & Place Value
2	Number & Place value	Addition & Subtraction	Addition & Subtraction
3	Addition & Subtraction	Addition & Subtraction	Multiplication & Division
4	Addition & Subtraction	Multiplication & Division	Fractions & Decimals
5	Multiplication & Division	Multiplication & Division	Fractions & Decimals
6	Multiplication & Division	Multiplication & Division	Half Term
7	Multiplication & Division	Fractions & Decimals	
	Half Term	Half Term	
1	Measurement – Length & Perimeter	Fractions & Decimals	Measurement - Money
2	Measurement - Area	Measurement – Length & Perimeter	Measurement - Time
3	Measurement - Money	Measurement – Money & Time	Geometry – Shape & Coordinates
4	Geometry - Angles	Geometry – Angles & Shape	Geometry – Shape & Coordinates
5		**Assessment Week (Maths to be taught in the afternoon)**	**Assessment Week (Maths to be taught in the afternoon)**
6	**Assessment Week (Maths to be taught in the afternoon)**		
7		Easter Holidays	
	Christmas Holidays		Summer Holidays

Y5 Mathematics Overview			
Weeks	**Autumn**	**Spring**	**Summer**
1	Number & PV	Number & PV	Number & PV
2	Number & PV	Number & PV	Addition & Subtraction
3	Addition & Subtraction	Addition & Subtraction	Multiplication & Division
4	Addition & Subtraction	Addition & Subtraction	Fractions
5	Multiplication & Division	Multiplication & Division	Fractions

6	Multiplication & Division	Multiplication & Division	Half Term
7	Fractions	Fractions	Measurement
8	Half Term	Half Term	Measurement
9	Fractions	Fractions	Geometry
10	Measurement	Fractions	Geometry
11	Measurement	Measurement	Statistics
12	Measurement	Measurement	**Assessment Week**
13	Geometry	**Assessment Week** Geometry	
14	**Assessment Week** Geometry	Geometry/Statistics	Summer Holidays
15	Geometry/Statistic		
16	Christmas Holidays	Easter Holidays	
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Y6 Mathematics Overview			
Weeks	**Autumn**	**Spring**	**Summer**
1	Assessment/ Number & Place value	Number/PV (if/where needed) Addition & Subtraction	Revision
2	Number & Place value	Multiplication & Division	Revision
3	Number & Place value	Measurement – converting units	Revision
4	Addition & Subtraction	Measurement – Perimeter, area, volume	SATs (10th May 2021)
5	Addition & Subtraction	Geometry – position & direction	Half Term
6	Multiplication & Division	Fractions, decimals & percentages	PS & Investigations on topics that need to be re-covered
7	Multiplication & Division	Fractions, decimals & percentages	
8	Half Term	Half Term	

9	Fractions, decimals & percentages	Ratio & Proportion	
10	Fractions, decimals & percentages	Measurement	
11	Algebra	Geometry	
12	Algebra	Statistics	**Assessment Week**
13	Ratio & Proportion	**Assessment Week**	Summer Holidays
14	Ratio & Proportion	Go through test papers/PS & Investigation week/Algebra	
	Geometry – properties of shapes		
15	**Assessment Week /statistics in pm**	Easter Holidays	
17	Christmas Holidays		
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Impact

The ultimate test of the impact of the curriculum is in whether the students know what you want them to know, and what you think they should know. This has been carefully mapped against the core concepts for computing in the tables on the following pages. To determine this, we check and monitor children's learning, providing teachers and students with information about progress and analysis of deliberate retrieval practice. We need to be able to fluidly use 'checking for understanding' techniques in the moment as well as being able to know what has been learnt and retained over time and the depth of that learning:

- We use checking for understanding techniques through our prior knowledge tests (PKA) to ensure we are aware of all students learning and adapt the pace as necessary.

- Retrieval practice is built in where most impactful to interrupt the forgetting curve and secure constructs in long term memory.

- Depth of knowledge is then assessed through end of unit PKAs, teacher discussion and observation and pupil portfolios on Showbie. Pupils are assessed against core concepts, which is recorded on DC Pro.

Mathematics Specific Impact Measures

- In maths, questioning and practice questions are used frequently as a method of assessing pupils understanding in the shared and modelled.
- During independent practice, questions move through fluency, reasoning and problem-solving phases to check on, and deepen understanding.
- Teachers live mark so they can intervene in a timely manner to address misconception or move learning forward via verbal feedback, when pupils are ready.

Each term pupils also complete a nationally standardised test in maths and results are examined at an individual

level. This further supports staff in identifying any children in need of additional support.

Question-level analysis from these assessments can then guide pupil practice focus in the following term.