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**Maths**



**St Stephen Churchtown Academy**

**2022 - 2023**

**Maths Lead: Mrs A Philp**

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| **Curriculum Overview 2023-2024** | | | | | | |
|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Nursery** | Combine objects- stacking blocks, putting objects inside others. | Take part in finger rhymes with numbers.  React to changes of amount in a group of up to 3 items. | Compare amounts saying ‘lots’, ‘more’ or ‘same’  Develop counting-like behaviour- making sounds, pointing or saying numbers in sequence. | Count in everyday contexts. | Can climb and squeeze in to different spaces.  Can build with a range of resources.  Can complete inset puzzles. | Compare sizes, weights, etc using gesture and language- bigger, little, smaller, high, low, tall, heavy, light.  Can notice patterns and arrange things in patters. |
| Number Rhyme Focus: 2 little dicky birds (up to 2)      Counting principle: Knowing numbers up to 3 in order  Cardinal principle: the number name assigned in a group is the total number of objects.    Extend ABAB pattern | Number Rhyme Focus: The goats came marching (up to 3)    Counting principle: Subitising numbers to 3    Talk about and explore 2D shapes  Master the Curriculum: Matching and Sorting | Number Rhyme Focus: 5 big hippos balancing  Rhyme 2:5 little ducks (back from 5)    Counting principle: Say one item for counting in order up to 5  Cardinal principle:  The abstraction principle: Children understanding that anything can be counted including things that cannot be touched (sounds and movement)    Make comparisons between objects relating to size and length    Create ABAB patterns  Master the Curriculum: It’s Me 1, 2, 3 | Number Rhyme Focus: 5 speckled frogs  Rhyme 2: 5 current buns  Rhyme    Counting principle:  Cardinal principle:    Discuss and explore 3D shapes    Discuss routes and locations using words like ‘in =front of’ and ‘behind’  Master the Curriculum: Alive in 5 | Number Rhyme Focus: One potato (counting up to 7)  Rhyme 2: 5 little monkeys (counting back from 5)    Counting principle: Knowing numbers up to 10 in order  The order irrelevance principle: children understanding that the order we count a group of objects is irrelevant.    Link numerals and amounts. For example, showing the right number of objects to math the numeral up to 5.  Master the Curriculum:  Building 6,7,8 | Number Rhyme Focus: 1,2,3,4,5 once I caught a fish alive (counting to 10)  Rhyme 2: 1 little, 2 little... (counting to 10)    Counting principle: Knowing numbers up to 10 in order    Solve real world mathematical problems with numbers to to 5.  Comparing quantities with language more than and fewer.    Making comparison between weight and capacity. (heavier/lighter/full/empty)  Master the Curriculum: Building 9 and 10 |
| **Reception** | Baseline.  Number (N): Match and sort, compare amounts.  Measure, shape and spatial thinking (MSST): compare size, mass and capacity. Exploring pattern | N: Numbers 1,2,3  Representing, comparing and composition  Representing numbers to 5. One more or less  MSST: Circles and triangles. Positional language. Shapes with 4 sides. Time. | Introducing zero.  Number bonds to 5.  Counting to 10.  Comparing groups to 10. | Comparing two groups to find the whole. Number bonds to 10- ten frame and part, part, whole model. Spatial awareness. 3D and 2D shapes. | Making patterns, simple and complex.  Adding more and taking away. Counting to 20. | Doubling, halving and sharing.  Odds and evens.  Length, height and distance.  Weight and capacity. |
| **Year 1** | Place Value – within 10  (5 weeks)  MNS  Stage 2 book 1 and 2 | Addition and Subtraction- within 10  (5 weeks)  Stage 2 Book 2,3,4,5  Geometry- Shape  (2 week)  MNS  Stage 2 Book 6 and 7 | Place Value- within 20  (2 weeks)  Addition and Subtraction- within 20  (3 weeks)  MNS  Stage 3 Books 1-3. | Place Value- within 50  (1 weeks)  Length and Height  (2 weeks)  Mass and Volume (2 weeks)  MNS- Stage 3 books 4- 7 | Multiplication and division (3 weeks)  Fractions (2 weeks)  Geometry Position and direction (1 week)  MNS Stage 3 books 7-9 | Place Value (within 100)  (2 weeks)  Measure- Money  (2 week)  Time (2 weeks)  Consolidation week  MNS Stage 4 Book 1 |
| **Year 2** | Place value (4 weeks)  Addition (2 weeks)  MNS Stage 5, books 1-5)  Number facts booklets 1 and 2 | Shape (1 week)  Subtraction (2 weeks)  Time (1 week)  Multiplication 3 weeks)  MNS Stage 5, book 6/7  Number facts booklets 3 and 4 | Money (2 weeks)  Division (2 weeks)  Fractions (1 week)  MNS Stage 6, books 1-6.  Number facts booklets 5 and 6 | Length and height (2 weeks)  Place value (1 week)  Addition (2 weeks)  Time (1 week)  Times tables 10 x table | Subtraction (2 weeks)  Fractions (1 week)  Money (1 week)  Mass, capacity and temperature (2 weeks)  Times tables 5x, 2x | Statistic (2 weeks)  Position and direction (2 weeks)  Consolidation/  Problem Solving (3 weeks)  Times tables 2s, mixed |
| **Year 3** | Place Value  (4 weeks)  Addition and Subtraction  (2 weeks)  Number facts booklets  5 and 6, Times tables 2, 5, 10 x | Addition and Subtraction cont  (2 week)  SHape (1 week)  Multiplication and division (4 weeks)  Times tables 4x | Multiplication and division cont (2 weeks)  Length and perimeter (3weeks)  Times tables 8x | Fractions (3 weeks)  Mass and capacity (3 weeks)  Times tables 3x | Fractions (2 weeks)  Money (2 weeks)  Time (2 weeks)  Consolidation week  Times tables 6x | Shape (2 weeks)  Statistics (2 weeks)  Time- (1 week)  Times tables mixed x |
| **Year 3/4** | Place Value (4 weeks)  Addition and Subtraction  (3 weeks)  Times tables 2, 5, 10, 4 x | Area (1 week)  Multiplication and division A (3 weeks)  Times tables 8x, 3x, 6x | Multiplication and division B (3 weeks)  Length and Perimeter (2 weeks)  Times tables 3x, 6x, 9x, 7x | Fractions (4 weeks)  Decimals (3 weeks)  Times tables 7x, 11x | Decimals (2 weeks)  Money (2 weeks)  Time (2 weeks)  Times tables 12x, mixed x | Shape (2 weeks)  Statistics (1 week)  Position and direction (2 weeks)  Times tables mixed x |
| **Year 4/5** | Place value  Addition and subtraction  Place value  Addition and subtraction  Area  Times tables 2, 5, 10, 4 x | Multiplication and division A  Multiplication and division  Fractions  Times tables 8x, 3x, 6x | Multiplication and division B  Length and Perimeter  Multiplication and division  Fractions  Times tables 3x, 6x, 9x, 7x | Fractions  Decimals  Decimals and percentages  Perimeter and area  Statistics  Times tables 7x, 11x | Decimals  Money  Time  Shape  Position and directions  Decimals  Times tables 12x, mixed x | Shape  Statistics  Position and direction  Decimals  Negative numbers  Converting units  Volume  Times tables mixed x |
| **Year 5** | Place Value (3 weeks)  Addition and Subtraction (3 weeks) | Multiplication and division (3 weeks)  Fractions (4 weeks) | Multiplication and division (3 weeks)  Fractions (2 weeks) | Decimals and percentages (3 weeks)  Perimeter and area (2 weeks)  Statistics (1 weeks) | Shape (3weeks)  Position and direction (2 weeks)  Decimals (2 weeks) | Decimals (1 week)  Negative numbers (1 week)  Converting units (2 weeks)  Volume (1 week) |
| **Year 6** | Place Value (2 weeks)  Addition, Subtraction, Multiplication and Division (5 weeks) | Fractions (4 weeks)  Fractions, decimals and percentages (2 weeks) | Decimals (2 weeks)  Converting units (1 week)  Shape (2 weeks) | Area, perimeter and volume (1 weeks)  Ratio and proportion (2 weeks)  Statistics (1 weeks | Algebra (2 weeks)  Position and direction (1week) | Consolidation of key learning, preparation for KS3 and further application of skills. |

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| **Year 2/3/4 times table overview 2023/2024** | | | | | | | | | | | |
| **Autumn 1** | | | | **Spring** | | | | **Summer** | | | |
| **Week** | **Year 2** | **Year 3** | **Year 4** | **Week** | **Year 2** | **Year 3** | **Year 4** | **Week** | **Year 2** | **Year 3** | **Year 4** |
| **1** | **MNS** | **Number facts** | **2/5/10** | **1** | **MNS** | **2x 4x** | **3x6x** | **1** | **5x** | **6x** | **12x** |
| **2** | **MNS** | **Number facts** | **2/5/10** | **2** | **MNS** | **8x** | **3x6x** | **2** | **5x** | **6x** | **12x** |
| **3** | **MNS** | **Number facts** | **2/5/10** | **3** | **MNS** | **8x** | **9x** | **3** | **5x** | **6x** | **12x** |
| **4** | **MNS** | **2/5/10** | **4x** | **4** | **MNS** | **8x** | **9x** | **4** | **5x** | **6x** | **Mixed, Squared** |
| **5** | **MNS** | **2/5/10** | **4x** | **5** | **MNS** | **8x** | **9x** | **5** | **5x** | **6x** | **Mixed** |
| **6** | **MSN** | **2/5/10** | **4x** | **6** | **MNS** | **8x** | **9x** | **6** | **5x** | **6x** | **Mixed** |
| **7** | **MNS** | **4x** | **4/8x** |  |  |  |  |  |  |  |  |
| **8** | **MNS** | **4x** | **8x** | **7** | **10x** | **3x** | **7x** | **7** | **2x** | **Mixed** | **X Check** |
| **9** | **MNS** | **4x** | **8x** | **8** | **10x** | **3x** | **7x** | **8** | **2x** | **Mixed** | **X Check** |
| **10** | **MNS** | **4x** | **8x** | **9** | **10x** | **3x** | **7x** | **9** | **2x** | **Mixed** | **X Check** |
| **11** | **MNS** | **4x** | **3x** | **10** | **10x** | **3x** | **11x** | **10** | **2x** | **Mixed** |  |
| **12** | **MNS** | **4x** | **3x** | **11** | **10x** | **3x** | **11x** | **11** | **2x** | **Review** |  |
| **13** | **MNS** | **4x** | **3x 6x** | **12** | **10x** | **3x** | **11x** | **12** | **10,5, 2,** | **Review** |  |
| **14** | **MNS** | **4x** | **3x6x** |  |  |  |  | **13** | **10,5, 2,** |  |  |

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| **Curriculum Area in Action – MATHS** | | |
| **Intent** | | ‘Every pupil matters; every moment counts’  Vision: The Mathematics curriculum at St Stephen ensures that our children understand and develop key skills that they will carry on into their everyday lives. The planning is sequenced to ensure prior learning is developed and enhanced by reasoning and problem-solving opportunities. We ensure all our children are fluent with arithmetic knowledge and skills.  We aim to:   * Ensure that every child has confidence in the recall of key number facts and arithmetic procedures, enabling them to access the whole maths curriculum with confidence and capability. * Develop and practise key vocabulary and understanding through reasoning and explanation. * Offer all children opportunities to problem solve and apply mathematical knowledge to the   wider world. |
| **Implementation for Maths** | **Example to demonstrate expectations** | |
|  | At St Stephen, we follow the White Rose schemes of work as a basis for teachers to plan. We use a range of resources to supplement and enhance pupils’ mathematical journey, including Master the Curriculum and the White Rose Resources. Within each mathematical area (building upon prior learning), the children explore and review number facts, learn and apply key vocabulary, develop and extend their reasoning and problem solving skills through small step progressive style questioning and retrieval.  We have a rigorous approach to developing pupils’ arithmetic skills and knowledge and provide dedicated time each day for this. As a school, we have agreed that this is central for developing pupils’ confidence and enjoyment - leading to success for our learners. | |
| Marking expectations | * Daily marking and/or verbal feedback given. * On the spot marking (where possible) to ensure any misconception or errors are addressed. * Whole school marking policy- Learning objectives highlighted (green, dash green, pink) and marked in black. Children complete TIC (Time for Improvement and Challenge) in green pen. | |
| Teaching and Learning expectations | EYFS   * Maths is everywhere within the environment and plays a part in daily routines. * Children are given the opportunity to become familiar with numbers and number resources (e.g. ten frames and number lines) * Songs and rhymes, which count on and back. * Discrete teaching time for all pupils on numbers and shape * Master the Curriculum overview and planning resources are used to support planning and teaching.   KS1 Lesson Structure   * Daily teaching and rehearsal of number facts using Maths Number Sense videos and questions * Whole class teaching input using key images followed by independent practice * Daily incidentals- misconceptions, additional time spent on rehearsal and writing of numbers (Year 1) * Maths Hub Number facts booklets are used, moving on to Maths Hub times table booklets in the second half of the Spring Term, in to the summer term. * A Reasoning and Problem solving floor book is added to daily where a key question is shared with the children and their responses are recorded.   KS2 Lesson Structure   * Daily teaching and rehearsal of arithmetic- ‘I do, We do, You do’ approach * Whole class teaching input using key images and procedures followed by independent practice * Times table teaching (counting stick, songs) followed by Maths Hub booklets (Year 3/4) * Weekly arithmetic test   Whole School   * Maths happens daily * Teachers will follow the school’s calculation policy, which includes agreed images, terminology and procedures * Following of overviews of main teaching strands, key facts and times tables followed * Use of teaching slides which include key vocabulary, sentence stems, arithmetic questions, review of prior learning and main teaching points. * Maths linked within other subjects, demonstrating mathematical understanding in a range of subject areas. * Regular opportunities for AfL through a range of activities * TeachActive is used to enhance mathematical understanding   **We understand all pupils (including those with SEND) benefit hugely from explicit, systematic instruction and systematic rehearsal of key facts and knowledge of procedures.** | |
| Working walls/Displays | * Shared vocabulary and sentence stems * Examples taken from the school calculation policy * Examples of work linked to topic alongside models by the class teacher (WAGOLL) * Images to support learning * Posters to remain on display all year to promote understanding in areas such as time, fractions, shape. * Examples of Concrete, Pictorial, Abstract | |
| Assessment | We use assessment to help pupils embed and use knowledge fluently, to check understanding and to inform teaching.   * Weekly arithmetic papers (KS2) * Reviewing and practising through Maths Number Sense (KS1) * End of term assessments (taken from WRM) * Summative Assessment - EYFS, end of KS1 and the end of KS2 * Year 4 multiplication check * IDL software for children with barriers to learning in maths * Pupil Conferencing * Learning Walk/Lesson Observations * Work Scrutinies- colleague book looks in staff meeting time and whole school book looks carried out by maths lead and a maths partner/advisor and/or SLT. | |
| **Impact** | Our pupils:   * Enjoy mathematics because they have the fundamental skills and knowledge * Are confident in applying their skills to a range of situations, * Achieve well * Take risks, ask questions, enjoy challenge and are confident to make and learn from their mistakes. * Make links between their mathematical learning and the wider curriculum and life outside of the classroom. | |