WREN'S NEST PRIMARY SCHOOL

School Key Policy 2025-2026

Mathematics Policy

September 2025

Document to be read in conjunction with *other key school policies (listed within document)*

Introduction

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject (National Curriculum 2014).

The aims of the 2014 National Curriculum are for our pupils to:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; follow a line of enquiry, conjecture relationships and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems; breaking down problems into simpler steps and persevering to find a solution.

The National Curriculum sets out year-by-year programmes of study for key stages 1 and 2. This ensures continuity and progression in the teaching of mathematics.

The EYFS Statutory Framework 2014 (the pilot scheme for the 2021 update is currently available for schools and will become statutory in 2021) sets standards for the learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development Matters' non statutory guidance. The EYFS Framework in relation to mathematics aims for our pupils to:

- develop and improve their skills in counting
- understand and use numbers
- calculate simple addition and subtraction problems
- describe shape, space and measure

The purpose of mathematics in our school is to:

- develop skills to meet the demands of everyday life – handling money, measurement, organising space, recording and interpreting numerical and graphical data and using ICT. Being numerate will greatly improve the life chances of our children
- allow children to transfer skills acquired in maths to other areas of the curriculum. For example, interpreting data from Science experiments or historical enquiries or measuring accurately in Design Technology
- give the children at Wren's Nest a real life understanding of Mathematics. We want to develop mathematicians who can calculate and have the ability to think 'What is the best way to solve this problem?' and know which strategies to draw upon to do so.
- contribute to a child's intellectual development by providing opportunities to foster problem solving strategies; deductive reasoning, which includes reasoning logically and systematically; creative thinking and reasoning about patterns and generalisations.
- promote the enjoyment of learning for maths. Children need to experience the sense of pleasure that comes from solving a problem or a mathematical puzzle; have their curiosity stimulated by formulating their own questions and investigating mathematical situations; experiment with patterns in numbers and shapes; participate in activities that draw on mathematical skills and concepts and experience moments when they are surprised, delighted or intrigued.

At Wren's Nest we aim to provide a stimulating and exciting learning environment that takes account of different learning styles and uses appropriate resources to maximise teaching & learning.

Breadth of study

Careful planning and preparation ensures that throughout the school children engage in:

- practical activities and games using a variety of resources
- problem solving to challenge thinking
- individual, paired, group and whole class learning and discussions
- purposeful practise where time is given to apply their learning
- open and closed tasks
- a range of methods of calculating e.g. mentally, pencil & paper and using a calculator
- working with computers as a mathematical tool

Through our creative approach to teaching and learning we also seek to explore and utilise further opportunities to use and apply mathematics across all subject areas (Appendix 5 – The NCETM Cross Curricular Links).

Teachers planning and organisation

Long term planning

The National Curriculum for Mathematics 2014, Development Matters and the Early Learning Goals (Number, Shape Space & Measure) provide the long term planning for mathematics taught in the school.

Medium term planning

Years 1-6 use the White Rose Maths Hub schemes of learning as their medium term planning documents (examples in Appendix 1).

These schemes provide teachers with exemplification materials for each of the units taught. Objectives are broken down into fluency, reasoning and problem solving which are key aims of the National Curriculum. They support a mastery approach to teaching and learning and have number and place value as a core, that underpins other areas. Using the schemes ensures teachers provide the opportunity for children to develop a deeper understanding of each unit studied. They support them to work together as a whole group and provide plenty of time to build reasoning and problem solving elements into the curriculum. Each unit of work is planned using targets from the National Curriculum suitably differentiated by the teacher (Appendix 6).

Weekly planning

For daily lessons, teachers adapt the medium term planning so that it is differentiated for the groups that they teach. Targets are set using age related objectives from the National Curriculum that are layered back so each group has challenging work that allows the children to make progress. These are further expanded into measurable steps (success criteria) that will allow the child to succeed in achieving the lesson target.

All classes have a daily mathematics lesson that is between 50-60 minutes in length. In addition to this, Maths Skills lessons have been integrated into the timetable. These additional lessons allow time for the children to consolidate key concepts and apply them. Pre-teaching opportunities are structured around assembly time. This extra session allows teachers to work with small groups of children prior to the mathematics lesson. Formative assessments identify these children as requiring some additional support. The additional time spent with these children will allow them to become 'class experts' for the day, and make good progress during the lesson.

Monday Mathematics include "Multiplication Monday", an opportunity to provide children with targeted work on multiplication facts, the times tables, associated division facts and exploring number patterns in a hands-on and in-depth manner

At Wren's Nest we have adopted a Visual Calculation and Fraction Policy (examples in Appendix 2 and 3). These policies show clear progression and build on skills. Children progress to the next step when the previous skill has been achieved. This ensures there is 'no cap' placed on the children's learning. The policies are used in conjunction with White Rose Medium Term Planning and the White Rose Manipulatives Policy (Appendix 4). The visual policies ensure there is a standard approach across school with the methods being modelled by teachers. The individual policy examples can also be used as an active part of the mathematics working wall which can be found in each classroom. In conjunction with these schemes of work, teachers use resources from Nrich, NCETM, DfE and White Rose premium resources.

Special educational needs & disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's IEP's incorporate suitable objectives from the National Curriculum for Mathematics or Development Matters and teachers plan work to meet the children's needs. Within the daily mathematics lesson teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide

sufficient challenge for children who are 'high achievers'. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability. For our children with more complex needs, there are specific groups within each phase throughout school from EYFS to KS2.

Lessons

In all lessons, learning objectives and success criteria are clearly shared and discussed. The emphasis in lessons is for all children to make progress through interactive and lively teaching which engages all children and takes account of their differing needs. Our aim is for our children to develop fluency and reasoning skills that enable them to confidently solve problems and become resilient.
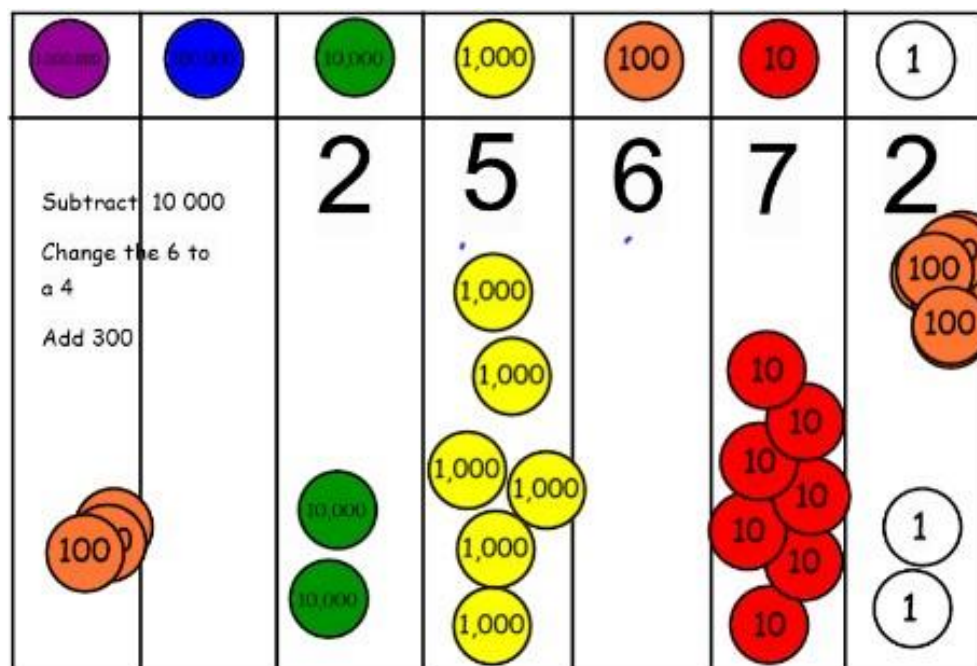
Strategies for teaching

- Having a CPA approach at the heart of every lesson.
- Giving instructions that the children can sequence to logically work through a problem. Instructions should be precise and in small enough steps for the children to follow (this will be dictated by the ability of the children).
- Teacher modelling as 'the expert' using a range of resources and visual displays. 'Thinking Out Loud' to model the thought processes and different methods available to complete the task.
- Demonstrating different strategies, breaking a problem down into small steps and having the ability to work systematically.

- Discussing and questioning as a means to assess the children's understanding and to encourage them to investigate their own lines of enquiry.
- Giving children the opportunity to solve problems 'in many ways' as well as allowing children to consolidate their knowledge.
- Reflecting and evaluating responses – identifying mistakes and using them as positive teaching points.
- Summarising - reviewing mathematics that has been taught enabling children to focus on next steps and understand how their learning links with other areas of the mathematical curriculum.
- Through formative assessment, identifying children who need support or intervention activities as well as those who have the potential to make accelerated progress.

Children's records of work

At Wren's Nest we strive for our children to be 'free thinking' mathematicians. Children are taught a variety of methods for recording their work and with careful teacher modelling they are encouraged and helped to use the most appropriate and efficient method. This can be in the form of a mental calculation, a jotting, a formal written method or a combination of different methods. Whichever method is selected, we want our children to consider whether their solutions are reasonable and relevant to the task set.

Marking

Marking of children's work is essential to ensure they make further progress. Work is marked against the relevant target(s), in line with the school marking policy. Children are encouraged to self-assess their work and make corrections where necessary.

Assessment

Assessment is an integral part of teaching and learning and is a continuous process. Teachers make assessments of children daily through;

- regular marking of work
- analysing errors and picking up on misconceptions
- asking questions and listening to answers
- facilitating and listening to discussions
- making observations
- providing verbal and written feedback to the children as appropriate

These ongoing assessments inform future planning and teaching. Lessons are adapted readily and short term planning is evaluated in light of these assessments.

Assessing a Unit of Work

At the start of each new unit of work, the children are required to complete a White Rose Unit Assessment to the best of their ability. Where possible, the children are to be encouraged to complete the assessment with no support, applying previous learning and adapting it where possible. On completion, the assessments are to be filed for later use.

At the end of the completed unit, the children are to have their initial assessments returned. Using a different coloured pen, the children can evaluate their previous answers and edit them where they think it is needed. On completing this activity, the whole assessment paper is then marked as a group with the teacher modelling good practice, sharing answers and methods used. This process allows both the teacher and the children to assess progress made.

Statutory Assessments

Y6 complete the National tests (SATs) in May each year.

Assessment and Moderation

'Sonar' is used through school to track children's progress. Teachers input data on a regular basis, with half termly reviews. The assessments from this data informs the RAP Review - termly. Pupil Progress meetings take place after each RAP meeting. This enables teachers, working alongside members of the SLT, to identify children who are 'at risk' of not making expected progress and those who can make accelerated progress. Interventions and teaching strategies can be put into place for these children.

Each term, staff meeting time is given to allow teachers, working alongside their year group partners, to standardise children across their group. This ensures consistency in the assessment process and that the data is robust.

On a yearly basis, Wren's Nest collaborates with other schools across the NDLP to moderate assessments. This ensures our judgements are accurate and participating staff have the opportunity to work with teachers from other schools to share good practice.

Resources

Each class has a range of core resources that are age appropriate and support the children's understanding of mathematical concepts. These range from abacuses and ten frames to place value counters and geometry equipment. Additional mathematical equipment and resources are stored centrally.

Displays

There is a mathematical display in each of the classrooms. The content will reflect the current unit of work that is being taught. The aim of the display is to support the children's learning and should consist of: current models being used, generic resources such as number-lines, hundred squares and multiplication grids as well as a means of celebrating their work. It should be regularly updated and referred to during the daily lesson.

Times Tables Rock Stars

Times Tables Rock Stars is used throughout school to support the children in the recall of their multiplication tables. It is an important skill to acquire as rapid recall of important number facts can rely on a good knowledge of the multiplication tables. It is

particularly important for our children in Year 4 with the introduction of the Statutory Multiplication Test. All children in Years 3 and 4 are to use TTRS as an early start to their day. This will be completed on a rota basis, ensuring all children have a balanced early morning curriculum.

Staff CPD

Staff receive regular training through a variety of channels. Our aim is for all staff to be confident, selfreflecting practitioners who can challenge and extend the learning of the children they teach. Regular staff meeting time is dedicated to mathematical CPD. In addition to this, external consultants are used such as Anthony Reddy, Helen Owens (L.A. adviser) as well as representatives from the Local Maths Hubs. This allows Wren's Nest to be well informed and act as quickly as possible on any local or national initiatives that may be introduced and are relevant for Wren's Nest.

Role of the Maths Subject Leader

- To support the Headteacher and SLT in raising the attainment of mathematics across school.
- To lead in the development of mathematics throughout the school.
- To monitor the planning, teaching and learning of mathematics throughout the school.
- To help raise standards in mathematics.
- To provide teachers with support in the teaching of mathematics.
- To provide staff with CPD opportunities in relation to mathematics within the confines of the budget and the School Development Plan.
- To monitor and maintain high quality resources.
- To keep up to date with new developments in the area of mathematics •
  To support staff in making accurate judgements.
- To maintain links with other schools within the network.
- To liaise with external consultants where applicable.

Monitoring information:
The policy will be promoted and implemented throughout the school by all staff. The school will review this policy through the Curriculum and Standards committee annually and assess its implementation and effectiveness.

Links with other policies:
Other important documentation to be read in conjunction with the Mathematics Policy:

- White Rose Medium Term Planning - Appendix 1
- Wren's Nest Visual Calculation Policy - Appendix 2
- Wren's Nest Visual Fraction Policy - Appendix 3
- White Rose Manipulatives Policy - Appendix 4
- The NCETM Cross Curricular Links – Appendix 5
- Setting Targets – Appendix 6
- Wren's Nest Multiplication Tables Policy
- Wren's Nest Marking Policy
- DfE Ready to Progress Criteria
- National Curriculum.

Date of Review: September 2025   **Policy to be reviewed: September 2026**

Appendix 1

	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			Measurement: Length and Perimeter		Number: Multiplication and Division		
Spring	Number: Multiplication and Division			Measurement: Area	Number: Fractions				Number: Decimals			Consolidation
Summer	Number: Decimals		Measurement: Money		Measurement: Time		Statistics	Geometry: Properties of Shape		Geometry: Position and Direction		Consolidation

Year 4 | Autumn Term | Week 1 to 4 – Number: Place Value

Round to the Nearest 100

Notes and Guidance

Children compare rounding to the nearest 10 (looking at the ones column) to rounding to the nearest 100 (looking at the tens column.)

Children use their knowledge of multiples of 100, to understand which two multiples of 100 a number sits between. This will help them to round 3-digit numbers to the nearest 100

Mathematical Talk

What's the same/different about rounding to the nearest 10 and nearest 100? Which column do we need to look at when rounding to the nearest 100?
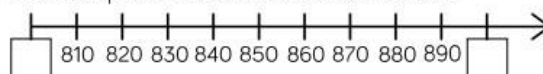
Why do numbers up to 49 round down to the nearest 100 and numbers 50 to 99 round up?
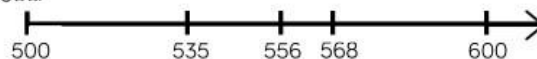
What would 49 round to, to the nearest 100?

Can the answer be 0 when rounding?

Varied Fluency

Which multiples of 100 do the numbers sit between?

☐ 810 820 830 840 850 860 870 880 890 ☐

Say whether each number on the number line is closer to 500 or 600.

500   535   556 568   600

Round 535, 556 and 568 to the nearest 100
Use the stem sentence: _____ rounded to the nearest 100 is _____ .

Complete the table:

Start number	Rounded to the nearest 100
4 0 0 ▷ 5 0 ▷ 7 ▷	
994	
XLV	

18

Appendix 2

Sense of Number
Visual Calculation Policy

Expanded Edition for
Wren's Nest Primary School
October 2014

Graphic Design by Dave Godfrey
Compiled by the Sense of Number Maths Team

For sole use within Wren's Nest Primary School.

'A picture is worth 1000 words!'
www.senseofnumber.co.uk

Wren's Nest Primary School

M7a: Column Multiplication

$$
\begin{array}{r}
3647 \\
\times \quad 4 \\
\hline
14588 \\
2\ 1\ 2
\end{array}
$$

Wren's Nest Primary School

Appendix 3

Sense of Number
Visual Fractions Policy

Wren's Nest Primary School
January 2016

Graphic Design by Dave Godfrey
Compiled by the Sense of Number Maths Team

For sole use within Wren's Nest Primary School.

'A picture is worth 1000 words!'
www.senseofnumber.co.uk

Wren's Nest Primary School

Naming a Fraction

If the numerator is 1, the denominator is 10, then the name of my fraction is one tenth. $\frac{1}{10}$

$\frac{1}{2}$ One half

$\frac{1}{6}$ One sixth

$\frac{3}{4}$ Three quarters

$\frac{5}{5}$ Five fifths - One Whole!

$\frac{7}{3}$ Seven thirds
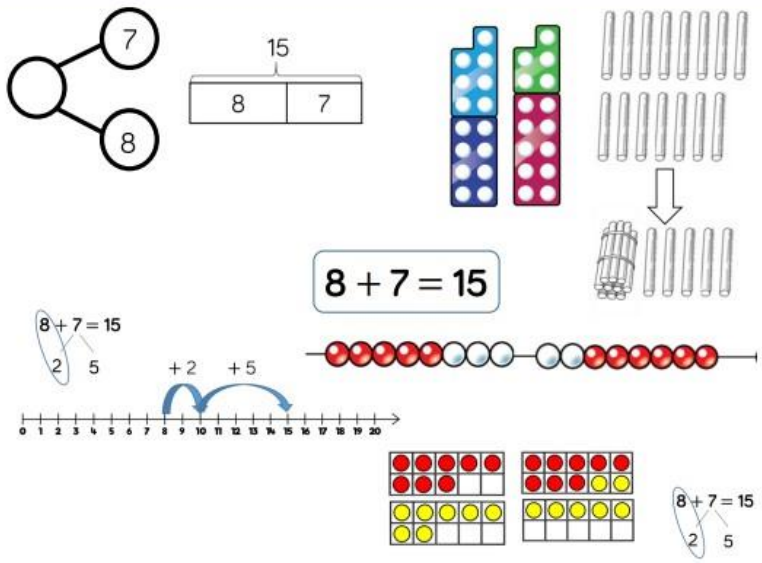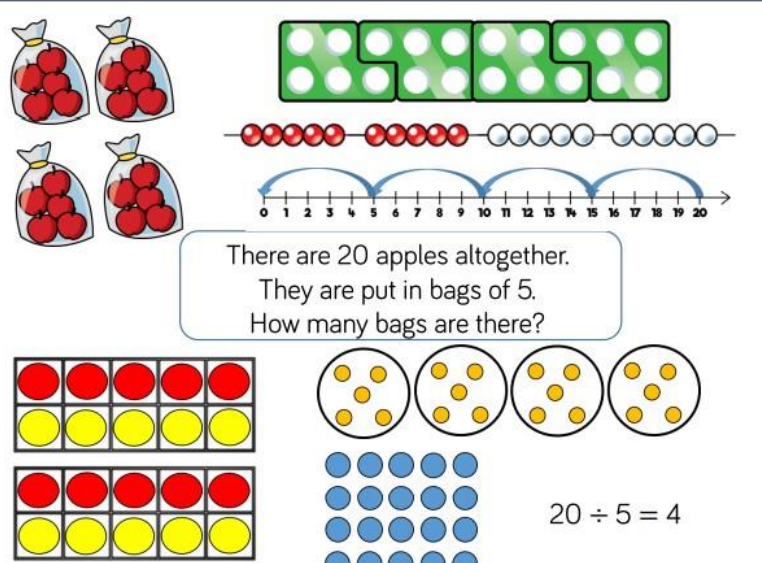
$\frac{27}{32}$ Twenty-seven thirty-seconds

Note: The denominator is said as an ordinal number (except halves and quarters!)

Wren's Nest Primary School

Appendix 4

Skill: Add 1 and 2-digit numbers to 20	Year: 1/2

8 + 7 = 15

When adding one-digit numbers that cross 10, it is important to highlight the importance of ten ones equalling one ten.

Different manipulatives can be used to represent this exchange. Use concrete resources alongside number lines to support children in understanding how to partition their jumps.

Skill: Solve 1-step problems using division (grouping)	Year: 1/2

There are 20 apples altogether.
They are put in bags of 5.
How many bags are there?

20 ÷ 5 = 4

Children solve problems by grouping and counting the number of groups. Grouping encourages children to count in multiples and links to repeated subtraction on a number line. They can use concrete representations in fixed groups such as number shapes which helps to show the link between multiplication and division.

Appendix 5

NATIONAL CURRICULUM RESOURCE TOOL

Materials to support teachers and schools in embedding the National Curriculum

Connections within Mathematics

Making connections to other topics within this year group

Number and place value

Pupils should be taught to:

- count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward
- recognise the place value of each digit in a two-digit number (tens, ones)
- identify, represent and estimate numbers using different representations, including the number line
- compare and order numbers from 0 up to 100; use <, > and = signs
- read and write numbers to at least 100 in numerals and in words
- use place value and number facts to solve problems.

Making connections to this topic in adjacent year groups

Year 1

- compare, describe and solve practical problems for:
  - lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half)
  - mass or weight (e.g. heavy/light, heavier than, lighter than)
  - capacity/volume (full/empty, more than, less than, quarter)
  - time (quicker, slower, earlier, later)

Appendix 6

The four number operations – multiplication and division	
End of Year National Curriculum Objective	**Block objectives working towards the end of year National Curriculum Objective**
Multiplication and Division *Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.* *Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.* *Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.* *Identify common factors, common multiples and prime numbers.* **Objectives written in purple are a recap of the Y5 work – Covid recovery**	• I can use the grid method to calculate a 4-digit number multiplied by a 1-digit number. • I can use column multiplication to multiply a 4-digit number multiplied by a 1-digit number, with exchange in one, then in more than one column. • I can use the grid method to multiply a 2-digit number by a 2-digit number (area model). • I can use column multiplication to multiply a 2-digit number by a 2-digit number. • I can use column multiplication to multiply 3-digit numbers by 2-digit numbers. • I can use column multiplication to multiply 4-digit numbers by 2-digit numbers. • I can use short division to divide a 3-digit number by a 1-digit number. • I can use short division to divide a 4-digit number by a 1-digit number. • I can use short division to divide a 4-digit number by a 1-digit number with remainders, in context. • I can use chunking and the long division method to divide a 3-digit number by a 2-digit number. • I can use chunking and the long division method to divide a 4-digit number by a 2-digit number. • I can recap my knowledge of factors. • Using my knowledge of factors, I can explore the relationship between the dividend and the divisor. • I can use my knowledge of multiples and multiplying and dividing by 10 and 100 to calculate more efficiently. • I can use long division where answers have remainders and, after dividing, check that the remainder is smaller than the divisor. • I am beginning to understand when rounding is appropriate to use for interpreting the remainder and when the context means that it is not applicable. • I know that factors of a number multiply together to give that number, meaning that factors come in pairs. • I understand that factors are the whole numbers that you multiply together to get another whole number (factor x factor = product. • I can find common factors of two numbers. I can show my results using Venn diagrams and tables. • I can find common multiples of numbers, including using numbers outside of those known in times tables facts. • I understand and I can use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • I can use my understanding of prime numbers to work out whether or not numbers up to 100 are prime. • Using primes, I can break a number down into its prime factors. • I can recall what square and cubed numbers are. • I can explore the relationship between squared and cubed numbers and solve problems involving them. • I can sort squared and cubed numbers into different diagrams and look for patterns and relationships. • I can explore general statements regarding square and cube numbers.