



## Numeracy Statement of Intent

The national curriculum for mathematics intends to ensure that all pupils:

1. Become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
2. **Reason** mathematically by following a line of enquiry, **conjecturing** relationships and generalisations, and developing an argument, justification or **proof using mathematical language**.
3. Can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including **breaking down problems into a series of simpler steps** and persevering in seeking solutions.

At Whinstone Primary School we intend to:

1. Ensure our children have access to a high quality maths curriculum that is **challenging, enjoyable** and **builds upon prior knowledge**.
2. Provide our children with a variety of **mathematical opportunities**, which will enable them to **make connections** across a variety of **subjects and situations** - and which will serve them well in **life beyond school**.
3. Ensure children are **confident** mathematicians who are not afraid to **take risks, attempt new methods**, and **justify and reason their decision-making**.
4. Fully develop **independent learners with inquisitive minds** who have secure mathematical foundations and an **interest in self-improvement**.





## Numeracy Implementation

Numeracy is taught as an area of learning in its own right, as well as integrated with other curriculum areas where appropriate. There is also flexibility to seize opportunities to celebrate and acknowledge significant events.

Foundation Stage teach numeracy everyday - discretely - following the Early Learning goals and integrate it across the curriculum throughout the day. KS1 have 5 full sessions per week. KS2 have 5 full sessions per week plus 1 x 1 hour Schofield and Sims session on a Friday.

FS follow the Early Learning Goals; KS1 and KS2 all follow the order of FOCUS MATHS.

| Year 3: Overview of the year                    |  |  |  |  |  |
|---|--|--|--|--|--|
| Autumn 1  | Autumn 2   | Spring 1   | Spring 2   | Summer 1                                       | Summer 2                               |
| 1 Place value                                   | 1 Multiplication and Division<br>Multiplication tables           | 3 Place value<br>Mental addition and subtraction         | 2 Geometry<br>2D and 3D shape, including sorting | 6 Multiplication and Division                  | 4 Place value (using measures)         |
| 2 Place value and mental calculation            | 2 Multiplication and Division<br>Written & mental multiplication | 1 Fractions  | 3 Addition and subtraction (using statistics)    | 4 Addition and subtraction<br>Decimals (money) | 6 Addition and subtraction<br>Problems |
| 1 Measures<br>Perimeter                         | 3 Multiplication and Division<br>Written & mental division       | 2 Fractions & Division                                   | 3 Fractions                                      | 5 Addition & Subtraction (using measures)      | 4 Fractions                            |
| 1 Statistics<br>Mental calculation              | 2 Measures<br>Time   | 3 Measures<br>Length, Mass & Volume                      | 3 Geometry<br>Angles                             | 7 Multiplication and division (using measures) | 6 Measures<br>General                  |
| 1 Addition & Subtraction<br>Written Addition    | 1 Geometry<br>3D shape   | 4 Multiplication and Division                            | 4 Measures<br>Time                               | 5 Measures<br>Time                             | 2 Statistics                           |
| 2 Addition & Subtraction<br>Written Subtraction | Consolidate and Assess   | 5 Multiplication and Division (using measures and money) | Consolidate and Assess                           | 5 Geometry<br>Properties                       | Consolidate and Assess.                |



**Maths Vocabulary for Year 3**

| Number and place value  | Addition and subtraction  | Multiplication and division  | Measure   | Geometry (position and direction)  | Geometry (properties of shape)   | Fractions  | Data/statistics   |
|---|---|--|---|--|--|--|---|
| <ul style="list-style-type: none"><li>Numbers to one thousand</li></ul> | <ul style="list-style-type: none"><li>Column addition and subtraction</li></ul> | <ul style="list-style-type: none"><li>Product</li><li>Multiples of four, eight, fifty and one hundred</li><li>Scale up</li></ul> | <ul style="list-style-type: none"><li>Leap year</li><li>Twelve-hour/twenty-four-hour clock</li><li>Roman numerals I to XIII</li></ul> | <ul style="list-style-type: none"><li>Greater/less than ninety degrees</li><li>Orientation (same orientation, different orientation)</li></ul> | <ul style="list-style-type: none"><li>Horizontal, vertical, perpendicular and parallel lines</li></ul> | <ul style="list-style-type: none"><li>Numerator, denominator</li><li>Unit fraction, non-unit fraction</li><li>Compare and order</li><li>Tenths</li></ul> | <ul style="list-style-type: none"><li>Chart, bar chart, frequency table, Carroll diagram, Venn diagram</li><li>Axis, axes</li><li>Diagram</li></ul> |



# Whinstone Primary School Year 3 Numeracy



## Impact

Teachers will regularly assess and will evaluate what knowledge and skills pupils have gained against expectations.

| 1 Below expectations | 2 Meeting expectations   | 3 Exceeding expectations |
|----------------------|--|--------------------------|
|                      | 4.1.a.1 Count in multiples of 1000; count backwards through zero to include negative numbers   |                          |
|                      | 4.1.a.2 Find 1000 more or less than a given number   |                          |
|                      | 4.1.a.3 Count in multiples of 6, 7, 9 and 25   |                          |
|                      | 4.1.b.1 Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, ones)   |                          |
|                      | 4.1.b.2 Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value                         |                          |
|                      | 4.1.b.3 Identify, represent and estimate numbers to 10 000 using different representations   |                          |
|                      | 4.1.c.1 Order and compare numbers beyond 1000  |                          |
|                      | 4.1.d.1 Solve number and practical problems with number and place value from the Year 4 curriculum, with increasingly large positive numbers                           |                          |
|                      | 4.1.e.1 Round whole numbers to 10,000 to the nearest 10, 100 or 1000   |                          |
|                      | 4.2.a.1 Use the distributive law to multiply two digit numbers by one digit  |                          |
|                      | 4.2.a.2 Understand the inverse relationship between addition and subtraction   |                          |
|                      | 4.2.a.3 Use commutativity in mental calculations   |                          |
|                      | 4.2.a.3 Use factor pairs in mental calculations  |                          |
|                      | 4.2.b.3 Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers |                          |
|                      | 4.2.c.1 Solve calculation problems involving two-step addition and subtraction in context, deciding which operations to use and why                                    |                          |
|                      | 4.2.c.2 Solve calculation problems involving two-step addition and subtraction in context, deciding which methods to use and why                                       |                          |
|                      | 4.2.c.3 Solve problems involving multiplying and adding, including integer scaling and harder correspondence problems such as n objects are connected to m objects     |                          |
|                      | 4.2.d.1 Recognise factor pairs   |                          |
|                      | 4.2.d.2 Recall multiplication and division facts for multiplication tables up to $12 \times 12$  |                          |
|                      | 4.2.e.1 Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate                           |                          |



## Whinstone Primary School Year 3 Numeracy



| 1 Below expectations | 2 Meeting expectations   | 3 Exceeding expectations |
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|                      | 4.2.e.2 Multiply two-digit and three-digit numbers by a one-digit number using formal written layout   |                          |
|                      | 4.2.e.3 Divide two-digit and three-digit numbers by a one-digit number using formal written layout   |                          |
|                      | 4.2.f.1 Check answers to addition and subtraction calculations by estimating and using inverse operations  |                          |
|                      | 4.3.a.3 Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten                         |                          |
|                      | 4.3.a.4 Divide a one- or two-digit numbers by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths (^)                     |                          |
|                      | 4.3.b.1 Recognise and show, using diagrams, families of common equivalent fractions  |                          |
|                      | 4.3.b.3 Recognise and write decimal equivalents of any number of tenths or hundredths and $\frac{1}{4}$ ; $\frac{1}{2}$ ; $\frac{3}{4}$ (^)                        |                          |
|                      | 4.3.c.2 Add and subtract fractions with the same denominator   |                          |
|                      | 4.3.c.4 Rounds decimals with one decimal place to the nearest whole number   |                          |
|                      | 4.3.c.5 Compares numbers with the same number of decimal places up to two decimal places   |                          |
|                      | 4.3.d.1 Solve problems involving harder fractions to calculate and divide quantities, including non-unit fractions where the answer is a whole number (*)          |                          |
|                      | 4.3.d.2 Solve simple measure and money problems involving fractions and decimals to two decimal places   |                          |
|                      | 4.1.1 Read, write and convert time between analogue and digital 12- and 24-hour clocks   |                          |
|                      | 4.1.2 Convert from larger to smaller units of time (*)   |                          |
|                      | 4.1.4 Convert from larger to smaller units of metric measure (*)   |                          |
|                      | 4.2.1 Read time from analogue and digital 12- and 24-hour clocks (^)   |                          |
|                      | 4.2.2 Write time from analogue and digital 12- and 24-hour clocks (^)  |                          |
|                      | 4.2.3 Estimate and compare different measures, including money (^)   |                          |
|                      | 4.2.4 Measure the perimeter of a rectilinear figure (^)  |                          |
|                      | 4.2.5 Find the area of rectilinear shapes by counting squares and relate it to multiplication arrays (+)   |                          |
|                      | 4.3.1 Continue to solve problems relating to the duration of events, involving converting hours to minutes, minutes to seconds, years to months, weeks to days (+) |                          |
|                      | 4.3.2 Calculate with different measures (^)  |                          |
|                      | 4.3.3 Calculate with money in pounds and pence (^)   |                          |
|                      | 4.3.5 Calculate the perimeter of a rectilinear figure (^)  |                          |
|                      | 4.1.1 Complete a simple symmetric figure with respect to a specific line of symmetry   |                          |



## Whinstone Primary School Year 3 Numeracy



| 1 Below expectations | 2 Meeting expectations   | 3 Exceeding expectations |
|----------------------|--|--------------------------|
|                      | 4.1.2 Identify lines of symmetry in 2-D shapes presented in different orientations, including where the line of symmetry does not dissect the original shape (+) |                          |
|                      | 4.2.1 Compare and classify geometric shapes, including different types of quadrilaterals and triangles, based on their properties and sizes (*)                  |                          |
|                      | 4.3.1 Identify acute and obtuse angles (^)   |                          |
|                      | 4.3.2 Compare and order angles up to two right angles by size (^)  |                          |
|                      | 4.4.1 Describe positions on a 2-D grid as coordinates in the first quadrant  |                          |
|                      | 4.4.2 Plot specified points and draw sides to complete a given polygon   |                          |
|                      | 4.5.1 Describe movement between positions as translations of a given unit to the left/right and up/down  |                          |
|                      | 4.1.1 Interpret discrete and continuous data using appropriate graphical methods, including time graphs (^)  |                          |
|                      | 4.2.1 Present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (^)   |                          |
|                      | 4.3.1 Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs (^)                           |                          |
|                      | 4.3.2 Begin to solve problems involving information presented in tables (+)  |                          |