

## MEASUREMENT

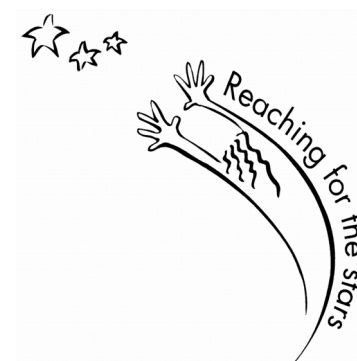
- Convert between different units of measure
  - kilometre and metre  $1.5\text{km} = 1500\text{m}$
  - metres and centimetres  $1.3\text{m} = 130\text{cm}$
  - centimetres and millimetres  $1.4\text{cm} = 14\text{mm}$
  - kilograms and grams  $1.5\text{kg} = 1500\text{g}$
  - litres and millilitres  $1.7\text{L} = 1700\text{ml}$
- Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- Measure and calculate the perimeter of composite rectilinear shapes (a shape made up of two or more rectangles together) in centimetres and metres
- Calculate and compare the area of rectangles (including squares) in square centimetres ( $\text{cm}^2$ ) and square metres ( $\text{m}^2$ )
- Estimate the area of irregular shapes
- Estimate volume [for example, using  $1\text{ cm}^3$  blocks to build cuboids (including cubes)] and capacity [for example, using water]
- Solve problems involving converting between units of time
- Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

## GEOMETRY: Shape

- Identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- Draw given angles, and measure them in degrees ( $^\circ$ )
- Identify:
  - angles at a point and one whole turn (total  $360^\circ$ )
  - angles at a point on a straight line and half a turn (total  $180^\circ$ )
  - other multiples of  $90^\circ$
- Use the properties of rectangles to deduce related facts and find missing lengths and angles
- Distinguish between regular and irregular polygons based on reasoning about equal sides and angles
- Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

## STATISTICS

- Solve comparison, sum and difference problems using information presented in a line graph
- Complete, read and interpret information in tables, including timetables



# St. Andrew's CE Primary School

## A Parent's Guide to Maths in Year Five



This booklet contains the skills the children should know by the end of Year Five. They are the key mathematical skills that children need to know in this year group. You will notice that there are many objectives—so we have highlighted in red the key skills you could practice at home.

The skills are taken from the National Curriculum. If you wish to see the full mathematics curriculum please visit

[www.gov.uk/government/collections/national-curriculum](http://www.gov.uk/government/collections/national-curriculum)

For more information about what is being taught in other year groups at St. Andrew's and to view our Calculation Policy please visit our school website at

[www.standrewsprimaryschoolstockwell.org/numeracy](http://www.standrewsprimaryschoolstockwell.org/numeracy)

## YEAR 5

Children are expected to leave Year 5 confident in working with numbers up to 1 000 000

### NUMBER

- **Read, write, order and compare numbers to at least 1 000 000 (1 million)**
- **Recognise the place value of each digit in numbers up to 1 000 000 (1 million)**
- **Count forwards or backwards adding or taking away 10 each time for any number up to 1 000 000 (1 million)**
- Use negative numbers in context *e.g. temperature*
- Count forwards and backwards with positive and negative whole numbers, including through zero 1, 0, -1, -2, -3.....
- **Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000**
- Solve number problems and practical problems that involve all of the above
- Read Roman numerals to 1000 (M) and recognise years written in Roman numerals

### NUMBER – Addition and Subtraction

- **Add and subtract whole numbers with more than 4 digits, including using the column method**
- **Add and subtract numbers mentally with increasingly large numbers**
- Check answers by estimating and rounding
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

### NUMBER – Multiplication and Division Facts

- **Know all the times tables up to 12 x 12: multiplication facts 6 x 4 = 24 and division facts 24 / 4 = 6 This is a Year 4 requirement but children in Year 5 may still need to practice their times tables.**
- Recognise factors *e.g. factors of 12 are 1, 2, 3, 4, 6 and 12*
- Recognise all factor pairs of a number  $1 \times 12 = 12$ ,  $2 \times 6 = 12$ ,  $3 \times 4 = 12$
- Recognise multiples *e.g. multiples of 12 are 12, 24, 36, 48.....*
- Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
- Establish whether a number up to 100 is prime and recall prime numbers up to 19
- Recognise and use square numbers and cube numbers, and the notation for squared ( $^2$ ) and cubed ( $^3$ ).

### NUMBER – Multiplication and Division Calculation

- **Multiply and divide numbers mentally drawing upon known facts**
- Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method
- Divide numbers up to 4 digits by a one-digit number
- **Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000**
- Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes
- Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
- Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

### NUMBER – Fractions, Decimals and Percentages

- Compare and order fractions whose denominators are all multiples of the same number  $\frac{1}{2}$ ,  $\frac{3}{8}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$
- Identify, name and write equivalent fractions of a given fraction including tenths and hundredths
- Change an improper fraction to a mixed number and vice versa  $\frac{9}{5} = 1 \frac{4}{5}$
- Write mathematical statements  $>1$  as a mixed number (eg  $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$ )
- Add and subtract fractions with the same denominator and denominators that are multiples of the same number  $\frac{3}{8} + \frac{1}{4} = \frac{5}{8}$
- Multiply proper fractions and mixed numbers by whole numbers  $\frac{1}{2} \times 6 = 3$  supported by pictures
- Read and write decimal numbers as fractions *e.g. 0.71 = 71/100*
- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents  $\frac{1}{10} = 0.1$ ,  $\frac{1}{100} = 0.01$ ,  $\frac{1}{1000} = 0.001$
- Round decimals with two decimal places to the nearest whole number and to one decimal place
- Read, write, order and compare numbers with up to three decimal places
- Solve problems involving number up to three decimal places
- Recognise the per cent symbol (%)
- Understand that per cent relates to 'number of parts per hundred',
- Write percentages as a fraction with denominator 100  $50\% = \frac{50}{100}$
- Write percentages as a decimal  $50\% = 0.5$
- Solve problems which require knowing percentage and decimal equivalents of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$  and those fractions with a denominator of a multiple of 10 or 25.