Supporting your child at home

in Maths



A guide for parents

Year 5

This booklet provides a checklist for parents/carers on the year expectations for children at Joseph Turner. The National Curriculum outlines these expectations as being the minimum requirements your child should meet each year. All of the objectives will be focused on throughout the year as part of your child’s lessons. Any extra support you can provide in helping your child to achieve these expectations is greatly valued. If you have any queries regarding these expectations or would like support in knowing how to help your child with these, please see your child’s class teacher.

**Number – Number and Place Value**

• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.

• Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.

• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.

• 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 numbers up to 1000000, negative numbers, rounding or jumping in steps.

• 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 formal written methods

• Add and subtract numbers mentally with increasingly large numbers.

• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

**Number – Multiplication and Division**

• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

• Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers and establish whether a number up to 100 is prime and recall prime numbers up to 19.

• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.

• Multiply and divide numbers mentally drawing upon known facts.

• Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.

• Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.

• Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).

• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.

• Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

**Number – Fractions and decimals**

• Compare and order fractions whose denominators are all multiples of the same number.

• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.

• Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements greater than 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5].

• Add and subtract fractions with the same denominator and denominators that are multiples of the same number.

• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.

• Read and write decimal numbers as fractions [for example, 0.71 = 71/100].

• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.

• 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 (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.

• Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.

**Geometry**

• 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 (°).   
• Identify angles at a point and one whole turn (total 360°) and at a point on a straight line and a turn (total 180°).

• Identify other multiples of 90°.

• 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.

**Measurement**

• Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).

• 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 in centimetres and metres.

• Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.

• Estimate volume [for example, using 1 cm3 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.

**Statistics**

• Solve comparison, sum and difference problems using information presented in a line graph.

• Complete, read and interpret information in tables, including timetables.

**Fun activities to do at home**

**How much?**

♦ While shopping, point out an item costing less than £1.

♦ Ask your child to work out in their head the cost of 3 items.

♦ Ask them to guess first. See how close they come.

♦ If you see any items labelled, for example, ‘2 for £3.50’, ask them to work out the cost of 1 item for you, and to explain how they got the answer.

**Finding areas and perimeters**

*Perimeter = distance around the edge of a shape Area of a rectangle = length x breadth (width)*

♦ Collect 5 or 6 used envelopes of different sizes.

♦ Ask your child to estimate the perimeter of each one to the nearest centimetre. Write the estimate on the back.

♦ Now measure. Write the estimate next to the measurement. How close did you get?

**Guess my number**

♦ Choose a number between 0 and 1 with one decimal place, e.g. 0.6.

♦ Challenge your child to ask you questions to guess your number. You may only answer ‘Yes’ or ‘No’. For example, he could ask questions like ‘Is it less than a half?’

♦ See if he can guess your number in fewer than 5 questions.

♦ Now let your child choose a mystery number for you to guess.

**Times tables**

♦Say together the six times table forwards, then backwards.

♦Ask your child questions, such as: Nine sixes? How many sixes in 42? Six times four? Forty-eight divided by six? Three multiplied by six? Six times what equals sixty?

♦Repeat with the seven, eight and nine times tables.

**Target 1000**

♦ Roll a dice 6 times.

♦ Use the six digits to make two three-digit numbers.

♦ Add the two numbers together.

♦ How close to 1000 can you get?

**Line it up**

You need a ruler marked in centimetres and millimetres.

♦ Use the ruler to draw 10 different straight lines on a piece of paper.

♦ Ask your child to estimate the length of each line and write the estimate on the line.

♦ Now give them the ruler and ask them to measure each line to the nearest millimetre.

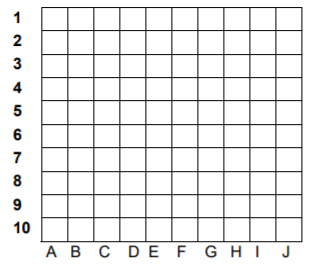
♦ Ask them to write the measurement next to the estimate, and work out the difference.

♦ A difference of 5 millimetres or less scores 10 points. A difference of 1 centimetre or less scores 5 points.

♦ How close to 100 points can she get?

**Battleships**

♦ Draw two grids like this



♦ Choose ships of various lengths (use between 2 and 4 squares)

♦ Hide your grid from your partner

♦ Take it in turns to guess the co-ordinates of your opponents’ ships.

♦ Respond with “hit” or “miss”

♦ The winner is the person to sink all their opponents’ ships