

Year 3 2017-18 Overview Maths

Autumn Term

Half term

Number and Place value (Y 2)

- Recognise the place value of each digit in a 2 digit number.
- Identify, represent and estimate numbers using different representations including number lines.
- Compare numbers using $>$ $<=$
- Read and write numbers up to 100.
- Count in steps of 2, 3, 5, and 10 from any given number forwards and backwards.
- Solve place value problems

Addition and Subtraction (Y 2)

- Recall and use the addition facts with numbers up to 20 and related facts up to 100 - $2 + 8/ 20 + 80$
- Use flexible partitioning mentally and with a number line to:
 - Add a 2 digit number and 1's
 - Add a 2 digit number and 10's
 - 2 two digit numbers
 - 3 single digit numbers.
 - Use the bar model to recognise the inverse relationship. Use the inverse to check calculations and missing number problems.
 - Understand that addition is commutative and subtraction is not.
 - Solve problems involving addition and subtraction using concrete objects and pictorial representations. Problems may be in a measurement context.

Measurement (Y2/ 3)

- Recognise and use the symbols for pounds £ and pence. Combine amounts to make a particular value.
- Find different amounts of coins that equal the same amount of money.
- Solve simple practical problems involving addition and subtraction of money in the same units (£ or P) and give change. *(Yr2 and 3 the same)*

Fractions Year 2/3 –

- Recognise, find, name and write fractions
- $\frac{1}{3}, \frac{1}{2}, \frac{2}{3}$ of a length, shape and set of objects (using resources)
- Calculate fractions of amounts (using resources and simple bar models. Write simple fractions $\frac{1}{2}$ of 6 = 3 and recognise the equivalence between $\frac{1}{2}$ and $\frac{2}{4}$.
- Recognise, find and calculate simple non-unit fractions of shape, discrete sets of objects.
- Compare and order unit fractions and fractions with the same denominator.

Multiplication and division (Y 2)

- Recall and use the multiplication and division facts for the 2, 5, and 10 multiplication tables, including recognising odd and even numbers. (Use Venn diagrams and carol diagrams in problem solving.)
- Calculate number sentences for multiplication and division (using simple times tables: 2, 5 10, 3, 4) and write number sentences using the \div and \times symbols. Use materials, arrays and **repeated addition/subtraction on a number line** to complete calculations. Introduce the idea of remainders in division.
- Show that multiplication can be done in any order (commutative) and division cannot.
- Solve problems involving multiplication and division using materials, arrays, repeated addition on a number line – demonstrate equivalence between number line and bar model?
- Solve problems in context.

Measures – (Yr 2/3)

- Choose an appropriate standard units to estimate and measure length/ height in any direction (M/cm/ mm); mass (Kg/ g); temperature ($^{\circ}$ C); capacity (L/ ml) using rulers, scales, thermometers and measuring vessels.
 - Compare and order lengths, mass, volume/ capacity and record using $<$ $>$ $=$ in the same unit of measure (Kg to Kg)
 - Add and subtracts units of measure.
 - Measure the perimeter of simple 2D shapes (using squared paper and a ruler to the nearest centimetre.)
- *Embed measures within problem solving contexts for the four operations.***

Spring Term

Half
term

Number and Place Value (Y3)

- Recognise the place value of each digit in a 3 digit number.
- Identify, represent and estimate numbers using different representations.
- Compare and order numbers up to 1000.
- Read and write numbers to 1000 in numerals and words.
- Count from 0 in multiples of 4, 8, 50 and 100.
- Find 0 more or 100 more or less than a given number.
- Solve number problems and practical problems involving these.

Addition and Subtraction (Y3)

- Add and subtract numbers mentally, including:
 - A 3 digit number and 1's, 10's and 100's.
- Add and subtract numbers with up to 3 digits using written method of partitioning for addition and subtraction. (Introducing carrying for addition and exchanging for subtraction.)
- Use the inverse operation to check answers and estimate the answers to a calculation.
- Solve problems, including missing number problems, using number facts, and place value.
- Solve more complex addition and subtraction problems including word problems and use the bar model to represent these.

Multiplication and division (Y3) *(Teach both operations alongside each other)*

- Recall and use the multiplication facts for the 3, 4, and 8 times tables.
- Write and calculate mathematical statements for multiplication and division using the times tables that they know. Including division sentences with remainders.
- Use mental methods (Partitioning) to multiply and divide within known facts. (Teen x one digit.)
- Use a number line to multiply and divide within known facts (teen x 1 digit)
- Use mental methods to multiply and divide numbers by multiples of 10 – $2 \times 3 = 6$, $20 \times 3 = 60$.
- Use a number line to multiply and divide 2 digit x 1 digit numbers.
- Embedded within this journey solve simple problems, including word problems so that pupils can identify which operations to use.

Fractions (Y2/ 3)

- Recognise, find, name and write fractions of a length, shape and set of objects *(using resources.) (Recap if necessary)*
- Add and subtract fractions with the same denominator within 1 whole.
- Recognise and use fractions as numbers: unit fractions and **non-unit fractions** with small denominators. *(Link this to previous learning with shape and discrete sets of objects.)*
- Solve problems that involve all of the above
- Compare and order unit fractions and fractions with the same denominator.
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Summer Term

Half Term

Shape and Space (Y2/3)

- Draw and name 2D shapes (quadrilateral, pentagon etc. Regular/ irregular)
- Recognise angles as a property of shape or a description of turn.
- Identify right angles (including right angles within 2D shapes); know that two right angles make a half turn, 3 makes three quarters of a turn and 4 makes a full turn; identify whether angles are smaller or larger than a right angle.
- Identify horizontal and vertical lines and pairs or parallel and perpendicular lines.
- Make 3D shapes using modelling materials.
- Recognise 3D shapes in different orientations and describe their properties (vertices, edges, faces.)
- Identify 2D shapes on the surface of 3D shapes for example on a cylinder there is a circle and a rectangle.

Multiplication and Division

- Revisit number line methods for multiplication and division taught in spring term if needed. (2 x 1 digit and related division.)
- Solve problems, including missing number problems involving multiplication and division including integer scaling problems and correspondence problems in which n objects are connected to m objects.
- Solve multi-step problems which bring in all four operations and are set within contexts (measure, money etc.)

Measurement (Time) - Set as half term homework

- Estimate and read the time with increasing accuracy (to the nearest minute) using an analogue clock face.
- Record time in terms of seconds, minutes and hours and o' clock; use vocabulary such as am and pm, morning, afternoon, noon and midnight.
- Compare the duration of events, for example to calculate the time taken by a particular event or task.
- Know the number of seconds in a minute and the number of days in each month, year and leap year.
- Tell and write the time from an analogue clock, including using Roman numerals from I to XII, (and 12-hour and 24-hour clocks?)

Fractions (Y2/3)

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and from dividing 1 digit numbers into quantities of 10.
- Recognise, find, name and write fractions of a length, shape and set of objects and amounts (Recap if necessary)
- Recognise and show using diagrams, equivalent fractions with small denominators. $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$; $\frac{1}{3} = \frac{2}{6}$; $\frac{1}{4} = \frac{2}{8}$; $\frac{3}{4} = \frac{6}{8}$; related fifths to tenths.

Statistics (Y3)

- Interpret and present data using bar charts, pictograms and tables (Using scales of 1, 2, 5 10 per cm square)
- Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

Consolidation of objectives where needed.