

Year 2 Yearly Overview

Maths

	Half term 1	Half term 2
Autumn	<p>Number and Place Value</p> <p>Read and write numbers to at least 100 in numerals and in words. To recognise the place value of each digit in a two digit number (tens, ones). Partition two digit numbers into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus. (F) Identify, represent and estimate numbers using different representations including the number line. Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs. Use place value and number facts to solve problems. Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.</p> <p>Addition & Subtraction</p> <p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones a two-digit number and tens, two two-digit numbers and adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. <i>Understand and use different vocabulary related to addition and subtraction (e.g. difference, fewer than, less than, plus, total).</i> <i>Understand and solve 'find the difference' problems.</i></p> <p>What can make this personal to Dovers Green?</p> <p>Active maths- make and compare T & U using real objects Outdoor learning- add/ subtract natural objects in Forest School. Half termly maths investigation</p>	<p>Addition & Subtraction (continued)</p> <p>Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones a two-digit number and tens, two two-digit numbers and adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. <i>Understand and use different vocabulary related to addition and subtraction (e.g. difference, fewer than, less than, plus, total).</i> <i>Understand and solve 'find the difference' problems.</i></p> <p>Shape</p> <p>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid). Compare and sort common 2-D and 3-D shapes and everyday objects. Describe the similarities and differences of 2D and 3D shapes, using their properties (GD).</p> <p>What can make this personal to Dovers Green?</p> <p>Half termly maths investigation Maths investigations - scavenger hunt to search for objects of different shapes, weight investigation using giant scales, use of tape measures/ metre sticks/ trundle wheel for length investigations.</p>

Money

Recognise and use symbols for pounds (£) and pence (p); to combine amounts to make a particular value.

Find different combinations of coins that equal the same amounts of money

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Multiplication & Division

Recall and use multiplication and division facts for the 2, 5 and 10 and 3 multiplication tables, including recognising odd and even numbers.

Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.

Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts. (F)

Use reasoning about numbers and relationships to solve more complex problems and explain their thinking. (F)

Solve unfamiliar word problems that involve more than one step. (F)

To understand and solve 'find the difference' problems.

What can make this personal to Dovers Green?

Set up a shop to practise using coins

Local trip to shops- make the learning real

Addition & Subtraction (Consolidation & introduction of number lines)

To solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods.

To recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.

To add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers

To show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

To recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

To understand and use different vocabulary related to addition and subtraction (e.g. difference, fewer than, less than, plus, total).

Measurement (Capacity/ Temperature)

Choose and use appropriate standard units to estimate and measure volume (ml/L) and temperature (°C) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.

Compare and order volume and temperature and record the results using <, > and =.

Read scales where not all numbers on the scale are given and estimate points in between.

To use reasoning to solve more complex problems and explain their thinking.

Measurement (Length/ Mass)

Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.

Compare and order lengths and mass and record the results using <, > and =.

Read scales where not all numbers on the scale are given and estimate points in between.

To use reasoning to solve more complex problems and explain their thinking.

What can make this personal to Dovers Green?

Outdoor maths - make clocks out of natural resources in the forest school area, use chalk on the playground to sort large scale objects into fractions.

Half termly maths investigation- predict and measure volume of liquid in different containers.

Time

Compare and sequence intervals of time.

Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.

Read the time on a clock to the nearest 15 minutes.

Know the number of seconds in a minute, minutes in an hour, hours in a day, days in a week and days/months in a year.

Read the time on a clock to the nearest 5 minutes. (GD)

Use reasoning about numbers and relationships to solve more complex problems and explain their thinking (GD)

Solve unfamiliar word problems that involve more than one step (GD)

Fractions

Recognise, find, name and write fractions: $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.

Write simple fractions, for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of

$\frac{2}{4}$ and $\frac{1}{2}$.

To explore a wider range of fractions, for example, $\frac{1}{6}$, $\frac{1}{8}$ and equivalent

fractions, for example $\frac{3}{6} = \frac{1}{2}$ (GD)

Use reasoning about fractions and relationships to solve more complex problems and explain their thinking (GD)

Solve unfamiliar word problems that involve more than one step (GD)

What can make this personal to Dovers Green?

Use real life examples eg pizza, cake to make different fractions.

Position & Direction

Order and arrange combinations of mathematical objects in patterns and sequences.

Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarters turns (clockwise and anti-clockwise).

Use reasoning and language related to position and direction (e.g. right angles, clockwise, anti-clockwise) to solve problems and explain their thinking (GD).

Statistics

Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.

Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.

Ask and answer questions about totalling and comparing categorical data.

Read scales where not all numbers on the scale are given.

Solve unfamiliar word problems that involve more than one step and be able to explain their thinking.

What can make this personal to Dovers Green?

Local trip to explore position and direction- link with geography/ compass directions.

Traffic survey- make bar graph of cars which pass the school in a given time. Link to road safety- cars parked outside the school.

Half termly maths investigation

The development of SMSC and the promotion of British Values within Maths

SMSC

Spiritual

The study of mathematics enables children to make sense of the world around them and we strive to provide opportunities for the children to explore the connections between their numeracy skills and every-day life. Developing deep thinking and an ability to question the way in which the world works promotes their spiritual growth. Children are encouraged to see the sequences, patterns, symmetry and scale both in the man-made and the natural world and to use maths as a tool to explore it more fully.

Moral

The moral development of children is an important thread running through the mathematics curriculum. Children are provided with opportunities to use their maths skills in real life contexts, applying and exploring the skills required in solving various problems. For example, children learn the value of each coin and then use this knowledge to add up the coins required to pay for a given item. All children are made aware of the fact that the choices they make lead to various consequences. They must then make a choice that relates to the result they are looking for. The logical aspect of this relates strongly to the right/wrong responses in maths and challenged further with, 'Sometimes, always, never' statements.

Social

Problem solving skills and teamwork are fundamental to mathematics through creative thinking, discussion, explaining and presenting ideas. Children are always encouraged to explain concepts to each other and support each other in their learning. In this manner, children realise their own strengths and feel a sense of achievement which often boosts confidence. Over time they become more independent and resilient learners.

Cultural

Understanding and appreciating personal influences: taking into account other people's views and understanding how to express own views. Eg. How to explain to someone where they may have gone wrong in a question.

British Values

Democracy; take into account the views of others when working together to solve a problem. Voting when collecting data- statistics.

Rule of Law; undertake safe practices, following class rules during tasks and activities for the benefit of all. Understand the consequences if rules are not followed.

Respect and Tolerance of different faiths; Use maths to learn about different faiths and cultures around the world, e.g. exploring Islamic patterns.

Individual Liberty; children to develop self-knowledge, self-esteem and increase confidence in their own abilities by giving children extensive opportunities to investigate, explore and reason mathematical concepts. Work within boundaries to make safe choices during practical activities.

Mutual Respect: Children to work collaboratively to listen to each other's opinions and to share equipment. Children to discuss different mathematical strategies used to solve a problem and offer help to their peers.