

# Exploring Decimals: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to use decimal notation for tenths and hundredths.	Children will understand the link between tenths and hundredths expressed as both fractions and decimals, and be able to convert from one to the other. They will identify the value of each digit in numbers with two decimal places and put numbers with two decimal places together from their decomposed pieces.	<ul style="list-style-type: none"> <li>• Can the children use decimal notation for tenths and hundredths?</li> <li>• Do they know the value of each digit?</li> <li>• Can they order decimals to two decimal places?</li> </ul>	<ul style="list-style-type: none"> <li>• Slide</li> <li>• Worksheet 1A/1B/1C</li> <li>• Domino Cards</li> <li>• Game Cards 1A/1B</li> <li>• Decimal Bingo sheet (FSD? activity only)</li> <li>• Decimal Bingo Teacher Sheet (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To be able to order and compare numbers with up to two decimal places.	Children will estimate the place of decimals on a number line to show their value, checking their answers. They will then compare numbers with up to two decimal places, using their understanding of place value to explain their reasoning. They will identify numbers that can go between two decimals on a number line and order sets of numbers with up to two decimal places.	<ul style="list-style-type: none"> <li>• Can the children use decimal notation for tenths and hundredths?</li> <li>• Do they know the value of each digit?</li> <li>• Can they order decimals to two decimal places?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Decimal Cards 2A/2B/2C</li> <li>• Worksheet 2A (FSD? activity only)</li> <li>• Beanbags and trundle wheels (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To be able to round decimals to the nearest whole number.	Children will learn how to round numbers with one or two decimal places to the nearest whole number. They will round decimal numbers to the nearest whole number to add totals together to find approximate answers.	<ul style="list-style-type: none"> <li>• Can the children round tenths?</li> <li>• Can they round tenths and hundredths?</li> <li>• Can they round decimals accurately in different contexts?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Mini whiteboards</li> <li>• Worksheet 3A/3B/3C</li> <li>• Challenge Sheet (FSD? activity only)</li> <li>• Challenge Card A/B/C (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to use and understand decimals in real life contexts.	Children will round amounts of money to the nearest whole pound, adding the rounded numbers together to find approximate totals in real-life contexts. Higher-ability children are challenged to calculate actual totals to compare with their approximate answers.	<ul style="list-style-type: none"> <li>• Can the children round small money amounts?</li> <li>• Can they round money amounts?</li> <li>• Can they calculate actual money totals?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Mini whiteboards</li> <li>• Worksheet 4A/4B/4C/4D</li> <li>• Calculators</li> <li>• Shopping catalogues or access to online catalogues (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To be able to round decimals to the nearest tenth.		<ul style="list-style-type: none"> <li>• Can children round numbers with up to two decimal places to the nearest whole number?</li> <li>• Can children round numbers with two decimal places to the nearest tenth?</li> <li>• Can children add numbers with one decimal place?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Game Board 5A/5B/5C</li> <li>• Number Cards 5A/5B/5C</li> <li>• Counters</li> <li>• Challenge Cards (FSD? activity only)</li> <li>• Challenge Answer Cards (FSD? activity only)</li> </ul>

# Calculating Decimals: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to add decimals together to create a whole number.	Children will start by recapping the place value of each digit in numbers with two decimal places. They will then consider what they need to add to decimals with one or two decimal places to make a whole number, using diagrams and number lines to help them if necessary. They will also relate this to money, adding amounts to a given total to create amounts, such as £2.00.	<ul style="list-style-type: none"> <li>• Do children know that fractions and decimals are both ways of expressing part of a whole?</li> <li>• Can children explain what each digit in a number with up to two decimal places represents?</li> <li>• Can children add two decimals together to produce a whole number?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Number Cards 1A/1B/1C</li> <li>• Worksheet 1A/1B (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To be able to read, write and compare numbers with up to three decimal places, and relate these to fractions.	Children will be introduced to thousandths, both in decimal and fraction form. They will write fractions as decimals, and vice versa, as well as writing numbers in digits from a written description. They will then start to compare decimals by looking at the place value of each digit.	<ul style="list-style-type: none"> <li>• Can children recognise the value of each digit in numbers with up to three decimal places?</li> <li>• Can children read and write numbers with up to three decimal places?</li> <li>• Can children compare numbers with up to three decimal places?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 2A/2B/2C</li> <li>• Instruction Card (FSD? activity only)</li> <li>• Number Cards 2A/2B/2C (FSD? activity only)</li> <li>• Game Board (FSD? activity only)</li> <li>• Counters (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To be able to order and compare decimals with up to three decimal places in real-life contexts.	Children will think about some instances in which decimals are used in real-life situations. They will then focus on the weight of different pets, comparing and ordering the weights up to three decimal places. They will start to use mental strategies to solve problems, such as 'Fluffy weighs 3.26 kg. Rufus is 0.12 kg heavier. How heavy is Rufus?'	<ul style="list-style-type: none"> <li>• Can children identify some of the ways in which decimals can be used in real-life contexts?</li> <li>• Can children compare numbers with up to three decimal places?</li> <li>• Can children order numbers with up to three decimal places?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 3A/3B/3C</li> <li>• Animal Cards 3A/3B/3C</li> <li>• Height Cards (FSD? activity only)</li> <li>• Clue Cards (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to add and subtract decimals with up to three decimal places.	Children will explore how they can use column addition and subtraction to add and subtract decimals. They will focus on making sure the place value columns are aligned when numbers are of different lengths (e.g. $3.2 + 4.28$ ). They will use this strategy to solve puzzles and word problems.	<ul style="list-style-type: none"> <li>• Can children add numbers with up to three decimal places?</li> <li>• Can children subtract numbers with up to three decimal places?</li> <li>• Can children solve problems involving numbers with up to three decimal places?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 4A/4B/4C</li> <li>• Number Board 4A/4B/4C (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To be able to add and subtract fractions with the same denominator and denominators that are multiples of the same number.	Children will recognise identical calculations that are expressed in both decimals and fractions. They will use this as the basis to start exploring how only the numerator needs to be added or subtracted in calculations. They will start adding and subtracting fractions, converting tenths, hundredths and thousandths to be common denominators where necessary. They will convert fractions to decimals.	<ul style="list-style-type: none"> <li>• Can children relate numbers with up to three decimal places with their corresponding fractions?</li> <li>• Can children add and subtract fractions with the same denominator?</li> <li>• Can children add and subtract fractions with denominators that are multiples of the same number?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Game Board 5A/5B/5C</li> <li>• Calculation Cards 5A/5B/5C</li> <li>• Target Board 5A/5B (FSD? activity only)</li> <li>• Worksheet 5A (FSD? activity only)</li> </ul>

# Investigating Shapes: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	Use the properties of rectangles to deduce related facts and find missing lengths and angles.	Children will identify common and distinctive properties of a variety of quadrilaterals and use conventional markings to show pairs of parallel lines. They will then use this information to find missing lengths and angles of rectangles and composite rectilinear shapes.	<ul style="list-style-type: none"> <li>Do children know the properties of quadrilaterals, rectangles, squares and oblongs?</li> <li>Can children identify pairs of parallel lines and use their conventional markings?</li> <li>Can children find missing lengths and angles of rectangles?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 1A/1B/1C</li> <li>Protractors</li> <li>Rectangles Challenge Rules (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	Children will look closely at a range of regular and irregular polygons, identifying differences between them. They will then practise measuring angles inside polygons and drawing them accurately. Some children may calculate the inside angles of regular polygons using a formula.	<ul style="list-style-type: none"> <li>Do children know all the properties of regular polygons?</li> <li>Can children use rulers and protractors to measure and check if polygons are regular?</li> <li>Can children make a variety of different regular polygons accurately?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 2A/2B/2C</li> <li>Protractors</li> <li>Make A Tangram (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To identify, measure and draw diagonal lines.	Children will identify perpendicular and diagonal lines around and inside shapes, then either draw, measure and label shapes or investigate how the angles of certain shapes affect how they may be tessellated.	<ul style="list-style-type: none"> <li>Can children explain what perpendicular and diagonal lines are?</li> <li>Can children measure and draw diagonal lines?</li> <li>Can children make conjectures about lines formed between sides?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 3A/3B/3C</li> <li>Pairs of compasses and protractors</li> <li>Diagonal Lines Challenge (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To identify 3-D shapes and explore their properties, including those of their 2-D plane surfaces.	Children will identify the plane surfaces of a range of polyhedrons, then identify, draw or make sets of 2-D shapes which, when put together may form a polyhedron.	<ul style="list-style-type: none"> <li>Can children identify 3-D shapes, including cubes and cuboids, from 2-D representations?</li> <li>Can children explain the differences between cubes and cuboids?</li> <li>Can children visualise and design 3-D shapes?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 4A/4B/4C</li> <li>Constructing 3-D Shapes (FSD? activity only)</li> <li>3-D construction toys such as K'NEX, Meccano or Polydron (FSD? activity only)</li> <li>Regular Polyhedrons (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To identify, visualise and design 3-D shapes.	Children will identify the properties of a range of 3-D shapes with curved surfaces. They will then explore how they may be constructed using nets, and how they may be combined to create composite 3-D models.	<ul style="list-style-type: none"> <li>Can children describe the properties of shapes with curved surfaces?</li> <li>Can children compare shapes with curved surfaces to polyhedrons?</li> <li>Can children combine simple 3-D shapes to make more complex shapes?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheets 5A/5B/5C</li> <li>Cardboard boxes, wooden/plastic 3-D shapes, 3-D construction toys etc. (FSD? activity only)</li> </ul>

# Decimals and Fractions: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to match equivalent decimals and fractions.	Children will start by thinking of different ways of expressing the shaded proportion of a shape using fractions and decimals. They will then go on to recap the value of each digit in numbers with three decimal places, and the difference between proper, improper and mixed number fractions. They are then challenged to find equivalents between decimals and fractions in a variety of forms, and how to convert from one to the other.	<ul style="list-style-type: none"> <li>Do children understand that fractions and decimals are both ways of expressing proportion?</li> <li>Can children match fractions with their decimal equivalents?</li> <li>Can children convert fractions to create equivalent fractions?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 1A</li> <li>Proportion Cards 1A/1B/1C</li> <li>Game Board 1A/1B (FSD? activity only)</li> <li>Game Cards 1A/1B (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To be able to compare and order fractions whose denominators are all multiples of the same number.	Children will recap the difference between a numerator and a denominator before exploring how they can compare and order fractions whose denominators are all multiples of the same number. The process for converting fractions so that they have a common denominator is then used to help children find as many different equivalents for a fraction as they can.	<ul style="list-style-type: none"> <li>Do children know the difference between a numerator and a denominator?</li> <li>Can children compare fractions whose denominators are all multiples of the same number?</li> <li>Can children order fractions whose denominators are all multiples of the same number?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 2A/2B/2C</li> <li>Fraction Cards 2A/2B (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To be able to add and subtract fractions whose denominators are multiples of the same number.	Building on their learning from the previous lesson, children will explore how they can add and subtract fractions whose denominators are all multiples of the same number. They will convert fractions so that they have a common denominator to make addition and subtraction easier. They will also convert any appropriate answers from an improper to a mixed number fraction.	<ul style="list-style-type: none"> <li>Do children understand the difference between a numerator and a denominator?</li> <li>Can children convert fractions whose denominators are all multiples of the same number so that the denominators are common?</li> <li>Can children add and subtract fractions with common denominators?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A</li> <li>Challenge Card 3A/3B/3C</li> <li>Fraction Chains 3A/3B (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to multiply proper fractions by whole numbers.	Children will find out how they can multiply a proper fraction by a whole number, firstly with the assistance of diagrams, then by converting the whole number to a fraction and multiplying the numerator by the numerator and the denominator by the denominator. They can then convert any answers that are improper fractions into mixed number fractions.	<ul style="list-style-type: none"> <li>Can children use diagrams to solve calculations that involve multiplying a fraction by a whole number?</li> <li>Can children solve calculations that involve multiplying a fraction by a whole number without using a diagram to support them?</li> <li>Can children convert an improper fraction to a mixed number fraction?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B/4C</li> <li>Game Cards 4A/4B (FSD? activity only)</li> <li>Game Board (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To be able to multiply proper and mixed number fractions by whole numbers.	Children will recap how to multiply a proper fraction by a whole number before looking at how they can multiply a mixed number fraction by a whole number. They will do this by converting the mixed number into an improper fraction. With increasingly challenging calculations, children can apply this to real-life problems and recap their learning throughout the week.	<ul style="list-style-type: none"> <li>Can children convert between proper, improper and mixed number fractions?</li> <li>Can children multiply proper fractions by whole numbers?</li> <li>Can children multiply mixed number fractions by whole numbers?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 5A/5B/5C</li> <li>Game Board 5A/5B (FSD? activity only)</li> <li>Instruction Card (FSD? activity only)</li> <li>Dice and counters (FSD? activity only)</li> <li>Plenary Question Sheet</li> </ul>

# Let's Calculate : Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to understand and use brackets in calculations involving all four operations.	Children will explore the function of brackets in a calculation and start to solve calculations involving one set of brackets. They will be encouraged to solve such problems mentally wherever possible. They will also read and understand a two-step word problem, expressing the problem as a single calculation involving brackets. They can also explore different ways of writing a calculation where the answer is known.	<ul style="list-style-type: none"> <li>• Can children multiply, divide, add and subtract numbers mentally?</li> <li>• Do children understand the function of brackets within a calculation?</li> <li>• Can children choose the correct order in which to solve calculations involving brackets?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Domino Cards 1A/1B/1C</li> <li>• Challenge Cards 1A/1B (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To understand the function of the equals sign and use this to find multiple ways of solving the same problem.	Children will explore and understand the function of the equals sign in a calculation. They will find multiple ways of solving the same equation, such as $35 \div 5 = 3^2 - 2$ or $35 \div 5 = (40 + 9) \div 7$ . They will also solve missing number problems in equations. Children are encouraged to solve calculations using all four operations, brackets and square numbers.	<ul style="list-style-type: none"> <li>• Do children understand the function of the equals sign within calculations?</li> <li>• Can children find multiple ways of solving the same calculation?</li> <li>• Can children solve missing number problems?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Challenge Cards 2A/2B/2C</li> <li>• Calculation Cards (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To be able to solve problems that involve scaling by simple fractions.	Children will start by answering some quick-fire problems involving all four operations, solving the problems mentally wherever possible. They will then go on to solve a variety of problems that involve scaling by simple fractions, e.g. finding half more or a quarter less than a given amount.	<ul style="list-style-type: none"> <li>• Can children find fractions of numbers?</li> <li>• Can children use mental methods to solve simple problems that involve scaling by simple fractions?</li> <li>• Can children use written methods to solve more challenging problems that involve scaling by simple fractions?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 3A/3B/3C</li> <li>• Game Board 3A/3B (FSD? activity only)</li> <li>• Game Cards 3A/3B (FSD? activity only)</li> <li>• Instruction Card (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to solve word problems involving all four operations.	Children will start by considering the process they need to follow to successfully solve word problems. They will then be asked to solve a variety of word problems, with the focus being on understanding what the question is asking and choosing the correct operation to solve the problem. There is also the option to solve a variety of problems that will require them to understand the vocabulary associated with all four operations.	<ul style="list-style-type: none"> <li>• Can children identify what a question is asking them to work out?</li> <li>• Can children choose an appropriate method to solve a word problem?</li> <li>• Can children check their answers for accuracy?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 4A/4B/4C/4D</li> <li>• Word Problems 4A/4B/4C</li> <li>• Help Card</li> </ul>
<b>Lesson 5</b>	To be able to solve multi-step word problems involving all four operations.	Children are challenged to solve a variety of multi-step problems, thinking about how they can express the working out they need to do in a single calculation involving brackets. They will need to choose which operations are needed and check their answers. There are also some challenging number riddles to solve.	<ul style="list-style-type: none"> <li>• Can children identify what a multi-step word problem is asking them to do?</li> <li>• Can children solve word problems that involve multiple steps?</li> <li>• Can children express their working out as a number sentence?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Word Problem Cards (green, orange and blue)</li> <li>• Worksheet 5A/5B/5C</li> <li>• Riddle Cards 5A/5B (FSD? activity only)</li> </ul>



# Converting Measures: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to use all four operations to solve problems involving measure.	Children will recap the units of measurement your class are already familiar with and reiterate how to convert between different units of measure. They will then be challenged to solve a variety of word problems relating to length, weight and capacity using all four operations, converting answers to a more appropriate unit of measurement if applicable.	<ul style="list-style-type: none"> <li>Do children understand the relationship between various units of measurement?</li> <li>Can children use all four operations to solve problems relating to measure?</li> <li>Can children convert units of measure?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 1A/1B/1C</li> <li>Question Cards 1A/1B (FSD? activity only)</li> <li>Answer Cards 1A/1B (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To be able to solve problems involving scaling.	Children will solve scaling problems involving measures by converting quantities needed in recipes when the number of people a recipe feeds is adjusted. Children will tackle simple doubling and halving problems as well as more challenging scaling calculations.	<ul style="list-style-type: none"> <li>Do children understand what scaling is?</li> <li>Can children solve problems involving scaling?</li> <li>Can children convert units of measure?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Recipe Cards 2A/2B/2C</li> <li>Blank Recipe Cards</li> <li>Tape measures, metre sticks, rulers, trundle wheels, etc. (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To identify and understand imperial units of measure.	Children will identify some common imperial measures for length, weight and capacity, and how they are related to one another (for example, that there are twelve inches in a foot). They then use this information to solve problems involving converting between units of measure.	<ul style="list-style-type: none"> <li>Can children identify common imperial measures relating to length, weight and capacity?</li> <li>Do children understand how various imperial measures are related to each other?</li> <li>Can children convert from one imperial measure to another, such as from feet to inches?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 3A/3B/3C</li> <li>Information Card</li> <li>Fact Cards (FSD? activity only)</li> <li>Challenge Card (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To understand and use equivalences between metric and imperial units of measure.	Children are challenged to use conversions between metric and imperial measures relating to length. Using approximate conversions between inches and centimetres, and miles and kilometres, your class will solve a variety of problems.	<ul style="list-style-type: none"> <li>Do children understand the difference between imperial and metric measurements?</li> <li>Can children identify a variety of imperial measurements and relate these to similar metric measurements?</li> <li>Can children find approximate equivalences between imperial and metric measurements?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 4A/4B/4C</li> <li>Access to online maps</li> <li>Challenge Card (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To understand and use equivalences between metric and imperial units of measure.	Children will use approximate conversions to convert between metric and imperial units of measure for weight and capacity. They will convert recipes with mixed measures into either metric or imperial using approximate equivalences. They can also test approximate equivalences of capacity for themselves as they measure out different amounts of water in both imperial and metric measures.	<ul style="list-style-type: none"> <li>Do children understand the difference between imperial and metric measurements?</li> <li>Can children identify a variety of imperial measurements and relate these to similar metric measurements?</li> <li>Can children find approximate equivalences between imperial and metric measurements?</li> </ul>	<ul style="list-style-type: none"> <li>Slides</li> <li>Worksheet 5A/5B/5C</li> <li>Information Card</li> <li>Capacity Cards (FSD? activity only)</li> <li>Water and measuring jugs (FSD? activity only)</li> </ul>

# Graphs and Diagrams: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to interpret a reading that lies between two unnumbered divisions on a scale.	Children will learn to interpret readings on unnumbered scales. Arrows will point to a point on a scale, challenging children to work out the value of the point, starting with whole numbers (including negative numbers) and extending to more challenging decimals.	<ul style="list-style-type: none"> <li>• Can the children interpret a reading on a scale showing simple whole numbers?</li> <li>• Can they interpret more complex numbers on a scale?</li> <li>• Can they interpret negative numbers and decimals on a scale?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Mini whiteboards</li> <li>• Worksheet 1A/1B/1C</li> </ul>
<b>Lesson 2</b>	To be able to construct and interpret line graphs.	Children will find out what the kind of data that can be presented in line graphs. They will identify the features of line graphs and learn to construct and interpret simple line graphs for themselves.	<ul style="list-style-type: none"> <li>• Can the children draw a line graph with the vertical scale specified?</li> <li>• Can they draw a line graph without support?</li> <li>• Can they draw and interpret line graphs?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 2A/2B/2C</li> <li>• Challenge Cards (FSD? activity only)</li> <li>• Access to internet (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To understand where intermediate points on line graphs have and don't have meaning.	Children will recognise line graphs where the intermediate points have meaning and where they do not. They will read and interpret line graphs where there is meaning between points, and consider possible meanings for unlabelled line graphs.	<ul style="list-style-type: none"> <li>• Do children recognise line graphs where the intermediate points have meaning?</li> <li>• Do children recognise line graphs where the intermediate points do not have meaning?</li> <li>• Can children construct and interpret line graphs?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 3A/3B/3C/3D</li> <li>• Graph paper</li> <li>• Information Sheet (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to construct and interpret a line graph.	Children will interpret information on a line graph before constructing their own line graphs, making decisions about which scale to use and including all other necessary features. Higher-ability children will start to construct graphs with two sets of data.	<ul style="list-style-type: none"> <li>• Can the children draw a line graph with the vertical scale specified?</li> <li>• Can they draw a line graph without support?</li> <li>• Can they draw and interpret line graphs?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 4A/4B/4C</li> <li>• Graph paper</li> </ul>
<b>Lesson 5</b>	To draw and compare two or more sets of data on a single line graph.	Children will explore how multiple sets of data can be expressed in charts and graphs. They will then focus on multiple sets of data being represented by line graphs. They will identify the key features of such graphs and have the chance to read, construct and interpret line graphs with multiple data sets independently.	<ul style="list-style-type: none"> <li>• Can children associate multiple sets of data in a table to that shown in corresponding charts and graphs?</li> <li>• Can children plot two lines on a line graph?</li> <li>• Can children compare multiple data sets on a line graph by asking and answering questions?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 5A/5B/5C/5D</li> <li>• Spreadsheet software (FSD? activity only)</li> </ul>

# Subtraction Methods: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to solve missing number subtraction problems.	Children will recap their understanding of the formal written method for subtraction and the steps to carry out this method for subtraction. They use their understanding to identify mistakes in existing working as well as missing numbers in increasingly difficult calculations.	<ul style="list-style-type: none"> <li>• Can children explain the formal written method of subtraction?</li> <li>• Can children use the formal written method of subtraction?</li> <li>• Are children able to solve missing digit problems for subtraction?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheets 1A/1B/1C</li> <li>• Game Sheet (FSD? activity only)</li> <li>• Game Instructions (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To choose suitable mental and written methods for subtraction.	The children have the chance to share and explore several different methods of calculating a subtraction problem by looking at mental and written methods including: compensation, partitioning, formal written method and number line. They have the opportunity to test out each method and make decisions on the suitability of a written or mental method for different problems and how to spot if a problem suits a particular method.	<ul style="list-style-type: none"> <li>• Can children use mental or formal written methods to solve subtraction problems?</li> <li>• Can children decide which methods are more suitable for a given problem?</li> <li>• Can children use reasoning to explain which method is more suited to a problem?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheets 2A/2B/2C</li> <li>• Challenge Cards (FSD? activity only)</li> <li>• Large paper (sugar paper) (FSD? activity only)</li> <li>• Felt tips (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To use the inverse operation to check an answer.	The children will look at the different ways to check their answers, focusing on using the inverse operation. The children become the teacher and mark the answers of another individual's work as well as using their understanding to solve 'I'm thinking of a number...' puzzles.	<ul style="list-style-type: none"> <li>• Can children identify the inverse operation?</li> <li>• Can children write the inverse calculation?</li> <li>• Can children check answers and correct mistakes?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheets 3A/3B/3C</li> <li>• Domino Cards 3A/3B/3C</li> </ul>
<b>Lesson 4</b>	To solve problems involving multiple subtrahends.	Following on from the previous lessons, the children explore the different methods for subtracting multiple values from a number. They investigate the efficiency for different methods and use what they find to settle on a preferred method for their independent work.	<ul style="list-style-type: none"> <li>• Can children use reasoning to explain their method and reasons why they chose it?</li> <li>• Are children able to solve problems involving more than one subtrahend?</li> <li>• Are children able to solve multi-step problems involving subtraction?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheets 4A/4B/4C</li> <li>• Subtraction Cards (FSD? activity only)</li> <li>• Number Cards (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To solve addition and subtraction word problems using the bar model representation.	This lesson allows the children to expand their use and understanding of bar models to support them when solving word problems. The children use the bar models to show understanding of what the problem is asking them to do, as well as using the models to show their thought processes when working through the problem.	<ul style="list-style-type: none"> <li>• Can children represent a word problem with a bar model?</li> <li>• Can children use bar model representations to choose the appropriate function and method to solve the problem?</li> <li>• Can children solve multi-step word problems based on addition and subtraction?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheets 5A/5B/5C</li> <li>• Number Chase Cards (FSD? activity only)</li> <li>• Number Chase Answer Sheet (FSD? activity only)</li> </ul>



# Solving Multiplication and Division: Maths : Year 5 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To know how to use the short division method	In this first lesson, children are introduced to the formal method of short division. As a class, they will work through several examples where a two-digit number is divided by a one-digit number, moving on to including examples where exchanging is needed and remainders are part of the final answer. In their independent activities, children will practise this skill by solving given number sentences and matching up dividends, divisors and quotients to create correct number sentences. In the alternative activity, they compare the short division method with the chunking method.	<ul style="list-style-type: none"> <li>• Can children explain how to use the short division method?</li> <li>• Can children divide a two-digit number by a one-digit number using the short division method?</li> <li>• Can children solve number sentences using the short division method that involve exchanging and remainders?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 1A/1B/1C</li> <li>• Division Cards (FSD? activity only)</li> <li>• Chunking vs Short Division Game (FSD? activity only)</li> <li>• Thought Bubble Cards (FSD? activity only)</li> </ul>
<b>Lesson 2</b>	To know how to use the short division method for three-digit numbers divided by one-digit numbers	Children will continue to develop their knowledge and understanding of the short method for division by using numbers with larger dividends. They will learn what to do when a number in the dividend is smaller than the divisor, and understand how to solve number sentences that include a zero. Independently, children will check answers and identify errors in given number sentences. In the FSD? activity, children find missing digits in given short division methods. Each digit corresponds to a letter which will spell out the punchline of a joke.	<ul style="list-style-type: none"> <li>• Can children divide a three-digit number by a one-digit number using the short division method?</li> <li>• Can they identify and correct errors in given short division methods?</li> <li>• Can children explain their reasoning clearly?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Quality Control Card</li> <li>• Worksheet 2A/2B/2C</li> <li>• Robotic Jokes Sheet (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To know how to write and interpret remainders	In this lesson, children will focus on the remainder, and what this figure actually means. They will learn that, when solving word problems, sometimes the remainder needs to be used in the answer, and sometimes it does not. As a class they will look at different word problems and discuss how to interpret the remainder in each one. In their independent activities, children will sort and solve a variety of word problems based on interpretation of the remainder.	<ul style="list-style-type: none"> <li>• Do children understand what a remainder is?</li> <li>• Can children write a remainder as a fraction or decimal?</li> <li>• Can children interpret remainders in a given context?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Card Set A/B/C</li> <li>• Worksheet 2A/2B/2C</li> <li>• Build-a-Bot! Game Board (FSD? activity only)</li> <li>• Question Cards (FSD? activity only)</li> <li>• Instructions Cards (FSD? activity only)</li> <li>• Bot Bits (FSD? activity only)</li> <li>• Bot Body Card (FSD? activity only)</li> <li>• Whiteboards, dice (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To know how to interpret and create scaled drawings	Children will use their knowledge and understanding of multiplication and division to scale up and scale down given measurements of different objects. In their independent activities, children will increase and decrease the size of different robot parts. In the alternative activity, they are challenged to see how many 2D shapes they can measure, then scale up or down to fit on their worksheet.	<ul style="list-style-type: none"> <li>• Can children use multiplication to scale up given measurements?</li> <li>• Can children use division to scale down given measurements?</li> <li>• Do children know some of the real-life applications of scaled drawings?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 4A/4B/4C</li> <li>• Robot Card A/B/C</li> <li>• 10mm Squared Paper</li> <li>• Challenge Cards (FSD? activity only)</li> <li>• Challenge Sheet (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To be able to solve problems involving simple rates	In this final lesson, children will learn what a rate is, and how to find the unit rate when comparing two different quantities. As a class, they will use their knowledge and skills of division and multiplication to answer various problems involving rates. Children will continue to apply this skill in their independent activities. In the alternative activity, children compare supermarket offers by finding the unit price of different products, and then working out which is the cheapest shop overall.	<ul style="list-style-type: none"> <li>• Can children find the unit rate when comparing two quantities?</li> <li>• Can children use the unit rate to work out other rates?</li> <li>• Can children explain their reasoning?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 5A/5B/5C</li> <li>• Battle of the Bargains! Sheet (FSD? activity only)</li> <li>• Worksheet 5D (FSD? activity only)</li> </ul>

	Learning Objective	Overview	Assessment Questions	Resources
<b>Lesson 1</b>	To be able to use a calendar to solve problems.	Children will recap their knowledge of the months of the year and how months are split into weeks and days. They will use calendars to answer simple questions before using both calendars and clocks to solve more challenging problems to help them calculate the duration of events in weeks, days and hours, converting answers where necessary.	<ul style="list-style-type: none"> <li>• Do children understand what a calendar is and how they are used?</li> <li>• Can children use a calendar to answer questions?</li> <li>• Can children convert measures of time from days to hours?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 1A/1B/1C/1D</li> <li>• Calendar Sheet</li> </ul>
<b>Lesson 2</b>	To be able to calculate lengths of time.	Children will use their knowledge of years, months and days to work out how long famous people lived for. They will use calendars and calculators to support them, taking leap years into account where necessary. They can also calculate how long they have been alive for in years, months, weeks and days.	<ul style="list-style-type: none"> <li>• Do children understand how passages of time are related to each other?</li> <li>• Can children use their knowledge of years and months to calculate lengths of time?</li> <li>• Can children use a calculator to support their calculations?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Famous People Cards</li> <li>• Challenge Cards 2A/2B/2C/2D</li> <li>• Calendar Card</li> <li>• Leap Year Card</li> <li>• Calculators (FSD? activity only)</li> </ul>
<b>Lesson 3</b>	To be able to solve problems involving converting between units of time.	Children will find out the scientific meaning of 'day' and 'year' as they explore the length of days and years for other planets in Earth days and years. They will convert units of time and use calculators to check and support their calculations.	<ul style="list-style-type: none"> <li>• Do children understand the scientific definition of a day and a year?</li> <li>• Can children convert various units of time?</li> <li>• Can children use a calculator to check and support their calculations?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 3A/3B/3C</li> <li>• Calculators</li> <li>• Planet Data sheet (FSD? activity only)</li> <li>• Question Cards (FSD? activity only)</li> </ul>
<b>Lesson 4</b>	To be able to read and interpret information in timetables.	Children will learn to read and interpret timetables accurately in the context of a cinema timetable. They will use a cinema timetable to work out a variety of problems, including film durations, screening times and travel times, converting units of time where necessary. They can also create their own timetables based on a set of given criteria.	<ul style="list-style-type: none"> <li>• Can children read a timetable accurately?</li> <li>• Can children work out the duration of films from a timetable?</li> <li>• Can children convert units of time to help them solve problems?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 4A/4B/4C</li> <li>• Cinema Timetable 4A/4B</li> <li>• Challenge Sheet (FSD? activity only)</li> </ul>
<b>Lesson 5</b>	To be able to read, complete and interpret information in timetables.	Children will read and interpret bus timetables to answer questions and solve a variety of problems. They will use given facts to fill in missing information on the timetables and use information within timetables to answer questions about the duration of various bus journeys.	<ul style="list-style-type: none"> <li>• Can children read timetables accurately?</li> <li>• Can children fill in missing information on timetable?</li> <li>• Can children interpret information in timetables?</li> </ul>	<ul style="list-style-type: none"> <li>• Slides</li> <li>• Worksheet 5A/5B/5C</li> <li>• Fact Sheet 5A/5B (FSD? activity only)</li> </ul>