A Million Numbers : Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To know what each digit represents in five- and six-digit numbers.	Children will identify the value of each digit in five- and six-digit numbers, extending to look at seven-digit numbers. They will partition and decompose numbers to help them identify the value of each digit. They will match numbers written in words to a numerical figure, and practise writing larger numbers in words.	• Can children recognise place value in numbers up to six digits? • Can children recognise place value in numbers above one million? • Can children write numbers in words?	• Slides • Worksheet 1A/1B/1C/1D • Number Cards 1A/1B/1C • Number Sentence Cards 1A/1B (FSD? activity only)
Lesson 2	To be able to order and compare numbers up to a million.	Children will order and compare numbers with up to seven digits using a variety of real-life contexts, including populations of UK towns and cities. They will use the < and > symbols to compare two or more numbers. They will solve a variety of challenges relating to ordering and comparing numbers.	• Can children compare numbers up to a million? • Can children order numbers up to a million? • Could the children use the < and > signs accurately?	• Slides • Worksheet 2A/2B/2C • Dice • Number Cards • Number and Symbol Cards • Challenge Cards (FSD? activity only)
Lesson 3	To be able to round numbers up to a million to a given degree.	Children will learn how to round numbers to the nearest ten, hundred, thousand, ten thousand and hundred thousand. They will learn to round the same number in different ways for numbers with up to six digits.	• Can children round to the nearest thousand? • Can children round to the nearest ten thousand? • Can children round five- and six-digit numbers?	• Slides • Worksheet 3A/3B • Question and Answer Cards • Quiz Template (FSD? activity only)
Lesson 4	To be able to read Roman numerals to 1000.	Children will identify some ways Roman numerals are used today before recapping how the Roman numeral system works. They will learn to read and write increasingly difficult numbers and use their knowledge to solve a variety of problems.	• Can children read Roman numerals to 100? • Can children read Roman numerals to 500? • Can children read Roman numerals to 1000?	• Slides • Worksheet 4A/4B/4C • Roman Numerals sheet • Domino Cards 4A/4B/4C (FSD? activity only)
Lesson 5	To be able to recognise years written in Roman numerals.	Children will recap how to read Roman numerals to a thousand. They will learn to read years as Roman numerals, identifying the birth year of a variety of famous people or the release year of various famous films.	• Can children read Roman numerals to 1000? • Can children explain some ways in which Roman numerals are used today? • Can children recognise years written as Roman numerals?	• Slides • Worksheet 5A/5B/5C • Famous People Cards • Roman Numeral Help Sheet • Film Year Cards 5A/5B (FSD? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different…?' activity within the lesson plan

What's the Total?: Maths : Year 5 : Autumn Term

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to add numbers mentally and use rounding to estimate answers.	Children will answer a series of quick-fire addition problems as a warm-up before using mental addition (where possible) to work their way through an addition maze. Children are encouraged to use rounding to estimate totals to help them. They can also use these skills to help them add three numbers together to reach a given total.	• Can children recall addition facts mentally? • Can children use rounding to estimate the answers to addition calculations? • Can children add several numbers together using mental methods?	• Slides • Addition Mazes 1A/1B/1C • Number Cards 1A/1B (FSD? activity only) • Challenge Cards 1A/1B (FSD? activity only) • Bingo Game Cards • Bingo Game Questions sheet
Lesson 2	To be able to add more than two numbers together using the decomposition and expanded methods.	Children will start by identifying missing numbers in number chains that increase in steps of powers of ten. They then go on to recap the decomposition and expanded methods of addition, using these methods to add three numbers together.	• Can children count on in steps of powers of ten? • Can children use the decomposition method to add more then two numbers together? • Can children use the expanded method to add more than two numbers together?	• Slides • Question Card 2A/2B/2C • Worksheet 2A or squared paper • True or False Cards 2A/2B (FSD? activity only)
Lesson 3	To be able to use column addition to add several numbers together.	Children will recognise similarities and differences between the expanded and formal column addition methods before recapping in detail how the formal column addition method works. They will use this method to add two or three numbers together in a variety of contexts.	• Can children describe the similarities and differences between the expanded method and formal column addition? • Can children use column addition to add two or more numbers accurately? • Can children use rounding to estimate and check the answer to a calculation?	• Slides • Challenge Card 3A/3B/3C • Worksheet 3A • Question Sheet 3A/3B (FSD? activity only) • Book Page Cards (FSD? activity only)
Lesson 4	To be able to solve missing number addition problems.	Children will start by adding several numbers (all steps of powers of ten) to a given number mentally. They will then go on to recap how the formal column addition method works before solving missing number problems involving column addition. Children will add two or three numbers together from two-digit to four-digit numbers. They can also investigate how to find all possible calculations when inserting four digits into a missing number calculation.	• Can children explain how the formal column addition method works? • Can children solve calculations accurately using the column addition method? • Can children solve missing number problems using column addition?	• Slides • Worksheet 4A/4B/4C/4D/4E • Challenge Card 4A/4B (FSD? activity only)
Lesson 5	To be able to use column addition to solve addition problems.	Children will use column addition to solve problems involving distance. They will look at a distance chart to find the distances between different UK cities or international airports and use this information to calculate the length of different journeys to several places. Children are encouraged to use rounding to check their answers.	• Can children use the column addition method correctly? • Can children use the column addition method to solve addition problems? • Can children check their answers?	• Slides • Worksheet 5A • Journey Cards 5A/5B/5C • Distance Chart 5A/5B/5C/5D • City Cards (FSD? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan

What's the Difference?: Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to use mental methods and number lines to find the difference between two numbers.	Children will start off with some simple mental subtraction problems before exploring how counting up on number lines can help work out the difference between two numbers. They are encouraged to use as few jumps as possible to help develop their mental subtraction skills. They can then investigate finding the smallest and largest differences in sets of numbers, or work out the answers to subtraction questions when the answers are represented as symbols.	• Can children answer simple subtraction problems mentally? • Can children find the difference between two numbers using a number line? • Do children understand the link between addition and subtraction?	• Slides • Challenge Card 1A/1B/1C • Match Me Cards 1A/1B (FSD? activity only)
Lesson 2	To be able to solve subtraction problems mentally using increasingly large numbers.	During the teaching input, symbols are used to represent values. After ensuring they understand how the symbols work, they will then go on to use these symbols to subtract amounts mentally in jumps of 1000, 500, 200, 100, 50, 10 and 1. They are encouraged to solve increasingly tricky problems mentally, picturing a number line to help them if necessary. Their independent learning provides further opportunities to develop these skills.	• Do children have a firm understanding of place value in four- and five-digit numbers? • Can children subtract simple multiples of ten, a hundred or a thousand mentally? • Can children subtract larger numbers mentally, including those with digits in more than one place value column?	• Slides • Challenge Cards 2A/2B/2C • Symbol Key • Letter Value Cards (FSD? activity only) • Phrase Cards (FSD? activity only)
Lesson 3	To be able to use the decomposition method to reinforce the formal column method of subtraction.	Children will recap the decomposition method of subtraction, focussing particularly on what happens when we exchange. Problems are represented visually as well as numerically to support this. They then go on to compare and link the decomposition and formal column subtraction methods. During their independent learning, they will further enforce their understanding of exchanging through investigations or written descriptions.	• Can children solve subtraction calculations using the decomposition method? • Can children solve subtraction calculations using the formal column method? • Can children explain the process of exchanging and use it correctly when solving subtraction calculations?	• Slides • Worksheet 3A/3B/3C/3D • Calculation Cards 3A/3B/3C (FSD? activity only) • Challenge Card (FSD? activity only)
Lesson 4	To be able to use the formal column method to solve subtraction problems.	This lesson starts by considering the methods examined in the earlier lessons, discussing which are easiest and most efficient. The slides then go through some real-life subtraction problems which children are encouraged to solve using formal column subtraction involving numbers up to six digits. They will then either use subtraction to find the difference between the areas of different countries or play a game to support their fluency with column subtraction.	• Can children identify different subtraction methods and discuss their effectiveness? • Can children use the formal column method to solve four-digit calculations? • Can children use the formal column method to solve five-digit calculations?	• Slides • Country Area Cards • Worksheet 4A/4B/4C • Game Board 4A/4B (FSD? activity only) • Calculation Cards 4A/4B (FSD? activity only)
Lesson 5	To be able to use formal column subtraction in the context of money.	Children will start by working out how much money is in two wallets by counting the notes and coins. They are then challenged to find the difference between these two amounts using column subtraction. The slides explain how to use decimals within column subtraction and children are given plenty of opportunities to practise this.	• Can children use the formal column subtraction method? • Do children understand how to use formal column subtraction using decimals in the context of money? • Can children check their work for accuracy?	• Slides • Worksheet 5A/5B/5C/5D • Game Board 5A/5B (FSD? activity only) • Instruction Card 5A/5B (FSD? activity only) • Dice and counters (FSD? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different...?' activity within the lesson plan

Measuring Shapes: Maths : Year 5 : Autumn Term

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to measure and calculate the perimeter of regular and irregular polygons.	Children will identify the perimeters of shapes and objects, then measure the sides of polygons and add them together to find their perimeters.	• Do children understand the term perimeter? • Can children measure regular polygons and calculate the perimeter? • Can children measure and calculate the perimeter of compound shapes?	• Slides • Worksheet 1A/1B/1C • Plain paper • Challenge Cards (FSD? activity only) • Centimetre square paper (FSD? activity only)
Lesson 2	To be able to use the formula for the area of a rectangle to calculate the rectangle's area.	Children will firstly learn how to find the area of rectilinear shapes by counting squares, then learn how to find the area of rectangles using the formula length x width.	• Can children find the area by counting squares? • Can children find the area by using the formula length x width? • Can children find the area of compound shapes?	• Slides • Worksheets 2A/2B/2C/2D • Rulers • Squared paper (FSD? activity only)
Lesson 3	To be able to solve problems involving area and perimeter.	Children will solve problems by finding the area and perimeter of rectilinear shapes. They may also investigate the way in which shapes of with pairs of sides which are factors of the same product will have the same area.	• Can children estimate the area of irregular shapes, explaining their reasoning? • Can children solve real-life problems relating to perimeter and area? • Can children estimate the area of a shape accurately?	• Slides • Worksheets 3A/3B/3C • Challenge Cards • Centimetre-squared paper • Metre sticks (FSD? activity only) • Chalk (FSD? activity only) • Trundle wheels (FSD? activity only)
Lesson 4	To be able to estimate the volume of cuboids.	Children will begin to calculate the volume of cuboids either by constructing cuboids of given dimensions using 1cm³ maths cubes or by visualising the number of 1cm³ cubes required to make a described cuboid.	• Do children know what the term 'volume' means? • Can children make sensible estimates about the volume of a cube or cuboid? • Can children calculate the volume of a cube or cuboid using 1cm3 blocks?	• Slides • Worksheet 4A/4B/4C • 1cm3 blocks • Cuboid Templates (FSD? activity only) • Help Card (FSD? activity only)
Lesson 5	To be able to calculate the volume of a cuboid.	Children will learn to calculate the volume of cuboids using the formula length x width x height. They may then practise this, either by calculating the volumes of cuboids of given dimensions, or by constructing cuboids using nets, then measuring them.	• Do children understand what the term 'volume' means? • Can children estimate the volume of a cuboid? • Can children calculate the volume of a cuboid using the formula length x width x height?	• Slides • Worksheet 5A/5B/5C/5D • Cuboid Net Templates (FSD? activity only)

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Fractions and Proportion : Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to identify equivalent fractions, represented visually.	Children will identify exactly what a fraction is before using diagrams and fraction walls to help them identify equivalent fractions. Children will use the < > and = signs to make fraction statements correct.	• Do children know what equivalent fractions are? • Can children identify equivalent fractions that are represented visually? • Can children match pairs of equivalent fractions?	• Slides • Matching Cards • Fraction Sorting Cards 1A/1B • Worksheet 1A • 'Would you rather?' Cards (FSD? activity only) • Fraction Wall (FSD? activity only)
Lesson 2	To be able to recognise and identify equivalent fractions.	Children will start to identify that looking at the relationship between denominators in fractions is useful to help find equivalent fractions. They will learn how to apply the same operation to the numerator as the denominator to identify equivalent fractions without the need for visual representations.	• Can children identify equivalent fractions that are represented visually? • Do children know that to find equivalent fractions you need to multiply the numerator and denominator by the same number? • Can children find pairs of equivalent fractions without visual representations?	• Slides • Worksheet 2A/2B/2C • Fraction Cards (FSD? activity only)
Lesson 3	To be able to convert improper fractions into mixed numbers.	Children will identify what improper and mixed number fractions are before learning how to convert improper fraction to mixed number fractions, and vice versa.	• Can children change simple improper fractions into mixed number fractions? • Can children change more challenging improper fractions into mixed number fractions? • Can children convert mixed number fractions into improper fractions?	• Slides • Worksheet 3A • Domino Cards 3A/3B
Lesson 4	To be able to add and subtract fractions with a common denominator.	Children will learn how to add an d subtract fractions with a common denominator, converting the answer to a mixed number fraction if necessary. They will then move on to adding mixed number fractions, converting to improper fractions to make them easier to add or subtract.	• Can children add fractions with a common denominator? • Can children subtract fractions with a common denominator? • Can children express answers as improper fractions and mixed number fractions?	• Slides • Worksheet 4A/4B/4C • Challenge Cards 4A/4B (FSD? activity only) • Spinner (FSD? activity only)
Lesson 5	To be able to order proper, improper and mixed number fractions.	Children will learn how to order proper, improper and mixed number fractions. They will think about the best way to convert fractions to make them easier to order, and use the <, > and = signs to express the value of fractions.	• Can children order fractions that all have the same denominator? • Can children convert fractions so that they have a common denominator? • Can children use the <, > and = symbols to express the value of fractions?	• Slides • Worksheet 5A/5B/5C • Fraction Wall • True or False Cards 5A/5B (FSD? activity only)

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Methods for Multiplying and Dividing : Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to use short multiplication to multiply two- and three-digits by a single digit.	Children will start by playing a game to encourage recall of known multiplication facts. They will then go on to consider which methods they are already familiar with for solving multiplication problems, before looking in more detail at formal short multiplication, starting with two-digit by one-digit and progressing to three-digit by one-digit calculations as they become more confident.	• Can children recall multiplication facts for tables up to 12x12? • Can children use formal short multiplication to solve two-digit by one-digit calculations? • Can children use formal short multiplication to solve three-digit by one-digit calculations?	• Slides • Worksheet 1A/1B/1C • Dice • Spinners • Secret Code Sheet 1A/1B (FSD? activity only)
Lesson 2	To be able to use short multiplication to solve problems involving up to four-digit by one-digit calculations.	This lesson starts by showing children a completed short multiplication calculation and asking them to check whether it is correct. They will then talk through each step in the process of solving short multiplication calculations, first with three-digit and then with four-digit calculations. There is also the opportunity to solve missing number calculations and tackle some multiplication challenges.	• Can children recall times tables facts accurately for multiplication tables up to 9x9? • Can children use short multiplication accurately to solve calculations with up to four digits? • Can children use their understanding of the short multiplication method to solve problems?	• Slides • Challenge Cards 2A/2B/2C • Number Word Search 2A/2B (FSD? activity only)
Lesson 3	To be able to use the chunking method to solve division problems.	Children will recap the relationship between multiplication and division before looking in detail at the chunking method of division. After solving some division problems using chunking, children will use short multiplication (the inverse) to check that their calculations are correct, and vice versa.	• Can children use known number facts to divide numbers mentally? • Can children use the chunking method correctly to solve division calculations involving numbers up to four digits? • Can children use short multiplication to check chunking calculations, and vice versa?	• Slides • Worksheet 3A • True or False Cards 3A/3B/3C • Challenge Sheet 3A/3B (FSD? activity only)
Lesson 4	To be able to solve multiplication and division problems in context.	Children will consolidate their understanding of the short multiplication and chunking division methods to solve a variety of real-life problems. The slides go through several examples of questions to solve as a class, including key prompt questions to help children identify what they need to do in order to successfully solve word problems. They can then tackle a variety of word problems and challenges independently.	• Can children identify what a word problem is asking them to find out? • Can children take appropriate steps to solve a word problem, including choosing the correct operation? • Can children check that their answer is accurate?	• Slides • Word Problem Sheet 4A/4B/4C • Challenge Cards (FSD? activity only)
Lesson 5	To explore the lattice method of multiplication and compare it to other known methods.	This lesson introduces children to the lattice method of multiplication. Firstly, they are shown a calculation that has been completed using this method and challenges them to use what they notice to explain how the method works. They can then go through some calculations as a class to familiarise themselves with this method. They are encouraged to describe why the method works and not just describe the steps needed to solve each problem, as well as to compare this to other known multiplication methods to assess ease, efficiency and accuracy.	• Can children recall multiplication facts for all times tables up to 9x9? • Do children understand how and why the lattice method of multiplication works? • Can children use the lattice method correctly?	• Slides • Lattice Calculations 5A/5B/5C • Points Cards 5A/5B/5C • Calculation Cards 5A/5B/5C (FSD? activity only) • Challenge Card (FSD? activity only)

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Angles and Triangles: Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to estimate, draw and measure acute and obtuse angles.	Children will identify whether angles on a line or around a point are either acute, right, obtuse or reflex angles. They will then estimate the sizes of angles in degrees (°), then measure them.	• Can children draw and estimate angles? • Can children recognise acute and obtuse angles? • Can children use a protractor?	• Slides • Worksheet 1A/1B/1C/1D • Angle Cards • Protractors • Sticky notes (FSD? activity only)
Lesson 2	To be able to measure and calculate angles on a straight line and around a point.	Children will learn how many degrees are in a quarter, half, three-quarter and full turn. They will use this information to help them find one or more missing angles on a straight line or around a point.	• Do children know how many degrees there are in a quarter, half, three-quarter and full turn? • Can children use their knowledge of angles to calculate missing angles on a line or around a point? • Can children use a protractor to measure angles on a line or around a point?	• Slides • Worksheet 2A/2B/2C • Protractors • Clock Angles 2 (FSD? activity only) • Blank Clock Faces 2 (FSD? activity only)
Lesson 3	To use knowledge of properties to identify, draw and describe 2-D shapes.	Children will learn in certain properties of 2-D polygons, such as having parallel sides, or having equal opposite/adjacent pairs of inside angles. They will then either draw shapes accurately according to given properties, or sort shapes according to various properties.	• Can children draw shapes from simple properties? • Can children draw shapes from more complex properties? • Can children identify complex shape properties?	• Slides • Challenge Cards 3A/3B/3C • Protractors and rulers • Shape Cards 3A/3B (FSD? activity only) • Clue Cards (FSD? activity only)
Lesson 4	To be able to identify and classify triangles.	Children will explore the special properties of different triangles such as equilateral, isosceles and scalene triangles. They will use maths vocabulary to describe triangles, and sort triangles according to various properties.	• Can children identify the four types of triangles by looking at their properties? • Can children calculate missing angles in triangles? • Can children draw triangles and measure the angles?	• Slides • Worksheet 4A/4B/4C/4D • Protractors
Lesson 5	To identify angles around a point which total 360°.	Children will apply their knowledge of angles and degrees around a point as they undertake an investigation by making rotating patterns using triangles, finding ones which will not overlap when rotated around a point.	• Can children rotate triangles around a point? • Can children find angles around a point which total 360°? • Can children identify patterns and rules about triangles according to their properties?	• Slides • Worksheet 5A/5B/5C • Protractors • Rotating Shapes 5A/5B (FSD? activity only)

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Changing Time: Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To understand the relationship between different measures of time.	Children will define different measures of time, such as second, minute, hour, day, week and year, and express how they are related to each other. They will use this information to express, e.g. how many hours there are in three days.	• Can children name and define a variety of measures of time? • Do children understand the relationship between various measures of time? • Can children convert between different measures of time?	• Slides • Word Cards • Sentence Cards 1A/1B • Game Instruction Card 1A/1B • Timers • Challenge Card (FSD? activity only)
Lesson 2	To be able to solve problems involving converting units of time.	Children will solve word problems relating to the duration of events. In order to answer accurately, children will need to convert units of time. Problems will include all four operations.	• Can children convert between units of time? • Can children solve problems involving converting between units of time? • Can children use all four operations to solve problems involving converting between units of time?	• Slides • Worksheet 2A/2B/2C • Question Cards 2A/2B/2C • Operations Sheet • Answer Cards (FSD? activity only)
Lesson 3	To be able to solve problems involving the use of clocks.	Children will read analogue and digital clocks accurately, using this skill to help them solve problems relating to the duration of events. They will work out the difference between two times shown on a clock and convert minutes to hours, and vice versa.	• Can children accurately read analogue and digital clocks? • Can children work out the difference between times shown on two clocks? • Can children solve problems involving telling the time and converting units of time?	• Slides • Worksheet 3A/3B/3C • Daily Timetable 3A/3B/3C • Clock Cards 3A/3B (FSD? activity only)
Lesson 4	To be able solve time problems involving timetables.	Children will read timetables shown in 24-hour digital time. They will use the information to answer questions, complete missing information and solve problems relating to the duration of events. Problems are given in the context of the Orient Express.	• Can children read a timetable accurately, including times shown in 24-hour time? • Can children fill in missing information in a timetable? • Can children use a timetable to answer questions?	• Slides • Worksheet 4A/4B/4C • Question Cards 4A/4B (FSD? activity only)
Lesson 5	To be able to solve problems involving converting units of time.	Children will explore the duration of the Apollo Space Missions. They will use the information to convert units of time in order to compare the lengths of the different missions.	• Can children solve problems involving converting days to hours and vice versa? • Can children solve problems involving converting minutes to seconds and vice versa? • Can children use a variety of appropriate methods to solve problems involving time?	• Slides • Worksheet 5A/5B/5C • Apollo Mission Fact Cards

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Squares, Cubes and Factors: Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to recognise and use square numbers.	Children will learn what a square number is and how to multiply a number by itself to find its square. Children will recognise square numbers to a hundred and start to calculate squares of larger numbers. They will begin to use square numbers in calculations.	• Do children understand what a square number is? • Can children identify square numbers to 100? • Can children square larger numbers?	• Slides • Worksheet 1A/1B/1C • Sometimes, Always or Never Card (FSD? activity only)
Lesson 2	To be able to identify and use cubed numbers.	Children will recap what square numbers are and match square numbers to their square roots. They will then go on to investigate cubed numbers, using visual representations to support them. They will calculate cubed numbers for cube roots to ten and begin to understanding the term 'to the power of'.	• Do children understand what cubed numbers are? • Can children identify cubed numbers for cube roots to 10? • Can children work out what a number cubed is?	• Slides • Worksheet 2A/2B • Picture Cards • Help Sheet (FSD? activity only) • Bingo Grid sheet (FSD? activity only)
Lesson 3	To be able to find factors of numbers.	Children will recap what factors and multiples are before being challenged to find all the factors pairs for various two-digit numbers. They can solve investigations to further their understanding.	• Do children understand what factors and multiples are? • Can children identify factor pairs? • Can children find all the factor pairs for a given number?	• Slides • Worksheet 3A/3B/3C • Multiplication Grid • Challenge Card 3A/3B (FSD? activity only)
Lesson 4	To know and apply divisibility tests.	Children will recap how to find all the factor pairs of two-digit numbers before using and applying divisibility tests to find factors of three- and four-digit numbers.	• Can children find factors of numbers? • Can children apply divisibility tests to find factors of numbers? • Can children use divisibility tests to find factor pairs?	• Slides • Worksheet 4A/4B/4C☝ • Number Cards 4A/4B • Challenge Sheet 4A/4B (FSD? activity only) • Divisibility Tests sheet (FSD? activity only)
Lesson 5	To be able to create equivalent number sentences using knowledge of factors, squares and cubes.	Children will use their understanding of squares, cubes and factors to find equivalent mathematical statements. They will recognise that, e.g. 8 x 16 is the same as $2 \times 4 \times 4^2$, and use this to make many different statements for the same number fact.	• Can children use their knowledge of factors to find equivalences? • Can children use their knowledge of squares and cubes to find equivalences? • Do children understand why finding equivalent statements can be helpful?	• Slides • Worksheet 5A/5B/5C • Statement Cards 5A • Help Sheet • Multiplication Grid • Challenge Cards (FSD? activity only)

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Length, Weight and Capacity: Maths : Year 5 : Autumn Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to convert between different units of metric measure.	Children will identify a variety of units of measurement that can be used to measure length, weight and capacity, and identify which of these units would be best for measuring a variety of objects. They will explore the relationship between various units of measurements and be able to convert from one to another, using decimals where necessary.	• Can children identify metric measures and use them in the correct contexts? • Can children convert metric measurements from e.g. metres to centimetres and vice versa? • Can children order measurements?	• Slides • Domino Cards • Worksheet 1A/1B/1C • Measurement Cards 1A/1B (FSD? activity only)
Lesson 2	To be able to order and compare measurements with up to two decimal places.	Children will identify the value of each digit in measurements with up to two places in order to order and compare measurements with up to two decimal places. Children will reinforce their understanding of which different units of measurement are used to express length, weight and capacity. They will also learn how to order and compare measures that are expressed in different units of measurement, such as centimetres and metres.	• Can children identify the value of each digit in measurements with up to two decimal places? • Can children order and compare measurements with one decimal place? • Can children order and compare measurements with two decimal places?	• Slides • Worksheet 2A • Measurement Cards 2A/2B/2C • Length Cards 2A/2B (FSD? activity only) • Weight Cards 2A (FSD? activity only) • Capacity Cards 2A (FSD? activity only)
Lesson 3	To be able to use solve problems involving length and weight.	Children will solve a variety of word problems relating to the length and weight of wild animals. They will start to estimate lengths and weights, using given facts to help them. They will use all four operations to compare and calculate the length and weight of a variety of animals.	• Can children use appropriate units of measure when working with length and weight? • Can children solve problems relating to length and weight? • Can children make sensible estimates relating to length and weight?	• Slides • Worksheet 3A/3B/3C • Animal Fact Cards • Challenge Sheet (FSD? activity only)
Lesson 4	To be able to estimate capacity and measure accurately to check estimates.	Children will estimate the capacity of a variety of containers, using prior understanding to inform their choices. They will then measure capacity accuracy to check their estimates.	• Can the children estimate capacity accurately? • Can they measure accurately in litres? • Can they measure accurately in millilitres?	• Slides • Worksheet 4A/4B/4C • Range of measuring jugs • Range of containers to measure • Water • Digital cameras (FSD? activity only) • Question Cards (FSD? activity only)
Lesson 5	To be able to solve problems involving money and measures.	Children will use their understanding of money and capacity to solve a variety of problems in the context of magic potions. Children will use all four operations to compare measurements and calculate the costs of different amounts of potions, as well as solving scaling problems.	• Can children solve problems involving measurements using all four operations? • Can children convert pounds to pence and vice versa? • Can children solve scaling problems?	• Slides • Challenge Cards 5A/5B/5C • Worksheet 5A/5B (FSD? activity only) • Magic Potions Price List (FSD? activity only)

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