Working with Numbers: Maths : Year 6 : Spring Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to multiply and divide by 10, 100 and 1000.	Children will recap the effect of multiplying and dividing numbers by 10 and 100, then extend this to looking at the effect of multiplying and dividing by 1000. They can then apply this to various numbers with up to six numbers through a variety of differentiated activities.	• Can the children multiply and divide by 10? • Can they multiply and divide by 100? • Can they multiply and divide by 1000?	• Slides • Jigsaw 1A/1B/1C • Operation Cards (FSD? activity only) • Worksheet 1A (FSD? activity only)
Lesson 2	To be able to multiply and divide decimals by 10 and 100.	Children will recap how to multiply and divide whole numbers by 10, 100 and 1000. They will then explore how to multiply and divide numbers with up to three decimal places by 10 and 100. During the plenary, they will explore the effect of multiplying and dividing decimals by 1000 and 10,000.	• Can they multiply decimals by 10? • Can they multiply and divide decimals by 10 and 100? • Can they multiply and divide decimals by 1000 and 10,000?	• Slides • Number Cards 2A/2B/2C • Question Cards • Calculation Web 2A/2B (FSD? activity only)
Lesson 3	To be able to round numbers to a specified degree of accuracy.	Children will recap rounding rules before looking at how to round numbers to the nearest 10, 100, 1000, 10,000, 100,000 and 1,000,000. Children will round various numbers to a specified degree of accuracy, and round the same number in a variety of ways.	• Can children round to 10 and 100? • Can children round to 10, 100 and 1000? • Can children round to any given power of ten to a million?	• Slides • Digit Cards 3A/3B/3C • Worksheet 3A/3B/3C • Challenge Cards (FSD? activity only) • Access to internet (FSD? activity only) • Bingo Grids (plenary) • Bingo Answer Sheet (plenary)
Lesson 4	To be able to order positive and negative numbers, and calculate intervals over zero.	Children will order sets of positive and negative numbers using their understanding of place value. They will then calculate intervals across zero by finding the difference between a positive and negative number, using number lines to support them and notation such as 14 - (-35) = 49 to record their calculations.	• Can children give examples of how negative numbers are used in real life? • Can children order positive and negative numbers? • Can children calculate intervals over zero?	• Slides • Game Board 4A/4B/4C • Game Cards 4A/4B/4C • Question Cards (FSD? activity only) • Information Sheet (FSD? activity only) • Fact Hunt Sheet (FSD? activity only)
Lesson 5	To be able to use negative numbers in context.	Children will calculate the difference between positive and negative numbers in context as they calculate the differences in elevations. They will also compare elevations. They will use number lines where necessary to support their calculations and use appropriate number sentences to record their calculations.	• Can children order and compare positive and negative numbers? • Can children calculate intervals across zero? • Can children solve problems involving negative numbers?	• Slides • Worksheet 5A/5B/5C/5D • Fact Sheet 5A/5B/5C • Country Cards (FSD? activity only) • Access to the internet (FSD? activity only)

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

Calculating Fractions and Decimals: Maths : Year 6 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to identify fraction and decimal equivalents, and simplify fractions.	Children will recap what they already know about fractions, including identifying fraction and decimal equivalents. They will then go on to explore how to simplify fractions using common factors, thinking about why simplifying fractions can be useful. In their independent learning they can either answer questions to crack a code, or solve a variety of challenges relating to fractions and decimals.	• Can children recall and use equivalences between simple fractions and decimals? • Can children use common factors to simplify fractions? • Can children order and compare fractions and decimals?	• Slides • Worksheet 1A/1B/1C • Challenge Sheet 1A/1B/1C (FSD? activity only) • Challenge Cards (FSD? activity only)
Lesson 2	To be able to add and subtract fractions whose denominators are multiples of the same number, and simplify the answers.	Children will start by recapping how to add and subtract fractions with common denominators before looking at how fractions with denominators that are multiples of the same number can be added or subtracted. They will be challenged to use their knowledge of factors and multiples to solve problems, as well as simplifying answers where appropriate.	• Can children add and subtract fractions where the denominators are multiples of the same number? • Can children add and subtract mixed number fractions? • Can children simplify fractions using their knowledge of factors?	• Slides • Worksheet 2A/2B/2C • Challenge Cards 2A/2B (FSD? activity only)
Lesson 3	To be able to add and subtract fractions where the denominators are not multiples of the same number.	Children will extend their understanding of adding and subtracting fractions by looking at how to convert fractions whose denominators aren't multiples of the same number in order to complete the calculation. They will be shown several ways to do this, including finding the lowest common multiple of the two denominators. Mixed number calculations are also included.	• Can children add fractions where the denominators are not multiples of the same number? • Can children subtract fractions where the denominators are not multiples of the same number? • Can children discuss and explain their reasoning and methods?	• Slides • Challenge Cards 3A/3B/3C • Butterly Method sheet (FSD? activity only)
Lesson 4	To be able to multiply simple fractions.	Children will use arrays to explore what happens when proper fractions are multiplied together. They will then use this to identify the algorithm for multiplying fractions, and be challenged to simplify answers to calculations where appropriate.	• Do children understand the process of what happens when two fractions are multiplied? • Can children multiply two fractions together? • Do children recognise that multiplying proper fractions makes the product smaller than the multiplier and multiplicand?	• Slides • Domino Cards 4A/4B • Fraction Cards • Game Sheet
Lesson 5	To be able to divide proper fractions by whole numbers.	After recapping how to multiply fractions, children will find out how to divide proper fractions by whole numbers. They will use diagrams to help them visualise problems before using an algorithm to solve fraction division problems. They are then challenged to solve a variety of problems, drawing on the learning they have done throughout the week.	• Do children understand what is happening to a fraction when it is divided by a whole number? • Can children divide proper fractions by whole numbers using an algorithm? • Can children solve problems in context?	• Slides • Game Board 5A/5B/5C • Game Cards 5A/5B • Help Sheet • Calculation Cards (FSD? activity only) • Target Cards (FSD? activity only)

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

Grids and Co-ordinates: Maths : Year 6 : Spring Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to read and plot co-ordinates in the first quadrant.	Children will recap the features of co-ordinate grids, then identify, plot and connect coordinates in the first quadrant to describe shapes. Some children may also identify and plot co-ordinates in all four quadrants.	• Can the children read and plot co-ordinates in the first quadrant? • Can they use co-ordinates in the first quadrant to draw, locate and complete shapes? • Can they use co-ordinates in the four quadrants to draw, locate and complete shapes?	• Slides • Worksheet 1A/1B/1C • Resource Sheet A/B/C
Lesson 2	To be able to use co-ordinates in the first quadrant to draw, locate and complete shapes that meet given properties.	Children will visualise, then plot co-ordinates which, when connected, describe shapes or symmetrical patterns with given properties (1st quadrant only).	• Can the children read and plot co-ordinates in the first quadrant? • Can they use co-ordinates in the first quadrant to draw, locate and complete shapes? • Can they use co-ordinates in the four quadrants to draw, locate and complete shapes?	• Slides • Blank First Quadrant sheet • Mini whiteboards • Worksheet 2A/2B/2C/2D/2E • Challenge Cards (FSD? activity only)
Lesson 3	To be able to visualise and draw in the four quadrants where a shape will be after reflection.	Children will learn how to transform shapes plotted on the first quadrant by reflecting them in all three of the other quadrants.	• Could the children reflect a simple shape? • Could they reflect a simple shape in different quadrants? • Could they reflect more complex shapes in each of the four quadrants?	• Slides • Blank Four Quadrant sheet • Worksheet 3A/3B/3C • Squared paper • Challenge Sheets (FSD? activity only)
Lesson 4	To be able to visualise and draw on grids of different types where a shape will be after translation.	Children will learn how to translate a shape described in the first quadrant into the other three quadrants. Most children will describe translations within a single plane (e.g. vertical or horizontal); some will describe two-step translations (diagonal).	• Could the children perform a simple one-step translation? • Could they do two-step translations? • Could they describe how shapes have been translated?	• Slides • Worksheet 4A/4B/4C • Squared paper • Challenge Cards (FSD? activity only) • Blank Four Quadrant sheet (FSD? activity only)
Lesson 5	To be able to visualise and draw on grids of different types where a shape will be after rotation through 90 or 180 degrees about its centre or about one of its vertices.	Children will visualise, then draw rotated shapes on squared paper (either rotated around a vertex or around the centre of the shape).	• Can the children rotate a simple shape 90 degrees? • Can they rotate shapes 90 and 180 degrees? • Can they rotate shapes around any point?	• Slides • Worksheet 5A/5B/5C • Squared paper • Picture Cards (FSD? activity only)

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

Parts and Percentages: Maths : Year 6 : Spring Term, Week 4

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To use ratios to describe related values and to solve problems.	Children will start to use ratios to solve scaling problems involving related amounts which can be easily visualised or drawn using grids or arrays. They will practise using a model for calculating increases in ratios, then apply what they've learned by solving slightly more complex, but similar, ratio problems.	• Can children use drawings or resources to help visualise a ratio problem? • Can children use mathematical models to help solve ratio problems? • Can children use times tables knowledge to help solve ratio problems?	• Slides • Worksheets 1A/1B/1C • Brick Wall Challenge sheet (FSD…? activity only) • Lego® or similar resource (FSD…? activity only)
Lesson 2	To select and use appropriate methods for solving problems involving ratios and scaling up.	Children will consider the efficiency of a variety of strategies for visualising ratio problems and learn a logical, efficient process for solving them. Following this, they may either work individually to apply their learning while solving some challenging, but highly differentiated, ratio problems – or undertake a group ratio scaling challenge.	• Can children evaluate the efficiency of various problem-solving strategies? • Can children select and use appropriate methods for solving ratio problems? • Can children draw or write to explain and/or prove their ideas regarding a problem?	• Slides • Worksheets 2A/2B/2C • Challenge Cards 2A/2B (FSD…? activity only) • Ribbon (FSD…? activity only)
Lesson 3	To select and use appropriate methods for solving problems involving ratios and scaling down.	Starting by looking at ratios of simple patterns on grids, children will consider how the scale of ratios can be decreased. They will then learn about an efficient method for scaling down ratios and practise using this method, either by solving a variety of word problems, or by working together on a group challenge.	• Can children children use division to solve ratio problems involving scaling down? • Can children use models to help visualise and solve ratio problems? • Can children identify efficient methods for solving ratio problems in a variety of contexts?	• Slides • Worksheets 3A/3B/3C • Challenge Cards 3A-3E (FSD…? activity only) • Scales, measuring jugs/cylinders, smoothie ingredients* (FSD…? activity only; *see Challenge Cards for ingredients)
Lesson 4	To solve problems involving the calculation of percentages.	Children will learn and practise making rough drawings of common fractions inside a circle, then use this knowledge to draw estimated pie charts of given sets of percentages. After that, they will learn a simple algorithm for finding the values of percentages, then practise these skills either by interpreting given sets of data, or by playing a percentage value board game.	• Can children estimate relative sizes of percentages by drawing pie charts? • Can children use an algorithm to find percentages of amounts and vice versa? • Can children use an efficient process to help understand and solve word problems involving the calculation of percentages?	• Slides • Worksheets 4A/4B/4C • 'Storm The Tower!' game board, cards and instructions (FSD…? activity only)
Lesson 5	To solve problems involving the calculation of percentages and use percentages for comparison of amounts.	Children will apply prior learning as they find values of percentages, then calculate percentage increases and decreases in a variety of word problems involving money and measure. Some children may additionally work together to find and choose discount prices for a range of sale items during a group challenge.	• Can children estimate relative sizes of percentages by drawing pie charts? • Can children use an algorithm to find percentages of amounts and vice versa? • Can children use an efficient process to help understand and solve word problems involving the calculation of percentages?	• Slides • Worksheet 5A/5B • Challenge Cards • Discount Day Instructions, Price Tags and Items (FSD…? activity only)

NB: 'FSD? Activity only' refers to the alternative 'Fancy Something Different…?' activity within the lesson plan **www.planbee.com**

Mental Multiplication and Division: Maths : Year 6 : Spring Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to recognise multiples and common multiples of numbers to 10.	Children will find multiples of one-digit numbers, then identify common multiples of numbers to ten. They may then find common multiples on a grid and/or find prime numbers.	• Can the children recognise multiples to the 10th one? • Can they find common multiples? • Can they find prime numbers to 100?	• Slides • Mini whiteboards • Worksheet 1A/1B/1C • Number Cards (FSD? activity only)
Lesson 2	To find, use and compare factors, including prime factors.	Children will find all of the factors of some two-digit numbers. They will go on to identify which of these numbers have special properties, e.g. only one pair of prime factors. Some children may draw factor trees to find all of the prime factors of some two-digit numbers.	• Can children work systematically to find all of the factors of a number? • Can children find the prime factors of a number? • Can children identify prime numbers by factorising numbers?	• Slides • Worksheet 2A/2B/2C • Worksheet 2D (FSD? activity only)
Lesson 3	To be able to use place value and known multiplication facts to solve calculations involving decimals.	Children will develop strategies for mentally multiplying decimal numbers that are less than one and more than one. They may also begin to use brackets in number sentences to show how they have performed calculations mentally.	• Can the children use multiplication facts to solve simple multiplication decimal questions? • Can they solve 2-digit by 1-digit decimal questions? • Can they use brackets?	• Slides • Mini whiteboards • Worksheet 3A/3B/3C/3D • Number Cards (FSD? activity only)
Lesson 4	To multiply near multiples of tens by adjusting, e.g. 21×13: (20×13)+(1×13).	Children will identify near multiples of ten of two-digit numbers, then adjust TO x TO calculations to these near multiples when mentally calculating. They will also use brackets in number sentences to express this method.	• Can the children multiply by 9 and 11 mentally? • Can they multiply by 21 and 19 mentally? • Can they multiply by 49 and 51?	• Slides • Worksheet 4A/4B/4C • Multiplication Cards (FSD? activity only)
Lesson 5	To use times tables facts to help with mental division calculations.	Children will identify near multiples of the divisor when mentally performing division calculations (e.g. 48÷5 — 45 is a near multiple of 5, therefore 48÷5=9r3). They may also use a distribution method for solving division calculations and write number sentences using brackets to show this method.	• Can children identify near multiples when working out division calculations mentally? • Can children distribute division calculations to make them easier to work out mentally? • Can children use brackets in a number sentence to show distribution?	• Slides • Worksheet 5A/5B/5C • Share It! Instructions and Cards (FSD? activity only)

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

Measures: Maths : Year 6 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To know how to convert between different units of measurement	Children will identify the abbreviations and symbols for different types of measurement, before recapping on the relationships between the different units of measurement for money, mass, capacity, time and length. In their independent activities, children will use this knowledge to convert different units of measurement to smaller and larger units. Alternatively, they can practise these skills by playing the Convert Me To... Game in pairs.	• Do children know the relationships between different units of measurement for length, mass and capacity? • Can they use these known relationships to convert between different units of measurement? • Can children compare measures given in different units?	• Slides • Conversion Charts • Place Value Chart • Conversion Cards A/B/C • Convert Me To... Game (FSD? activity only) • Score Sheet (FSD? activity only) • Counters, dice
Lesson 2	To solve problems involving the conversion of different units of measurement	The lesson will begin with a brief recap on the different conversion relationships. The children will then apply this knowledge to solve a variety of multi-step problems. They will need to decide what methods to use, and at what step in the calculation they need to convert their answers into different units of measurement.	• Can children apply their knowledge of the relationships between different units of measurement to solve problems? • Can children make sensible decisions about which numbers to convert and when within a calculation? • Can children justify their choice of calculation and method?	• Slides • Conversion Chart • Monster Mansion Information Sheet • Worksheet 2A/2B • Measures Match Up! Q & A Sheets A/B (FSD? activity only) • Measures Match Up! Instruction Cards (FSD? activity only)
Lesson 3	To know how to convert miles to kilometres and vice versa	Children will find out about the difference between two units of measurement for distance – the mile and the kilometre. They will learn how to convert between miles and kilometres, and vice versa, using a given rule. Children will practise these conversions by either working out distances for a Monster Marathon, or playing a game involving conversion called Are We Nearly There Yet?	• Do children understand the difference between miles and kilometres? • Can children convert miles to kilometres using a given rule? • Can children convert kilometres to miles using a given rule?	• Slides • Conversion Cards • Fraction to Decimal Conversion Charts • Monster Marathon Worksheet 3A/3B/3C • Are We Nearly There Yet? Game Sheet A/B (FSD? activity only) • Journey Cards Set A/B (FSD? activity only) • Instruction Cards (FSD? activity only)
Lesson 4	To know how to calculate and compare the volume of cubes and cuboids	Children will recap on what volume is, and how to calculate the volume of a cuboid. They will then find out how to calculate missing dimensions using a given volume. In their independent activities, children will apply this knowledge to calculate various different volumes and/or dimensions of cubes and cuboids. Alternatively, children will be challenged to find out which box will have the largest volume based on given measurements.	• Can children estimate the volume of cubes and cuboids? • Do children understand how to calculate the volume of cubes and cuboids? • Can children compare the volume of cubes and cuboids?	• Slides • Worksheets 4A/4B/4C • Cuboid Challenge Card A/B (FSD? activity only)
Lesson 5	To know how to calculate the average speed, distance and time of a journey	In this lesson, children will find out what speed is. They will begin to understand the relationship between average speed, distance and time, and learn how to use formulas to calculate each measurement. Children will apply this knowledge to finding missing information in a table of results for a cycle race, or in the FSD activity, they will solve and check a variety of real-life word problems.	• Do children understand how to calculate average speed when given the time and distance measurements? • Do children understand how to calculate time when given the average speed and distance measurements? • Do children understand how to calculate distance when given the time and average speed measurements?	• Slides • Worksheet 5A/5B/5C • Formula Cards • Solve & Check Cards A/B (FSD? activity only)

Mean, Mode and Median: Maths : Year 6 : Spring Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to construct and interpret charts and graphs.	Children will recap features of bar charts and line graphs (and how to read them), then draw and interpret line graphs showing two or more sets of data.	• Can the children construct simple bar charts? • Can they construct and interpret bar and line graphs? • Can they begin to understand conversion graphs?	• Slides • Worksheet 1A/1B/1C/1D/1E • Squared paper
Lesson 2	To be able to interpret pie charts.	Children will identify the features of pie charts, then interpret data presented in them. They will also ask and answer questions about data presented in pie charts. Some children may start to learn how to draw simple pie charts.	• Could the children interpret the numbers from simple pie charts? • Could they interpret numbers and fractions of simple pie charts? • Could they design their own simple pie chart and interrogate the data?	• Slides • Worksheet 2A/2B/2C/2D/2E • Coloured cubes (FSD? activity only) • Felt-tip pens/coloured pencils (FSD? activity only) • Bags (FSD? activity only)
Lesson 3	To describe and interpret results and solutions to problems using the mode, range, median and mean.	Children will learn that data can be interpreted in a variety of different ways by finding the mean, mode and median. They will then practise finding these in given sets of data.	• Could the children find the mode and range? • Could they find the range, mode, median and mean? • Could they interrogate the data?	• Slides • Worksheet 3A/3B/3C • Calculators (if necessary) • Challenge Cards (FSD? activity only)
Lesson 4	To describe and interpret results and solutions to problems using the mean.	Children will recap the meaning of mean, mode, median and range, then find the mean for given sets of data or for sets of data they collect themselves.	• Can the children calculate a simple mean? • Can they calculate more complex means with and without a calculator? • Can they interpret real data and calculate the mean?	• Slides • Worksheet 4A/4B/4C • Calculators • Challenge Cards (FSD? activity only) • Variety of books (FSD? activity only)
Lesson 5	To describe and predict outcomes from data using the language of chance and likelihood.	Children will consider how to collect probability data by using sets of words to describe and categorise the likelihood of an event occurring. They may then investigate the probability of all possible outcomes of an event such as rolling two dice.	• Can the children use correct probability language? • Can they carry out a probability investigation? • Can they use terms like 1:6?	• Slides • Statement Cards • Worksheet 5A/5B/5C/5D • Coins • Dice • Access to computers (FSD? activity only)

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

Using Subtraction and Addition: Maths : Year 6 : Spring Term

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To choose appropriate methods for quickly and accurately solving addition and subtraction calculations.	Children will practise to increase speed, accuracy and confidence using rounding and adjusting or equal addition to mentally solve addition and subtraction calculations with three-, four-, five- and six-digit whole numbers. They will also identify trickier calculations, such as those involving numbers with up to two decimal places, where a written method may be more appropriate.	• Can children use a rounding and adjustment method to solve addition calculations mentally? • Can children use an equal addition method to solve subtraction calculations mentally? • Can children identify trickier calculations where a written method is most appropriate?	• Slides • Worksheets 1A/1B/1C • Block Race 1/2/3/Instructions (FSD…? activity only) • Counters, dice and sand timers (FSD…? activity only)
Lesson 2	To develop formal methods for subtracting quickly and accurately.	Children will practise using a standard written method, and an equal addition written method, for solving subtraction calculations involving three-, four-, five- and six-digit numbers, some with up to two decimal places.	• Can children, where appropriate, use a mental method of equal addition to solve subtraction calculations? • Can children recognise when a written method for solving a calculation may be appropriate? • Can children use a formal equal addition method for subtracting?	• Slides • Worksheet 2A/2B/2C • Challenge Card 2 (FSD…? activity only) • Large sheets of paper (FSD…? activity only) • Base 10 resources or place value cards (FSD…? activity only)
Lesson 3	To use estimating by rounding to predict, and check, answers to calculations.	Children will practise and develop skills of estimating by rounding to various degrees of accuracy, depending on the contexts of the problems and calculations given. They will also study the vocabulary used in word problems and 'real-world' situations, identifying language which suggests an estimated answer, rather than an exact calculation, may be acceptable.	• Can children round numbers to the nearest thousand, hundred and ten? • Can children estimate or check the answers to calculations by rounding? • Can children round to an appropriate degree of accuracy to provide approximate answers to word problems, where appropriate?	• Slides • Estimate or Calculate cards 3A/3B/3C • Chef's Kitchen sheet (FSD…? activity only) • Culinary Catalogue 3A/3B sheet (FSD…? activity only)
Lesson 4	To solve subtraction calculations resulting in negative numbers.	Children will learn an ad hoc method for finding answers to subtraction calculations resulting in negative numbers, including those with up to two decimal places. They will then practise this method, with the option (during one of the two included activities) to sequence negative numbers high to low too.	• Can children quickly identify subtraction calculations that will result in negative numbers? • Can children use an ad hoc method for subtractions resulting in negative numbers? • Can children make notes, draw number lines or use resources to check their calculations?	• Slides • Worksheet 4A/4B/4C • Unifix cubes and blank number lines (optional) • Bank Manager Challenge sheet (FSD…? activity only)
Lesson 5	To choose and use appropriate methods to solve a variety of addition and subtraction calculations, including multi-step problems.	Children will recap and practise the skills of rounding and adjusting, using equal addition when subtracting, estimating by rounding and working with negative numbers. They may then either play a game to consolidate their learning, or undertake a straightforward maths investigation challenge involving subtraction and addition.	• Can children select and use a favoured strategy for solving calculations resulting in negative numbers? • Can children choose and use a variety of methods for solving addition and subtraction calculations? • Can children, where appropriate, use notes or formal written methods to solve calculations?	• Slides • Work It Out! game board, instructions and cards • Counters, dice and sand timers/stopwatches • Challenge Cards (FSD…? activity only)

Difficult Division: Maths : Year 6 : Spring Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to solve division problems using chunking and express remainders as a fraction.	Children will recap how the chunking method of division works, starting by dividing two-digits by a single digit and moving quickly on to dividing three- and four-digits by a single digit. They will also learn how to express remainders as fractions and how to use multiplication to check division calculations that involve reminders.	• Can children use an appropriate method to solve division problems? • Can children show a remainder as a whole number? • Can children show a remainder as a fraction?	• Slides • Worksheet 1A/1B/1C/1D/1E/1F • Digit Cards (FSD? activity only)
Lesson 2	To be able to solve division problems and express remainders as a decimal.	Children will learn how to express remainders in division calculations as decimals. They will recap how to convert remainders to fractions, then use their understanding of the relationship between fractions and decimals to convert the remainder to decimals. Children will solve a variety of division calculations, many of which can be solved mentally.	• Can children solve division problems and express the remainder as a whole number? • Can children solve division problems and express the remainder as a decimal? • Can children use calculators to explore decimals as remainders?	• Slides • Worksheet 2A/2B/2C • Calculation Cards 2A/2B/2C • Challenge Card 2A/2B (FSD? activity only)
Lesson 3	To be able to solve division problems using the formal method of short division.	Children will recap the method of short division. They will divide three- and four-digit numbers by a single digit, as well as by two-digit numbers. Higher-ability children will be extended to dividing five-digit numbers by one or two digits. They will use their understanding of division and short division to solve missing number problems.	• Can children solve four-digit by one-digit calculations using short division? • Can children solve four-digit by two-digit calculations using short division? • Can children recall division facts to solve appropriate problems mentally?	• Slides • Division Maze 3A/3B/3C • Worksheet 3A/3B/3C (FSD? activity only) • d10 dice (FSD? activity only)
Lesson 4	To be able to solve division problems using the formal method of long division.	Children will learn how the formal long division method works. They will divide three- and four-digit numbers by a two-digit numbers. Higher-ability children will be extended to dividing five-digit numbers by one or two digits. They will learn to solve calculations for themselves and they can also check calculations that have already been solved for inaccuracies.	• Can children recognise what long division is? • Can children explain how the long division process works? • Can children solve problems using the formal long division method?	• Slides • Worksheet 4A/4B/4C/4D • Help Card • Multiplication Grid • Calculations Cards A/B (FSD? activity only) • Calculation Answer Sheet 4A/4B (FSD? activity only)
Lesson 5	To be able to solve division problems using an appropriate method.	Children will choose an appropriate division method for solving a variety of word problems. They will consolidate their understanding of how and when to use formal short and long division methods, and choose how to express remainders.	• Can children use a variety of methods to solve division problems, including formal short and long division? • Can children decide which method is most appropriate to solve different division problems? • Can children express remainders appropriately?	• Slides • Worksheet 5A/5B/5C • Division Crossword 5A/5B (FSD? activity only)

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

Time and Money: Maths : Year 6 : Spring Term

PlanBee

	Learning Objective	Overview	Assessment Questions	Resources
Lesson 1	To be able to solve time problems, including those involving converting between units of time.	Children will recap telling the time on analogue and digital clocks before moving on to solve a variety of problems using all four operations, including those where units of time have to be converted.	• Can children read the time accurately on analogue and digital clocks? • Can children solve word problems involving time? • Can children convert units of time to help them solve problems?	• Slides • Worksheet 1A/1B/1C • School Timetable 1A/1B (FSD? activity only) • Time Cards - plenary
Lesson 2	To be able to solve problems relating to time zones around the world.	Children will explore time zones around the world. They will find out what 'GMT' is and identify the time zones of various cities using a time zone map. They will work out what the local times around the world are in comparison to each other, such as working out what the time in New York is if it is 14:30 in London.	• Do children understand that there are different time zones around the world? • Can children calculate time differences around the world? • Can children solve problems involving time zones?	• Slides • Time Zone Map 2A/2B • Worksheet 2A/2B/2C • Question Cards 2A/2B (FSD? activity only)
Lesson 3	To be able to solve problems involving converting between units of time.	Children will solve problems relating to time zones. They are challenged to work out what the local time at a flight destination is, taking into account both the flight time and the time difference. There can also find car journeys across Europe that take a particular length of time using online maps.	• Do children understand the relationship between different units of time? • Can children convert units of time from minutes to hours and minutes? • Can children solve time problems involving several steps?	• Slides • Worksheet 3A/3B/3C • Time Zone Map sheet • Challenge Cards 3A/3B (FSD? activity only)
Lesson 4	To be able to multiply numbers with two decimal places by whole numbers.	Children will explore how much money workers earn for doing different jobs. They will multiply numbers with two decimal places to calculate how much workers are paid for certain jobs. They can also work out how much different workers across a variety of sectors get paid per day, week and year.	• Can children multiply a number with two decimal places by a whole number? • Can children convert measures of time to solve problems? • Can children use a variety of appropriate methods to solve problems?	• Slides • Worksheet 4A/4B/4C • Challenge Cards 4A/4B (FSD? activity only) • Wage Cards (FSD? activity only)
Lesson 5	To be able to multiply a number with two decimal places by a whole number.	Children will find out what the term 'minimum wage' means in this lesson and explore minimum wage hourly rates in a variety of countries across the world. They will use this information to solve a variety of problems, including how many hours different minimum-wage workers around the world would have to work in order to pay for the same item.	• Can children multiply a number with two decimal places by whole numbers? • Can children order decimal values from smallest to largest? • Can children convert measures of time to help them solve problems?	• Slides • Worksheet 5A/5B/5C • Infographic sheet (FSD? activity only) • Question Cards (FSD? activity only)

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