

Decimal Place Value: Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|---|---|--|
| Lesson 1 | To be able to read, write, order and compare numbers up to 10,000,000. | Children will identify the value of each digit in numbers up to ten million. They will practise reading and writing larger numbers in both numerals and words, and use place value charts to check the value of each digit. Children will start to order and compare numbers with up to seven digits. | <ul style="list-style-type: none"> • Can children read numbers to 10,000,000? • Can children write numbers to 10,000,000? • Can children order and compare numbers to 10,000,000? | <ul style="list-style-type: none"> • Slides • Crossword Puzzle 1A/1B/1C • Number Cards 1A/1B/1C (FSD? activity only) • Blank Number Cards (FSD? activity only) |
| Lesson 2 | To be able to identify the value of each digit in numbers with up to three decimal places. | Children will identify the value of each digit in numbers with up to three decimal places. They will read and write decimals in words and numbers, and start to order and compare numbers with up to three decimal places. | <ul style="list-style-type: none"> • Can the children recognise decimal place value to one place? • Can the children recognise decimal place value to three places? • Can the children order decimals? | <ul style="list-style-type: none"> • Slides • Game Board 2A/2B • Question Cards 2A/2B • Spinner • Score Cards • Digit Cards (FSD? activity only) • Game Card 2A/2B/2C (FSD? activity only) • Dice (FSD? activity only) |
| Lesson 3 | To be able to use place value to order numbers with up to three decimal places. | Children will use their understanding of the place value of numbers with up to three decimal places to compare and order sets of numbers. | <ul style="list-style-type: none"> • Could the children order decimals to one decimal place? • Could the children order decimals to two decimal places? • Could the children order decimals to three decimal places? | <ul style="list-style-type: none"> • Slides • Game Board 3A/3B • Dice and counters • Number Cards 3A/3B/3C (FSD? activity only) |
| Lesson 4 | To be able to round a number with two decimal places to the nearest tenth or whole number. | Children will recap the rules for rounding whole numbers. They will then translate this knowledge to rounding numbers with up to three decimal places to the nearest whole number or nearest tenth. | <ul style="list-style-type: none"> • Could the children round to the nearest whole number? • Could the children round to the nearest tenth? • Could the children round to the nearest hundredth? | <ul style="list-style-type: none"> • Slides • Worksheet 4A/4B/4C • Game Card (FSD? activity only) • Number Cards 4A/4B (FSD? activity only) |
| Lesson 5 | To be able to solve problems which require answers to be rounded to specified degrees of accuracy. | Children will put rounding decimals into real-life contexts as they apply a variety of maths skills to find averages, rounding the answer to the nearest tenth or whole number when needed. They will add numbers together to find totals and divide these totals to find averages, using calculators where necessary. They will then round numbers, with many decimal places in some instances, to the nearest whole number or tenth to give an answer in context. | <ul style="list-style-type: none"> • Can children round decimals to the nearest whole number? • Do children understand how to find an average? • Can children recall the value of each digit in numbers with up to three decimal places? | <ul style="list-style-type: none"> • Slides • Calculators • Challenge Cards 5A/5B/5C • Data Cards 5A/5B (FSD? activity only) |

Choosing Methods: Maths: Year 6: Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|---|--|
| Lesson 1 | To practise column methods for addition and subtraction. | Children will recap methods for column addition and subtraction, then practise these methods by solving missing number problems or by randomly generating numbers to add/subtract. | <ul style="list-style-type: none"> • Can children add using a column method? • Can children subtract using a column method? • Can children add and subtract decimals using a column method? | <ul style="list-style-type: none"> • Slides • Problem Cards A/B/C • Target Sheet A/B/C (FSD? activity only) • Spinner A/B/C (FSD? activity only) |
| Lesson 2 | To be able to choose a method for solving addition and subtraction problems, including mental methods. | Children will read addition and subtraction word problems then decide on the most appropriate methods for solving them. | <ul style="list-style-type: none"> • Can children add or subtract numbers mentally? • Can children add or subtract numbers using the column method? • Can children choose an appropriate method for solving addition and subtraction problems? | <ul style="list-style-type: none"> • Slides • Thinking of a Number Cards A/B/C • Number Cards A/B/C • Problem Cards A/B/C (FSD? activity only) |
| Lesson 3 | To practise different multiplication and division methods. | Children will recap methods for multiplication (the grid method, an expanded method and a formal method) and division (an ad hoc 'chunking' method and the short division method), then play games where they must apply these methods. | <ul style="list-style-type: none"> • Can children multiply using the short and long multiplication methods? • Can children divide using the short division methods? • Can children think of their own multiplication and division questions? | <ul style="list-style-type: none"> • Slides • Wheel Sheet A/B/C • Worksheet 3A • Famous People Cards A/B (FSD? activity only) |
| Lesson 4 | To be able to choose a method for solving multiplication and division problems, including mental methods. | Children will read word problems and decide whether multiplication or division is required to solve them. They will also find missing numbers in given calculations, and identify mistakes in given calculations. | <ul style="list-style-type: none"> • Can children multiply or divide numbers mentally? • Can children multiply or divide numbers using formal methods? • Can children choose an appropriate method for solving multiplication and division problems? | <ul style="list-style-type: none"> • Slides • Problem Cards A/B/C • Worksheet 4A • Missing Number Cards A/B/C (FSD? activity only) |
| Lesson 5 | To be able to solve problems involving addition, subtraction, multiplication and division. | Children will solve a number of problems around a theme, where they must use appropriate addition, subtraction, multiplication and division methods of their choosing. | <ul style="list-style-type: none"> • Can children choose an appropriate method for solving a problem? • Can children check their answers accurately? • Can children explain their workings? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C • Number Cards A/B (FSD? activity only) |

Subtraction Strategies: Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|---|---|
| Lesson 1 | To use appropriate subtraction strategies to solve problems. | While learning about the world your class will solve problems and analyse findings while improving their confidence and subtraction skills. | <ul style="list-style-type: none"> • Can children apply subtraction strategies to solve problems? • Can children choose appropriate strategies to solve problems? • Can children apply their knowledge of real-life contexts to mathematical problems? | <ul style="list-style-type: none"> • Slides • Worksheet 1A/1B/1C • Fact Cards (FSD? activity only) |
| Lesson 2 | To choose appropriate subtraction strategies to solve problems. | Through the context of the International Day of Peace your class will solve subtraction problems. They will explore the number of people involved in the day each year before going on to look at the Global Peace Index and compare the different countries' ranking over time. | <ul style="list-style-type: none"> • Can children use appropriate subtraction strategies to solve problems? • Can children use estimation to increase the speed they can solve problems? • Can children solve problems involving billions and decimal numbers? | <ul style="list-style-type: none"> • Slides • Worksheet 2A/2B/2C • Challenge Cards A/B/C • Global Peace Index 2017, 2016, 2015, 2014, 2013 • Country Cards (FSD? activity only) • Group Discussion Cards (FSD? activity only) |
| Lesson 3 | To apply subtraction strategies to solve problems. | During this charity-themed lesson your class will get to grips with applying a range of problem-solving strategies to answer questions. They will explore the number of people helped by charities and the amount of money earned and spent. | <ul style="list-style-type: none"> • Can children choose appropriate subtraction strategies to solve problems? • Can children use estimation to check an answer? • Can children apply subtraction strategies to solve problems in a real-life context? | <ul style="list-style-type: none"> • Slides • Worksheet 3A/3B/3C • Information Cards (FSD? activity only) • Worksheet 3D (FSD? activity only) |
| Lesson 4 | To solve problems using a variety of subtraction strategies. | While helping a school plan a fundraising event your class will work out profit margins of stalls and decide the best activities to have at the event, while staying within a given budget. They will encounter some mixed operation questions and have to apply their problem-solving skills to ensure they are using the right figures to answer the questions. | <ul style="list-style-type: none"> • Can children choose appropriate subtraction strategies to solve problems? • Can children use estimation to check an answer? • Can children use the inverse operation to check an answer? | <ul style="list-style-type: none"> • Slides • Worksheet 4A/4B/4C • Potential Stalls Sheets • Challenge Cards (FSD? activity only) • Tile Question Cards (FSD? activity only) • Decoration Question Cards (FSD? activity only) |
| Lesson 5 | To solve problems using a variety of methods and strategies. | In this final lesson your class will plan their own fundraising event. They will be challenged to apply all they know about keeping to a budget and increasing profit margins. | <ul style="list-style-type: none"> • Can children choose appropriate strategies to solve problems? • Can children use estimation/inverse operations to check an answer? • Can children apply strategies to solve problems in a real-life context? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C • Stock Sheet A/B/C • What Next Sheet A/B/C • Visitor Number Sheet • Budget Sheet (FSD? activity only) |

Calculating Compound Shapes: Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|--|---|--|
| Lesson 1 | To recognise that shapes with the same area can have different perimeters, and vice versa. | Children will consider the ways in which shapes of different dimensions may have the same area or the same perimeter. They may then investigate how altering the construction of shapes of a given area affects their perimeter. | <ul style="list-style-type: none"> Do children know how to find the area and perimeter of a rectangle? Do children know shapes with the same area can have different perimeters and vice versa? Can children work systematically to solve problems involving area and perimeter? | <ul style="list-style-type: none"> Slides Worksheet 1A/1B Question Cards 1A/1B/1C Challenge Card (FSD? activity only) Trundle wheels/tape measures (plenary) |
| Lesson 2 | To be able to calculate the perimeter and area of compound shapes. | Children will develop strategies for finding the area, and missing lengths of sides, of rectilinear compound shapes. They may then practise these strategies by calculating and measuring the perimeters and areas of compound shapes. | <ul style="list-style-type: none"> Can children find the area and perimeter of compound shapes by counting squares? Can children find the area of compound shapes? Can children find the perimeter of compound shapes? | <ul style="list-style-type: none"> Slides Worksheet 2A/2B/2C Squares and rectangles to draw around (FSD? activity only) Plain paper (FSD? activity only) |
| Lesson 3 | To be able to calculate the area of triangles and parallelograms. | Children will learn how to find the area of any triangle, then use this information to find the area of parallelograms and more complex compound shapes. | <ul style="list-style-type: none"> Can children find the area of triangles? Can children find the area of parallelograms? Can children find the area of compound shapes? | <ul style="list-style-type: none"> Slides Worksheet 3A/3B/3C Tangram Sheet (FSD? activity only) |
| Lesson 4 | To be able to calculate the volume of cubes and cuboids. | Children will use the formula length x width x height to calculate the volume of cuboids or of compound shapes constructed using only cuboids. Some children may explore ways in which cuboids of different dimensions may have the same volume. | <ul style="list-style-type: none"> Do children understand the difference between area and volume? Can children use the formula to work out the volume of cubes and cuboids? Can children work out the volume of compound shapes? | <ul style="list-style-type: none"> Slides Riddle Cards 4A/4B Challenge Cards 4A Volume Cards Worksheet 4A/4B (FSD? activity only) |
| Lesson 5 | To be able to estimate and compare the volume of cubes and cuboids. | Children will estimate the volumes of cuboids with one missing dimension, then compare the values of volumes given with different units of measurement, e.g. mm ³ , cm ³ , m ³ , km ³ . | <ul style="list-style-type: none"> Can children estimate the volume of cubes and cuboids? Can children compare the volume of cubes and cuboids? Can children calculate the volume of cubes and cuboids to check their estimates? | <ul style="list-style-type: none"> Slides Variety of cubes and cuboids (packaging) Sticky notes Volume Cards 5A/5B (FSD? activity only) Worksheet 5A (FSD? activity only) |

Parts and Proportion: Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|---|--|
| Lesson 1 | To compare and order fractions, including fractions greater than one. | Children will recap adding fractions with the same denominator, resulting in improper fractions. They will practise converting improper fractions to mixed numbers and consider why this is helpful. Children will also start to convert some fractions to decimals, again considering why this is helpful. | <ul style="list-style-type: none"> • Can children convert improper fractions to mixed number fractions? • Can children convert some fractions to decimal numbers? • Can children compare and order fractions, including those greater than one? | <ul style="list-style-type: none"> • Slides • Target Boards 1A/1B/1C • Target Number cards 1A/1B/1C • Big Ordering Challenge cards (FSD...? activity only) |
| Lesson 2 | To compare and order fractions by finding a common denominator. | Children are presented with a scenario in which two different fractions – with different denominators – of the same amount must be compared. They will then learn how to find the lowest common denominator of two or more fractions, so they may be more easily compared or ordered. | <ul style="list-style-type: none"> • Can children find the lowest common multiple of two different denominators? • Can children convert two different fractions so they have a common denominator? • Can children compare and order fractions by finding their common denominator? | <ul style="list-style-type: none"> • Slides • Worksheets 2A/2B/2C • Challenge Cards 2A–2C (FSD...? activity only) • Weighing scales, containers, rice or sand (FSD...? activity only) |
| Lesson 3 | To express related amounts as ratios, and solve ratio problems. | Children will consider how and why ratios are used, write ratios to represent related amounts, and change the scale of ratios where both sides of the ratio may be multiplied or divided by the same whole number. Some children will also solve trickier ratio problems requiring extra steps/calculations. | <ul style="list-style-type: none"> • Can children write ratios for given images and descriptions of related amounts? • Can children increase/decrease the scale of ratios where the values are divisible by the same amount? • Can children spot number patterns to solve some trickier ratio problems where the values are not divisible by the same amount? | <ul style="list-style-type: none"> • Slides • Demolition! sheet • Crash, Bash & Smash question cards • End Of The Line sheet (FSD...? activity only) |
| Lesson 4 | To compare, order and transform shapes by scale factors. | Children will recap various ways shapes on a grid may be transformed, then learn more about how they may be transformed by scaling. They will learn how a scale factor may be used to describe this type of transformation, then practise scaling polygons and rectilinear shapes by scale factors more, and less, than one. | <ul style="list-style-type: none"> • Can children estimate, just by looking, whether a shape transformed by a scale factor has increased/decreased? • Can children identify or draw shapes that have been transformed by common scale factors, e.g. $\frac{1}{4}$, $\frac{1}{2}$, 2, 4, 5, 10? • Can children calculate transformations by scale factors less than one, given as fractions and as decimal numbers? | <ul style="list-style-type: none"> • Slides • Worksheets 4A/4B/4C • Challenge Card 4 (FSD...? activity only) • Maths resources, construction toys, art software etc. (FSD...? activity only) |
| Lesson 5 | To solve problems involving the scale factor of shapes. | Children will identify common errors that may be made when transforming simple shapes or images by various scale factors. They will go on to learn how to identify the ratio of a transformed image, compared to the original. After that, children may either practise transforming drawings of everyday objects at different scales, identifying their ratios, or make clay sculptures at different scales. | <ul style="list-style-type: none"> • Can children identify ways in which shapes have been incorrectly transformed by given scale factors? • Can children work out ratios to describe shapes that have been transformed by given scale factors? • Can children make scale drawings or models at given scale factors and ratios? | <ul style="list-style-type: none"> • Slides • Worksheets 5A/5B • Challenge Card 5 (FSD...? activity only) • Weighing scales and clay (FSD...? activity only) |

Practising Multiplication and Division: Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|--|--|---|
| Lesson 1 | To be able to choose an appropriate method to solve multiplication and division problems. | Children are challenged to use their knowledge of multiplication and division to solve missing number problems. They are encouraged to consider various methods and choose the most appropriate. They are also challenged to find the highest and lowest possible answers by rearranging digits in multiplication and division statements. | <ul style="list-style-type: none"> • Can children use their understanding of multiplication tables to solve problems? • Can children use a variety of appropriate methods to solve multiplication and division problems? • Can children use reasoning and estimating to help them solve problems? | <ul style="list-style-type: none"> • Slides • Challenge Cards 1A/1B/1C • Worksheet 1A • Calculation Cards 1A/1B |
| Lesson 2 | To be able to use the formal written method of long multiplication. | Children will recap the formal long multiplication method by going through some examples as a class. They are then challenged to use their multiplication knowledge to solve calculations where the numbers have been replaced with letters. Children will need to use the key, then deduce facts to solve each one. | <ul style="list-style-type: none"> • Can children complete long multiplication calculations using the formal written method to multiply two two-digit numbers? • Can children complete long multiplication calculations using the formal written method to multiply a three-digit number by a two-digit number? • Can children use their understanding of the long multiplication method to solve problems? | <ul style="list-style-type: none"> • Slides • Challenge Cards 2A/2B/2C • Worksheet 2A/2B/2C (FSD? activity only) |
| Lesson 3 | To be able to use short division to divide numbers by one- and two-digit numbers. | Children will recap the short division method, then extend to looking at how to divide three- and four-digit numbers by two-digit numbers. They can then either practise the short division method by solving a crossword puzzle or work out the years of important historical events by solving division problems. | <ul style="list-style-type: none"> • Can children use short division to divide three-digit numbers by a single digit? • Can children use short division to divide numbers four-digit numbers by a single digit? • Can children use short division to divide three-digit numbers by a two-digit number? | <ul style="list-style-type: none"> • Slides • Worksheet 3A/3B/3C • Historical Event Cards (FSD? activity only) • Fact Hunt Sheet 3A/3B (FSD? activity only) |
| Lesson 4 | To be able to multiply increasingly large numbers by 11. | Children will explore the 11 times table beyond 11x12 to see if they can identify any patterns. They are then shown a handy trick that will allow them to multiply increasingly large numbers by 11. There are a variety of fun activities to consolidate this. | <ul style="list-style-type: none"> • Can children identify patterns? • Can children identify and use the strategy for multiplying by 11? • Can children check their answers using an appropriate method? | <ul style="list-style-type: none"> • Slides • Question Cards 4A/4B/4C • Time Tests (FSD? activity only) • Challenge Card (FSD? activity only) |
| Lesson 5 | To be able to solve problems involving multiplication and division. | Children are challenged to use multiplication and division to solve problems relating to distances between fictional planets. They are encouraged to think about which methods would be best to solve a variety of problems, including two-step problems, and consider how they can check their work for accuracy. | <ul style="list-style-type: none"> • Can children identify what a word problem is asking them to do? • Can children choose an appropriate method to solve word problems? • Can children check their answers for accuracy? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C • Clue Cards 5A/5B/5C • Planet Distance Chart sheet (FSD? activity only) • True or False Cards 5A/5B (FSD? activity only) |

Using Money : Maths : Year 6: Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|--|--|---|
| Lesson 1 | To add, subtract and order money, including negative amounts. | Children will recap and practise reading, writing, saying, adding, subtracting and ordering amounts of money, including negative amounts. | <ul style="list-style-type: none"> Can children read, write and say large amounts of money? Can children order amounts of money, including negative numbers? Can children use informal and formal written methods to add/subtract amounts of money, including calculations resulting in negative numbers? | <ul style="list-style-type: none"> Slides Worksheet 1A/1B/1C Money Run game board (FSD...? activity only) Dice and counters (FSD...? activity only) |
| Lesson 2 | To develop mental and written methods for multiplying money. | Children will recap and practise doubling amounts of money. They will also develop strategies for multiplying amounts of money by three or more. Children will go on to select appropriate informal or written methods for multiplying amounts in a variety of contexts. | <ul style="list-style-type: none"> Can children double small amounts of money mentally? Can children present simple money multiplication word problems as number sentences? Can children use written methods to find multiples of large amounts of money? | <ul style="list-style-type: none"> Slides Worksheet 2A/2B/2C Worksheet 2D (FSD...? activity only) Chip Shop cards (FSD...? activity only) |
| Lesson 3 | To develop mental and practical strategies for halving money. | Children will develop informal methods, including partitioning, to halve amounts of money. They may then go on to practise these methods, in some cases using play money to help or check. | <ul style="list-style-type: none"> Can children mentally halve small amounts in pounds and pence, finding remainders? Can children use informal written methods to help halve large amounts of money? Can children use notes and coins when dividing amounts, some with remainders? | <ul style="list-style-type: none"> Slides Worksheet 3A/3B/3C Maths Money: printable notes and coins × Tables Grid Challenge Cards 3 (FSD...? activity only) |
| Lesson 4 | To develop practical, mental and written strategies for dividing money. | Children will explore ways of quickly dividing money using practical strategies involving bank notes and coins. They will go on to recap and develop using short division to divide larger amounts of money, finding the smallest possible remainder in pence. | <ul style="list-style-type: none"> Can children divide amounts in whole pounds using short division? Can children divide amounts in pounds and pence using short division? Can children solve problems involving division of money or other measures of quantity? | <ul style="list-style-type: none"> Slides Worksheet 4A/4B/4C × Tables Grid Challenge Cards (FSD...? activity only) School Donation Sheets (FSD...? activity only) |
| Lesson 5 | To develop a variety of mental, informal and formal written methods for + - × ÷ money. | Children will consolidate their skills manipulating amounts of money through solving a variety of word problems and completing tasks by interpreting real data about family spending in different UK regions. | <ul style="list-style-type: none"> Can children identify what calculations are required to solve multi-step problems? Can children select appropriate methods for a variety of calculations involving money? Can children present their calculations and findings in a way that others can read and understand? | <ul style="list-style-type: none"> Slides Challenge Card 5A/5B/5C Worksheet 5 Shopping List sheet Family Spending Report (2014) (FSD...? activity only) Family Spending Challenge (FSD...? activity only) |

Mental Methods: Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|--|---|--|
| Lesson 1 | To recap and use a variety of mental strategies to solve problems involving all four operations. | Children will explore a range of different calculations and identify a range of strategies that can be used to solve these calculations mentally. Children will practise multiplying by 10 and 100 (including decimals), adding near doubles, using adjustment methods and partitioning numbers to make calculations simpler. | <ul style="list-style-type: none"> • Can children use mental strategies to solve addition and subtraction problems? • Can children use mental strategies to solve multiplication and division problems? • Can children use mental strategies to solve problems involving decimals? | <ul style="list-style-type: none"> • Slides • Calculation Web 1A/1B/1C • Skill Sets A to F (FSD? activity only) |
| Lesson 2 | To be able to use and understand the role of brackets in number sentences. | Children will be introduced to the concept of brackets within a calculation, focussing on solving the calculation within the brackets first. Children will continue employing strategies to solve problems mentally wherever possible. | <ul style="list-style-type: none"> • Do children understand the function of brackets within a number sentence? • Can children solve a number sentence that includes brackets? • Can children express and solve real-life scenarios using number sentences that include brackets? | <ul style="list-style-type: none"> • Slides • Top Trump Cards 2A/2B/2C • Number Sentences 2A/2B (FSD? activity only) |
| Lesson 3 | To know the order of operations and use this when solving problems. | Children will build on their understanding of the function of brackets within a calculation by exploring the order of operations. Using multiple operations within a number sentence, children will work mentally to solve problems, identifying which parts of the calculation should be completed first and understanding why the order of operations is important. | <ul style="list-style-type: none"> • Do children understand why the order of operations is important? • Can children solve problems mentally using the correct order of operations? • Can children investigate how brackets can change the outcome of a number sentence? | <ul style="list-style-type: none"> • Slides • Highlighters • Worksheet 3A/3B/3C • Challenge Card 3A/3B/3C • Domino Cards 3A/3B (FSD? activity only) |
| Lesson 4 | To be able to use the correct order of operations in calculations including all four operations. | Children will develop their fluency in using the correct order of operations by exploring what happens when there is more than one multiplication or division calculation in a number sentence. They will learn how to work from left to right to ensure the calculation is solved correctly, and continue to use mental methods wherever possible to solve increasingly challenging problems. | <ul style="list-style-type: none"> • Can children remember the order of operations? • Can children solve problems accurately using the correct order of operations? • Can children translate word problems into number sentences to be solved? | <ul style="list-style-type: none"> • Slides • Clue Cards 4A/4B/4C • Code Translator 4A/4B/4C • Key Sheet and Key Cards • Challenge Cards 4A/4B • Worksheet 4A (FSD? activity only) |
| Lesson 5 | To be able to solve problems involving increasingly large numbers mentally. | Children will recap how to multiply numbers up to 12 by a multiple of 10 before exploring how to multiply multiples of powers of 10 together, such as 50×600 . They will recall multiplication facts for all times tables to solve such problems mentally. | <ul style="list-style-type: none"> • Can children recall multiplication facts for all times tables up to $\times 12$? • Do children understand the effect of multiplying multiples of powers of 10? • Can children solve problems with increasingly large number using appropriate mental strategies? | <ul style="list-style-type: none"> • Slides • Game Board 5A/5B/5C • Number Cards 5A/5B/5C • Calculation Cards 5A/5B/5C (FSD? activity only) • Worksheet 5A (FSD? activity only) |

Calculators : Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|---|---|--|
| Lesson 1 | To use calculators to solve calculations including several operations. | Children will learn about the order of operations, then draw brackets around parts of calculations to show which parts are solved first. They may also explore ways in which placing brackets around other parts of a calculation can affect the total. | <ul style="list-style-type: none"> Can children identify the order of operation when solving calculations? Can children draw brackets around the parts of a calculation which, in the standard order of operation, are calculated first? Can some children find higher/lower totals by drawing brackets around different parts of a calculation? | <ul style="list-style-type: none"> Slides Worksheets 1A/1B/1C Flashcards 1 Answer sheets Squared paper Calculators |
| Lesson 2 | To use calculators to solve calculations with several different operations and numbers with up to two decimal places. | Children will build on their understanding of the order of operations, using calculators to solve long calculations including numbers with up to two decimal places. | <ul style="list-style-type: none"> Can children identify the order of operation in long calculations? Can children use mental/written methods to solve $n.nn-n.nn$ or $n.nn \times n$ calculations? Can children identify reasons for, and advantages of, using a calculator for certain types of calculation? | <ul style="list-style-type: none"> Slides Worksheets 2A/2B/2C Squared paper Answer sheets <p>FSD...? activity only:</p> <ul style="list-style-type: none"> Challenge Card 2 Game Board 2 A variety of maths resources |
| Lesson 3 | To identify the correct order of operations for long calculations including powers, and use calculators to solve them. | Continuing to build on their understanding of the order of operations, children will use calculators to solve long calculations including square numbers and other powers. Some children may also find missing operations in long calculations. | <ul style="list-style-type: none"> Can children identify the correct order of operation for long calculations? Can children solve long calculations including powers? Can children construct long calculations including at least two different operations? | <ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C/3D Squared paper Calculators Answer sheets |
| Lesson 4 | To convert fractions to decimals, and use calculators to solve calculations including fractions. | Continuing to build on their understanding of the order of operations, children will use calculators to convert fractions to decimals, then solve long calculations including fractions. | <ul style="list-style-type: none"> Can children choose and use appropriate written methods or solving calculations? Can children convert fractions to decimals using calculators? Can children solve calculations including all four operations, whole numbers and fractions? | <ul style="list-style-type: none"> Slides Worksheets 4A/4B/4C/4D Squared paper Calculators Answer sheets |
| Lesson 5 | To solve multi-step problems choosing appropriate methods, including using calculators. | Children will be reminded that they can choose appropriate methods (mental/written/calculator) as they demonstrate their understanding of the week's learning by solving long, tricky calculations - either provided, or generated by themselves. | <ul style="list-style-type: none"> Can children decide on appropriate operations and methods when solving multi-step problems? Can children apply their knowledge of the order of operations when solving problems? Can children use calculators and mental/written methods, where appropriate, to solve and check their calculations? | <ul style="list-style-type: none"> Slides Bungling Builders Cards 5 Calculation Clues 5 Squared paper Calculators Challenge Cards 5 (FSD...? activity only) A variety of measuring equipment, e.g. tape measures, trundle wheels, scales (FSD? only) Answer sheets |

Solving Data Problems: Maths : Year 6 : Autumn Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|--|---|--|
| Lesson 1 | To interpret data presented in tables and pie charts. | Children will recap features of pie charts, identify mistakes in pie charts, read and interpret data presented in pie charts, and learn how to calculate percentage amounts of a given total. They will then go on to answer questions and explain their own interpretations of data presented in a variety of ways, including pie charts. | <ul style="list-style-type: none"> Can children relate data presented in tables and pie charts? Can children solve problems by interpreting pie charts? Can children find percentages of an amount? | <ul style="list-style-type: none"> Slides Worksheets 1A/1B/1C Clothes Shop Challenge sheets 1A–1C (FSD...? activity only) |
| Lesson 2 | To convert proportions of a total amount to percentages and present them using pie charts. | Children will develop strategies, using prior knowledge of degrees and angles, to sketch 'estimated' pie charts by interpreting given sets of data. They will then practise making accurate pie charts, including those where it may be necessary to round degrees to the nearest whole number. | <ul style="list-style-type: none"> Can children use knowledge of percentages and angles to make estimated drawings of pie charts? Can children find percentages of proportions, including percentages of 360°? Can children use a protractor to draw pie charts? | <ul style="list-style-type: none"> Slides Airport Challenge sheets 2A/2B/2C Station Clues cards (FSD...? activity only) |
| Lesson 3 | To interpret and construct line graphs, including those with two variables. | Children will explore how line graphs are useful for showing changes over time, looking at both continuous and discrete data. They will plot continuous and discrete data on line graphs, including those with two variables, and interpret the information shown. There is also the opportunity to solve problems involving the information shown on a variety of line graphs. | <ul style="list-style-type: none"> Can children identify differences between discrete and continuous variables? Can children draw scales and plot data on line graphs? Can children solve problems by interpreting line graphs? | <ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C Graph paper Business Report Challenge sheet (FSD...? activity only) Charts and Graphs 3A–3D (FSD...? activity only) |
| Lesson 4 | To interpret and draw conversion graphs. | Children will start by looking at how simple conversions can be solved using a four-cell ratio model before quickly finding out that this is only useful for simple conversions. They will then study a variety of conversion graphs. Children are encouraged to explain what they show before learning how to create their own accurate conversion graphs. | <ul style="list-style-type: none"> Can children solve problems by interpreting conversion graphs? Can children choose an appropriate scale for conversion graphs? Can children accurately draw conversion graphs? | <ul style="list-style-type: none"> Slides Challenge Card 4 Graph paper Converting Currency sheet (FSD...? activity only) Internet access (FSD...? activity only) |
| Lesson 5 | To interpret and construct pie charts, line graphs and conversion graphs. | Children will consolidate their understanding of pie charts, line graphs and conversion graphs in this lesson as they solve a variety of problems. Children are challenged to create a report either from given data or from data about themselves. They will need to decide how to present each set of data, accurately draw pie charts, line graphs and conversion charts, and interpret the information they have collated. | <ul style="list-style-type: none"> Can children construct and interpret pie charts? Can children construct and interpret line graphs? Can children construct and interpret conversion graphs? | <ul style="list-style-type: none"> Slides Annual Report sheets 5 Annual Report form Lined paper and graph paper Challenge Card 5 (FSD...? activity only) |

Working with Numbers: Maths : Year 6 : Spring Term

| | 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. | <ul style="list-style-type: none"> • Can the children multiply and divide by 10? • Can they multiply and divide by 100? • Can they multiply and divide by 1000? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • Can children order and compare positive and negative numbers? • Can children calculate intervals across zero? • Can children solve problems involving negative numbers? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C/5D • Fact Sheet 5A/5B/5C • Country Cards (FSD? activity only) • Access to the internet (FSD? activity only) |

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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • Slides • Challenge Cards 3A/3B/3C • Butterfly 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • Slides • Game Board 5A/5B/5C • Game Cards 5A/5B • Help Sheet • Calculation Cards (FSD? activity only) • Target Cards (FSD? activity only) |

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

| | 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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). | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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). | <ul style="list-style-type: none"> • Could the children perform a simple one-step translation? • Could they do two-step translations? • Could they describe how shapes have been translated? | <ul style="list-style-type: none"> • 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). | <ul style="list-style-type: none"> • Can the children rotate a simple shape 90 degrees? • Can they rotate shapes 90 and 180 degrees? • Can they rotate shapes around any point? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C • Squared paper • Picture Cards (FSD? activity only) |

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

| | 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> Can 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> Slides Worksheet 5A/5B Challenge Cards Discount Day Instructions, Price Tags and Items (FSD...? activity only) |

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

| | 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. | <ul style="list-style-type: none"> • Can the children recognise multiples to the 10th one? • Can they find common multiples? • Can they find prime numbers to 100? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. $21 \times 13: (20 \times 13) + (1 \times 13)$. | 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. | <ul style="list-style-type: none"> • Can the children multiply by 9 and 11 mentally? • Can they multiply by 21 and 19 mentally? • Can they multiply by 49 and 51? | <ul style="list-style-type: none"> • 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. $48 \div 5 = 9$ r3). They may also use a distribution method for solving division calculations and write number sentences using brackets to show this method. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C • Share It! Instructions and Cards (FSD? activity only) |

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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> Slides Worksheet 5A/5B/5C Formula Cards Solve & Check Cards A/B (FSD? activity only) |

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

| | 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. | <ul style="list-style-type: none"> • Can the children construct simple bar charts? • Can they construct and interpret bar and line graphs? • Can they begin to understand conversion graphs? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • Could the children find the mode and range? • Could they find the range, mode, median and mean? • Could they interrogate the data? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • Can the children use correct probability language? • Can they carry out a probability investigation? • Can they use terms like 1:6? | <ul style="list-style-type: none"> • Slides • Statement Cards • Worksheet 5A/5B/5C/5D • Coins • Dice • Access to computers (FSD? activity only) |

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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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. | <ul style="list-style-type: none"> 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? | <ul style="list-style-type: none"> 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

| | 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C • Division Crossword 5A/5B (FSD? activity only) |

Time and Money: Maths : Year 6 : Spring Term

| | 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • 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? | <ul style="list-style-type: none"> • Slides • Worksheet 5A/5B/5C • Infographic sheet (FSD? activity only) • Question Cards (FSD? activity only) |

Comparing and Ordering Numbers: Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|--|---|--|
| Lesson 1 | To write and identify positive numbers to 10,000,000 | Children will recap what an eight-digit number is. The children's ability to write numbers as numerals and words will be challenged through a variety of activities. They will also practise identifying the value of each digit in a number. | <ul style="list-style-type: none"> • Can they identify whole numbers to 10,000,000? • Can they write whole numbers to 10,000,000? • Do they understand the place value of each digit? | <ul style="list-style-type: none"> • Slides • Worksheet 1A/1B/1C • Place Value Poster • Matching Cards (FSD? activity only) • Question Cards A/B (FSD? activity only) |
| Lesson 2 | To order positive numbers to 10,000,000 | Children will order positive numbers with up to two decimal places to 10,000,000. They will order groups of four numbers. During the plenary they will order race times from the Olympics and find the difference between different competitors' times | <ul style="list-style-type: none"> • Can they identify numbers to 10,000,000? • Can they order numbers to 10,000,000? • Do they understand the place value of each digit? | <ul style="list-style-type: none"> • Slides • Worksheet 2A/2B/2C • Challenge Cards A/B (FSD? activity only) |
| Lesson 3 | To compare positive numbers to 10,000,000 | Children will find the difference between larger positive numbers. They will complete subtraction calculations to find the difference, checking their answers using the inverse. They can also time their own sporting events and calculate the difference between race times. | <ul style="list-style-type: none"> • Can they identify and order numbers to 10,000,000? • Can they compare numbers to 10,000,000? • Can they find the difference between two numbers? | <ul style="list-style-type: none"> • Slides • Worksheet 3A/3B/3C |
| Lesson 4 | To use negative numbers in context and calculate intervals across zero. | Children will apply their knowledge of finding the difference between two numbers when calculating intervals across zero. They will be introduced to negative numbers through temperatures, including temperatures with decimal places. They will find the difference using a number line to support them as they calculate intervals across zero, expressing their answers using an appropriate statement, such as $5.5 - (-1) = 5.6$. | <ul style="list-style-type: none"> • Can they identify and name positive and negative numbers? • Can they compare positive and negative numbers? • Can they find the difference between two positive and negative numbers? | <ul style="list-style-type: none"> • Slides • Worksheet 4A/4B/4C • Above Sea Level Cards (FSD? activity only) • Below Sea Level Cards (FSD? activity only) |
| Lesson 5 | To solve problems involving writing, ordering and comparing positive and negative numbers. | Children will apply the skills they have used throughout the week to solve practical problems. They will need to work out what the question is asking them to find out and choose an appropriate method to solve the problems, which include ordering high scores, ordering javelin throws, finding the difference between temperatures and creating their own word problems. | <ul style="list-style-type: none"> • Can they write and name positive and negative numbers? • Can they identify and compare positive and negative numbers? • Can they decide what a question is asking them to do? | <ul style="list-style-type: none"> • Slides • Question Cards A/B/C • Number Cards A/B (FSD? activity only) • Challenge Cards (FSD? activity only) • Worksheet (FSD? activity only) • Answer Sheet (FSD? activity only) |

Ratio, Percentages and Proportion: Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|--|--|
| Lesson 1 | To use fractions and percentages to describe parts of a whole. | Children will study a variety of missing number word problems involving calculating parts of a whole expressed as fractions or percentages. They will develop strategies for visualising and solving these problems, as well as learning a method for simplifying fractions. | <ul style="list-style-type: none"> Can children solve missing number problems involving fractions? Can children solve missing number problems involving percentages? Can children identify when ratios may be more appropriate than fractions or percentages when describing related values? | <ul style="list-style-type: none"> Slides Challenge Rings 1A/1B/1C sheets Challenge Cards 1A/1B/1C Calculators Worksheet 1 (FSD...? activity only) Pony beads (optional) (FSD...? activity only) |
| Lesson 2 | To find and use ratios when reading maps and plans. | Children will consider why ratios with a '1' are helpful, particularly when reading maps or solving problems involving scale. They will also develop methods for calculating distances using maps, including those where the gridlines are different to the scale given. | <ul style="list-style-type: none"> Can children use ratios when reading maps? Can children use ratios when reading detailed, small-scale maps and plans? Can some children draw simple plans according to a given scale? | <ul style="list-style-type: none"> Slides Worksheets 2A/2B/2C Challenge Card 2 (FSD...? activity only) Big paper, colouring pencils, felts or paints, sticky notes (FSD...? activity only) |
| Lesson 3 | To use ratios and multiplication and division facts to solve proportion problems. | Children will develop strategies for solving ratio problems such as increasing/decreasing the proportions of ingredients in recipes. They will then practise the skills they have learned, either by solving word problems or by calculating ratios during a practical, group activity. | <ul style="list-style-type: none"> Can children use their times tables knowledge to recognise relationships between numbers in ratio scaling problems and suggest ways of solving them? Can children solve one-step scaling problems by finding or recognising common factors? Can some children solve two-step scaling problems involving both dividing and multiplying? | <ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C Bunting Challenge 3A/3B (FSD...? activity only) Bunting Design 3A/3B/3C/3D (FSD...? activity only) Ribbon/string, scissors, glue (FSD...? activity only) |
| Lesson 4 | To interpret data, and solve problems, by finding percentages. | Children will build on prior learning by comparing, developing and practising strategies for solving tricky percentage problems using mental and written methods. They will apply their knowledge by solving a variety of word problems, or explore ways in which pocket calculators and calculator apps may be used to find 'tricky' percentages of amounts. | <ul style="list-style-type: none"> Can children use a mathematical model to solve missing number problems, including those involving percentages? Can children interpret data given as percentages? Can children interpret percentage readouts on a calculator by rounding and/or approximating? | <ul style="list-style-type: none"> Slides Percentage Problem cards 4A/4B/4C Challenge Cards 4A/4B/4C Calculating Percentages Fact Sheet (FSD...? activity only) A variety of calculators and calculator apps on desktops, tablets and other devices (FSD...? activity only) |
| Lesson 5 | To solve problems involving fractions, percentages and ratios. | Children will recap various methods for solving missing number problems involving fractions, ratios and percentages. They will then solve a variety of word problems, choosing methods to solve them. | <ul style="list-style-type: none"> Can children select and use an appropriate model to help them visualise and solve a missing number problem? Can children solve trickier missing number problems involving two or more steps to solve them? Can children identify when it may be more appropriate to use a calculator to solve a missing number problem? | <ul style="list-style-type: none"> Slides Worksheets 5A/5B/5C Calculators Treasure Hunt Cards 5A-5F (FSD...? activity only) Ratio...Master! Certificates (FSD...? activity only) Treasure Hunt Challenge 5 sheet (FSD...? activity only) |

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|--|--|---|
| Lesson 1 | To develop and improve fluency when finding equivalent fractions, including simplifying fractions. | Children will learn, practise and develop a variety of strategies for finding equivalent fractions, simplifying fractions and converting percentages to fractions. They may then either undertake a variety of challenges which test their skills, or apply their learning to a 'real world' context where data must be made more meaningful. | <ul style="list-style-type: none"> Can children recognise some common fraction/percentage/decimal equivalents? Can children convert percentages to fractions? Can children use a variety of methods to find equivalent fractions, including simplifying fractions? | <ul style="list-style-type: none"> Slides Task Table 1 Activity 1 Cards Supporting Resources Poster Challenge Card 1 (FSD...? activity only) |
| Lesson 2 | To associate a fraction with division and calculate decimal fraction equivalents. | Children will learn a short division method for converting fractions to decimal numbers, including how, and when, to 'stop' and either round the calculated amount to three or fewer decimal places, or show that it is a recurring number using the correct symbol. They may then either solve a number of conversion calculations or play a fractions to decimals game. | <ul style="list-style-type: none"> Can children use place value knowledge to calculate decimal fraction equivalents of tenths and hundredths unit fractions? Can children then multiply decimal fraction equivalents of unit fractions to find other decimal fraction equivalents? Can children use short division to calculate decimal fractions? | <ul style="list-style-type: none"> Slides Dividing Fractions Poster/Table Mat Worksheets 2A/2B/2C Fractions to Decimals Estimating game board and cards, plus counters and one calculator per group (FSD...? activity only) |
| Lesson 3 | To convert decimals to fractions, simplifying them when it is appropriate, or helpful, to do so. | Children will learn and practise a method for converting decimal numbers (less than one) to fractions and percentages, simplifying them where possible. They may then either solve a variety of conversion calculations or devise and test their own decimal conversion game. | <ul style="list-style-type: none"> Can children multiply both parts of a division calculation by 10, 100, 1000 etc.? Can children recognise that multiplying a decimal number and its divisor of 1 in this way converts it to a fraction? Can children simplify fractions by finding their lowest common multiple? | <ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C Challenge Card 3 (FSD...? activity only) Counters and dice (FSD...? activity only) |
| Lesson 4 | To use a variety of methods for comparing and converting fractions, decimals and percentages. | Children will recap the skills they have learnt and developed in previous lessons, then undertake tasks designed to help them consolidate their learning regarding comparing and converting fractions, decimals and percentages. | <ul style="list-style-type: none"> Can children recall a variety of strategies for comparing and converting fractions, decimals and percentages? Can children identify areas of their learning which are more, and less, secure? Can children select appropriately challenging questions when practising comparing and converting fractions, decimals and percentages? | <ul style="list-style-type: none"> Slides Quiz Cards 4A/4B/4C Worksheet 4 Carroll Diagrams 4A–4F (FSD...? activity only) |
| Lesson 5 | To multiply one-digit numbers with up to two decimal places by whole numbers. | Children will learn a three-step method for multiplying numbers with two decimal places which incorporates their previously learnt skills of using place value knowledge, times tables knowledge and formal written multiplication. They may then either solve a variety of multiplication calculations or apply what they have learnt during a practical Maths challenge. | <ul style="list-style-type: none"> Can children use times tables knowledge, and knowledge of common decimal/fraction equivalents, to multiply some numbers with two decimal places mentally? Can children use place value knowledge to simplify multiplication of numbers with up to two decimal places? Can children use written multiplication methods to multiply three-, four- or five-digit numbers? | <ul style="list-style-type: none"> Slides Worksheets 5A/5B/5C Car Park Challenge (FSD...? activity only) Tape measures or trundle wheels (FSD...? activity only) |

Algebra: Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|---|--|
| Lesson 1 | To use simple formulae involving addition and subtraction. | Children will learn what algebra is and why it is used. They will find the value of a variable using simple formulae and will move on to substituting values into formulae. Where necessary, they will use the method of finding the difference, rather than rearranging the formula, to find missing variables. | <ul style="list-style-type: none"> Do they understand that the value of 'x' can change? Can they use their mathematical knowledge to find the value of 'x'? Do they understand that any letters can be used in algebraic formulae? | <ul style="list-style-type: none"> Slides Worksheet 1A/1B/1C Instruction Sheet (FSD? activity only) Formula Flip Book Template (FSD? activity only) Sticky notes, scissors (FSD? activity only) |
| Lesson 2 | To express missing number problems algebraically. | Children will express a variety of problems algebraically, exploring the different ways a problem can be written. They will be challenged to read word problems and express them algebraically before solving them. | <ul style="list-style-type: none"> Can they express number problems algebraically? Can they apply their mathematical knowledge to solve questions involving algebra? Do they understand equations can be expressed in different ways? | <ul style="list-style-type: none"> Slides Worksheet 2A/2B/2C/2D Number Cards X/Y/Z (FSD? activity only) |
| Lesson 3 | To use simple formulae involving multiplication. | Children will discover the difference between an equation and a formula. They will be introduced to the formula they need to use to find the area of square and rectangular quadrilaterals. They will find out how multiplication is expressed in a formula and apply this knowledge when finding the area of the quadrilaterals. | <ul style="list-style-type: none"> Can they use a formula in context? Can they check their answer is correct? Do they understand how to rearrange the formula to find a missing value? | <ul style="list-style-type: none"> Slides Worksheet 3A/3B/3C Challenge Cards A/B (FSD? activity only) Squared paper and rulers (FSD? activity only) |
| Lesson 4 | To generate and describe linear number sequences. | Children will explore simple linear equations. After using the equation to find values of 'y', they will plot the points on a graph and discuss the shape of line they form. They will then use their graph and the equation to work out and check the values of different variables. | <ul style="list-style-type: none"> Do they understand when a formula is asking them to multiply? Can they use the formula in context? Can they use their mathematical knowledge to create formulae? | <ul style="list-style-type: none"> Slides Worksheet 4A/4B/4C Graph and Table Sheet A/B/C (FSD? activity only) |
| Lesson 5 | To use simple formulae involving multiplication and division. | Children will be introduced to division in algebra. They will find the area of right-angled triangles using a formula and be challenged to find the area of a square that has had a triangular shape removed from its corner. | <ul style="list-style-type: none"> Do they understand the letters in the formula can be any number? Can they apply their maths skills to answer questions involving algebra? Do they understand the order they need to use the numbers in this equation? | <ul style="list-style-type: none"> Slides Worksheet 5A/5B/5C Area Cards (FSD? activity only) |

Geometric Shapes: Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|---|---|--|
| Lesson 1 | To illustrate and name parts of circles. | Children will learn how to measure the radius, diameter and circumference of a circle, then practise drawing and measuring diameter and radius lines inside circles. | <ul style="list-style-type: none"> Do children know what the circumference, diameter and radius of a circle are? Do children know that the diameter is twice the radius? Can children use the radius to draw a circle? | <ul style="list-style-type: none"> Slides Worksheets 1A/1B/1C Pairs of compasses Measuring Circles (FSD? activity only) Tape measures, trundle wheels, chalk, string (FSD? activity only) |
| Lesson 2 | To recognise angles and find missing angles. | Children will build on their prior knowledge of angles by developing and practising strategies for accurately measuring reflex angles. They will then use know facts about angles on a straight line and around a point to derive missing angles. | <ul style="list-style-type: none"> Can children explain the differences between acute, obtuse and reflex angles? Can children recognise angles where they meet at a point and on a straight line? Can children find missing angles where they meet at a point or on a straight line? | <ul style="list-style-type: none"> Slides Worksheets 2A/2B/2C Bee-Bots/Turtles/Roamers (FSD? activity only) |
| Lesson 3 | To draw 2-D shapes using given dimensions and angles. | Children will practise drawing irregular and regular polygons accurately using rulers, protractors and/or set squares. They will also practise drawing circles accurately using rulers and pairs of compasses. | <ul style="list-style-type: none"> Can children use rulers to accurately draw the sides of 2-D shapes? Can children use protractors to accurately draw the angles of 2-D shapes? Can children use pairs of compasses to accurately draw circles (and segments of circles)? | <ul style="list-style-type: none"> Slides Worksheet 3A/3B/3C Challenge Card 3A |
| Lesson 4 | To recognise and describe simple 3-D shapes. | Children will build on their understanding of the properties of 3-D shapes, using mathematical vocabulary to describe them. They will also draw isometric 3-D shapes based on given descriptions. | <ul style="list-style-type: none"> Can children describe some common properties of 3-D shapes? Can children identify specific 3-D shapes according to their properties? Can children match and draw 3-D shapes according to descriptions of their properties? | <ul style="list-style-type: none"> Slides Worksheets 4A/4B/4C Isometric paper Describing Shapes (FSD? activity only) Wooden/plastic 3-D shapes (FSD? activity only) A bag (must be opaque) (FSD? activity only) |
| Lesson 5 | To recognise, describe and build simple 3-D shapes, including making nets. | Children will study exploded diagrams of polyhedrons and identify their plane surfaces. They may then construct 3-D shapes by making wireframes or nets. | <ul style="list-style-type: none"> Do children recognise that polyhedrons have faces which are 2-D shapes? Can children visualise what 3-D shape a net will make? Can children design and build 3-D wireframes and nets according to descriptions of a shape? | <ul style="list-style-type: none"> Slides Worksheets 5A/5B/5C 3-D construction toys, e.g. cocktail sticks and marshmallows, K'NEX, Polydron Cereal Box Challenge (FSD? activity only) A variety of cardboard packaging (FSD? activity only) Card, scissors, glue, sticky tape (FSD? activity only) |

More Multiplication and Division: Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|---|---|
| Lesson 1 | To be able to choose appropriate multiplication and division methods for solving a variety of calculations. | In preparation for the work in the lessons ahead, children review the methods for formal short and long multiplication and division. They will be reminded of the necessary steps to solve each type of calculation before solving some missing number problems. They will then work independently to consolidate their understanding of these processes. | <ul style="list-style-type: none"> • Can children use the formal methods of short multiplication and short division? • Can children use the formal methods of long multiplication and long division? • Can children choose which method is most appropriate for solving different calculations? | <ul style="list-style-type: none"> • Slides • Calculation Cards • Worksheet 1A/1B/1C • Help Sheet • Game Sheet (FSD? activity only) • Dice (FSD? activity only) |
| Lesson 2 | To be able to use multiplication and division to solve problems. | Beginning the holiday theme in this lesson, children are challenged to watch a short animation about a journey on a plane and use the information given to solve a variety of multiplication and division problems. In their independent learning they will then solve similar problems from a description of a plane journey. Alternatively, they can help an airline work out how many seats were sold on their flights and how much money was made from some given information. | <ul style="list-style-type: none"> • Can children identify important information to work out what the question is asking them to solve? • Can children choose an appropriate operation and method to solve a variety of problems? • Can children check reasonableness of their answers using estimation? | <ul style="list-style-type: none"> • Slides • Note Sheet (input) • Zoe on a Plane (mp4) • Holiday Comprehension Cards 2A/2B/2C • Holiday Comprehension 2A/2B/2C • Worksheet 2A/2B/2C (FSD? activity only) |
| Lesson 3 | To be able to use multiplication and division to solve problems. | The slides in this lesson introduce your class to a character who needs help choosing a hotel for her holiday. Children must solve various calculations to help her determine which hotel would be most appropriate. They can also help feuding hoteliers determine whose hotel made the most profit. During their independent work, children will solve a variety of similar problems, using long and short multiplication and division. | <ul style="list-style-type: none"> • Can children use given data to find the solution to a problem? • Can children choose appropriate operations and methods to solve a variety of problems? • Can children use estimation to check the reasonableness of their answers? | <ul style="list-style-type: none"> • Slides • Hotel Data Card • Worksheet 3A/ • Challenge Card 3A/3B/3C • Sibling Rivalry Card 3A/3B (FSD? activity only) |
| Lesson 4 | To be able to use long division in the context of money, expressing remainders as decimals. | Children help a family allocate their spending money for their holiday in this lesson as they learn how to use decimals to solve long division problems involving remainders. Children are shown how to add zeros after a decimal to the dividend to help express remainders, and how to round a decimal appropriately for the context (in this instance, money). They can then use what they have learnt to work out how much various holiday activities cost, or to complete a tricky decimal division challenge. | <ul style="list-style-type: none"> • Can children use the long division method appropriately? • Can children solve use interpret remainders as decimals in long division calculations? • Can children use knowledge of long division and other operations to solve problems? | <ul style="list-style-type: none"> • Slides • Activity Sheet 4A/4B/4C • Price Card 4A/4B • Challenge Cards 4A/4B/4C (FSD? activity only) |
| Lesson 5 | To be able to use a variety of operations and methods to plan a holiday. | Children are challenged to plan their own holiday in this lesson. They can choose who they travel with and are given a set amount of money per person. From three different destinations, they must then choose the best flights, accommodation and activities for their budget and requirements. Alternatively, they can help a family work out these problems based on given criteria. | <ul style="list-style-type: none"> • Can children solve problems involving all four operations? • Can children identify what they need to do in order to solve a problem and take sensible steps to solve it? • Can children make decisions based on answers to calculations? | <ul style="list-style-type: none"> • Slides • Holiday Planners • Worksheet 5A/5B/5C/5D • Family Cards (FSD? activity only) |

More about Algebra: Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|---|---|--|---|
| Lesson 1 | To use simple equations. | Children will recap what algebra is and why it is used. They will find the value of a variable using simple equations and will move on to rearranging and balancing equations to prove their answers. They will also be encouraged to solve equations where there are several possible answers. | <ul style="list-style-type: none"> • Can children solve simple equations involving addition or subtraction? • Can children solve simple equations involving multiplication or division? • Do children understand that the letter in an equation is a variable? | <ul style="list-style-type: none"> • Slides • Worksheet 1A/1B/1C • Equation Cards (FSD? activity only) • Number Cards X/Y (FSD? activity only) |
| Lesson 2 | To use formulae to find the area of a triangle. | Children will explore different formulae to find the area of a triangle and find out why they work. During the plenary they will be challenged to come up with different ways to find the area of a rhombus. This will encourage them to apply their understanding of shape and algebra and gain a deeper understanding. | <ul style="list-style-type: none"> • Can children use a simple formula to find the area of a triangle? • Do children understand why the formula to find the area of a triangle is divided by two? • Do children understand that the letter in an equation is a variable? | <ul style="list-style-type: none"> • Slides • Worksheet 2A/2B/2C • Triangle Cards (FSD? activity only) • Instruction Sheet (FSD? activity only) • Squared paper, rulers, scissors (FSD? activity only) |
| Lesson 3 | To use formulae to find the length of the sides of a triangle. | Children will be introduced to Pythagoras' Theorem. They will find out why the formula works and apply it to find the missing lengths of right-angled triangles. They will then be challenged to find the perimeter of the shapes. | <ul style="list-style-type: none"> • Can children use a formula to find the length of the longest side of a triangle? • Can children use a formula to find the length of the any side of a triangle? • Do children understand that the letter in an equation is a variable? | <ul style="list-style-type: none"> • Slides • Calculators • Worksheet 3A/3B/3C • Shape Cards A/B (FSD? activity only) |
| Lesson 4 | To use formulae to find the area and the circumference of a circle. | Children will be introduced to pi and the symbol that is used to represent it. They will be encouraged to substitute values into the given formula to find the area or the circumference of a circle. They will become more confident about the relationship between the diameter and radius of a circle and use this knowledge when problem solving. | <ul style="list-style-type: none"> • Can children use a simple formula to find the area of a circle? • Can children use a simple formula to find the circumference of a circle? • Do children understand that the letter in an equation is a variable? | <ul style="list-style-type: none"> • Slides • Calculators • Worksheet 4A/4B/4C/4D • Race Track Cards (FSD? activity only) |
| Lesson 5 | To use formulae to convert temperatures from Fahrenheit to Celsius. | Children will explore the relationship between Celsius and Fahrenheit by converting temperatures. They will substitute values into a given formula to find out what different USA temperature records are in degrees Celsius. The plenary consolidates their understanding of algebra and how to use it to solve problems. | <ul style="list-style-type: none"> • Can children use a formula that involves multiplication? • Can children use a formula that involves division? • Do children understand that the letter in an equation is a variable? | <ul style="list-style-type: none"> • Slides • Calculators • Worksheet 5A/5B • Graph paper, rulers • Climate Cards (FSD? activity only) • Follow Me Cards (Plenary only) |

Factors Multiples and Primes : Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|---|---|---|
| Lesson 1 | To use factors and number facts to solve problems. | Children will use mathematical terms to explain what factors, products, multiples and integers are. They will then find and record factors and multiples of numbers. The lesson concludes by challenging the children to share what they know about a given number. | <ul style="list-style-type: none"> • Can children explain what factors and products are? • Can children explain what multiples and integers are? • Are children able to explain how they know something? | <ul style="list-style-type: none"> • Slides • Sieve of Eratosthenes Video (Starter only) • Worksheet 1A/1B/1C • Game Sheet (FSD...? activity only) • Help Sheet (FSD...? activity only) |
| Lesson 2 | To make and use prime factor trees. | Children will explain what prime numbers and composite numbers are, as well as giving examples of them. They will become familiar with and use a prime factors multiplication grid while creating and completing prime factor trees. | <ul style="list-style-type: none"> • Can children identify prime numbers? • Can children use division to find factors? • Can children apply number facts to find prime factors? | <ul style="list-style-type: none"> • Slides • Prime Factors Multiplication Grid A/B • Worksheet 2A/2B • Missing Numbers Prime Factors Multiplication Grid • Incomplete Prime Factor Trees A/B (FSD...? activity only) |
| Lesson 3 | To use divisibility tests to find large prime numbers. | Children will explain what prime numbers and composite numbers are, as well as giving examples of them. They will be reminded of divisibility tests and apply them to solve problems and find prime numbers by a process of elimination. | <ul style="list-style-type: none"> • Can children identify large prime numbers? • Can children use divisibility tests to answer questions? • Can children work methodically? | <ul style="list-style-type: none"> • Slides • Divisibility Rules (starter only) • Number Cards Set A/B • Worksheet 3A • Challenge Cards (FSD...? activity only) |
| Lesson 4 | To solve problems involving common multiples. | Children will find lowest common multiples of numbers using either a formula or the grid method. They will be challenged to apply their knowledge of factors and multiples in this lesson when finding the highest common factor and the lowest common multiple. | <ul style="list-style-type: none"> • Can children use multiplication to solve problems? • Can children use division to solve problems? • Can children apply number facts to solve problems? | <ul style="list-style-type: none"> • Slides • Worksheet 4A/4B/4C • Multiples Grids A/B (FSD...? activity only) • Blank Multiples Grid (FSD...? activity only) |
| Lesson 5 | To show what we know about numbers. | Children will look at a range of numbers and share what they know about them. They will be challenged to apply their knowledge of prime numbers, composite numbers, factors, multiples, multiplication and division. | <ul style="list-style-type: none"> • Can children identify prime numbers? • Can children use multiplication to solve problems? • Can children use division to solve problems? | <ul style="list-style-type: none"> • Slides • Number Cards (Starter only) • Worksheet 5A/5B/5C • Worksheet 5D (FSD...? activity only) • Sorting Numbers and Categories (FSD...? activity only) • Factors and Multiplication Game Sheet (Plenary only) |

Charts and Graphs: Maths : Year 6 : Summer Term, Week 9

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|---|--|---|
| Lesson 1 | To interpret and construct line graphs with two variables. | Children will identify and consider differences between discrete and continuous data, and explore why line graphs are preferable for showing continuous data or discrete time data. They will then conduct simple 'fair tests' or play games enabling them to collect data with two variables which may be presented using line graphs. | <ul style="list-style-type: none"> Can children identify which types of data are best presented using line graphs? Can children accurately plot data points for two variables on a line graph? Can children make statements about two variables shown on a line graph? | <ul style="list-style-type: none"> Slides Heat Loss Experiment 1A/1B/1C Hot water (from hot tap, or stored in tea urns), thermometers, stopwatches 0.5mm squared paper and/or 2mm graph paper Challenge Card 1 (FSD...? activity only) Tape measures, chalk, beanbags (FSD...? activity only) |
| Lesson 2 | To interpret and construct pie charts. | Children will consider the uses of pie charts as well as how they are well suited for presenting certain types of data. They will also practise accurately drawing pie charts using given sets of data and their corresponding degrees. Children may then either complete tables of survey data with missing values, presenting them using pie charts, or collect and present their own pie chart data. | <ul style="list-style-type: none"> Can children explain how pie charts are helpful/unhelpful for showing different types of data? Can children interpret data presented in pie charts 'at a glance'? Can children accurately draw pie charts when given the degrees for each proportion in a set of data? | <ul style="list-style-type: none"> Slides Worksheets 2A/2B/2C Protractors Challenge Card 2 (FSD...? activity only) |
| Lesson 3 | To accurately construct pie charts using given sets of data and their corresponding angles. | Children will start to learn how proportions of a set of data may be converted to proportions of 360 degrees, enabling them to plot them on pie charts. The learning in this lesson focusses on converting only proportions which are factors (or multiples of factors) of 360. Children may then make pie charts either by completing given sets of data or by collecting and converting their own sets of data. | <ul style="list-style-type: none"> Can children interpret data shown using pie charts? Can children use a mathematical model to convert proportions of whole amounts which are factors of 360 to proportions of 360°? Can children draw pie charts to show sets of data? | <ul style="list-style-type: none"> Slides Worksheets 3A/3B/3C Challenge Card 3 (FSD...? activity only) |
| Lesson 4 | To use a multi-step method for converting proportions of amounts, drawing pie charts to show them. | Children will build on prior learning, practising a method for converting any proportion to a proportion of 360 degrees. Using calculators, they will practise this multi-step method which allows them to draw pie charts accurately showing proportions of any size, from any set of data. | <ul style="list-style-type: none"> Can children convert multiples of factors of 360 to proportions of 360° using a written method? Can children use calculators to convert any proportion into a proportion of 360°? Can children round proportions to the nearest degree before drawing pie charts? | <ul style="list-style-type: none"> Slides Challenge Cards 4A/4B/4C Converting to Degrees help sheet Tiddlywinks Target Sheet Calculators Sticky notes (FSD...? activity only; optional) |
| Lesson 5 | To use pie charts and line graphs to present data, solve problems or make predictions. | Children will briefly recap prior learning about reading data and making pie charts and line graphs, then apply their learning either by making fact-filled infographics or by completing a charts and graphs 'quiz'. | <ul style="list-style-type: none"> Can children interpret line graphs, spotting patterns and predicting trends? Can children present data in charts and graphs either by hand or using spreadsheet software? Can children solve problems using charts and graphs? | <ul style="list-style-type: none"> Slides Challenge Card 5A/5B Spreadsheet software Quiz 5 (FSD...? activity only) |

The Fibonacci Sequence: Maths : Year 6 : Summer Term

| | Learning Objective | Overview | Assessment Questions | Resources |
|-----------------|--|--|--|---|
| Lesson 1 | To investigate the Fibonacci sequence and the patterns it creates. | Children are introduced to Fibonacci and the sequence of numbers he wrote about after theorising about a rabbit population. The children investigate the sequence through the hypothetical situation of Fibonacci's rabbit population before going on to draw a golden spiral using the squared Fibonacci sequence. Alternatively they can investigate the rabbit problem further by manipulating the problem with 'What if...?' questions. | <ul style="list-style-type: none"> Can children describe how the Fibonacci sequence is produced? Are children able to recall or calculate the first ten numbers in the Fibonacci sequence? Are children able to think of their own What if...? questions based on an investigation? | <ul style="list-style-type: none"> Slides Rabbit Investigation Sheet 1A Squared Paper, compasses, colouring pencils/felt tip pens, coloured paper. Pattern Cards 1A Challenge Card 1A What If...? Cards 1A (FSD? activity only) |
| Lesson 2 | To further investigate the Fibonacci sequence. | Children investigate deeper within the Fibonacci sequence of numbers to find patterns and comparisons within the sequence which make it special. They experiment with different 'What happens when...?' style questions about consecutive Fibonacci numbers. They must use their understanding of short and long multiplication to find different patterns and are challenged to describe these patterns and try to prove them always or sometimes true. | <ul style="list-style-type: none"> Can children use all four operations in a problem solving challenge? Are children able to use their understanding of number and sequences to justify their findings? Can children observe and record patterns and similarities in findings? | <ul style="list-style-type: none"> Slides Challenge Cards 2A/2B/2C Teacher Notes 2A Plain paper Challenge Card 2D (FSD? activity only) |
| Lesson 3 | To find the n^{th} term of a linear sequence. | Children are challenged to find the n^{th} term within a sequence by using the acronym DiNO to find a formula for the sequence. They must then use this formula to find the 10 th , 20 th and 100 th term in the sequences. The children work independently to find formulas for sequences or use their problem solving skills to solve the 'Lily Pad Swap' problem and find a formula for the sequence their results show. | <ul style="list-style-type: none"> Are children able to describe the rule for a given sequence? Can children use a method to find the n^{th} term formula? Can children use a formula to find the n^{th} term in a sequence? | <ul style="list-style-type: none"> Slides Number Sequence Cards Worksheet 3A/3B Formula Cards Sequence Cards Worksheet 3C (FSD? activity only) Frog Tokens, Lily Pad Sheet, Teacher Notes (FSD? activity only) |
| Lesson 4 | To investigate the Golden ratio. | Reflecting back on the Fibonacci sequence, the children explore the idea of the golden ratio in rectangles. They look at how their golden spirals from Lesson 1 show multiple golden rectangles within them and are challenged to test, draw or find golden rectangles by dividing the length by the width of different rectangles, showing their remainders to two decimal places and comparing their answer to Phi Φ . | <ul style="list-style-type: none"> Can children recall Phi Φ to 2dp? Can children describe what a golden rectangle is? Are children able to test a rectangle's measurements to find if it fits with the golden ratio? | <ul style="list-style-type: none"> Slides Worksheet 4A/4B/4C Calculators Worksheet 4D/4E (FSD? activity only) Objects with rectangular faces e.g. books, DVD cases, photos/ photo frames, paper, tablets etc. |
| Lesson 5 | To investigate the golden ratio in art, architecture and the human body. | This lesson introduces the children to the idea that the golden ratio has been used in art and architecture to make the product more visually appealing. They will explore how Leonardo da Vinci used the golden ratio in his illustration of the Vitruvian Man and express how the golden ratio is displayed in human features. The children will investigate this by measuring and testing features to see if they have the golden ratio when compared to one another. | <ul style="list-style-type: none"> Are children able to describe how to find if two measurements have a golden ratio? Can children find a mean average? Are children able to divide a number giving the remainder as a decimal to 2dp? | <ul style="list-style-type: none"> Slides Art and Architecture Cards Facial Features Sheet 5A Measuring tapes, calculators, felt tip pens, plain paper Worksheets 5A/5B/5C Portrait Cards 5A Worksheet 5D (FSD? activity only) |