Year 6 spring home learning overview 2020-21

Quality First Education Trust

1 Spring term 2020-21

Chapter 4: Decimals

INSET day	Recap multiplying decimals or complete Lesson 8: Multiplying Decimals To multiply decimals by whole numbers (Use L9 as deepening)	Lesson 10: Dividing Decimals To divide decimals using number bonds and number discs as the key strategies. (Method 2)	Lesson 11: Dividing Decimals To divide decimals using bar models, number bonds and long division as key strategies,	Lesson 12: Multiplying a Decimal by a 2-Digit Whole Number To multiply decimals by a 2-digit whole number	Lesson 13: Dividing a Decimal by a 2-Digit Whole Number To divide decimals by 2-digit numbers using number bonds and the worded method.
	Learn the strategy: https://classroom.thenational.academy/lessons/use-formal-written-methods-for-short-multiplication-including-multiplying-decimals-6rvp2r?step=2&activity=video https://classroom.thenational.academy/lessons/multiplying-decimals-by-a-whole-number-6xjkcr?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/multiplying-decimals-by-a-whole-number-6xjkcr?step=2&activity=video https://classroom.thenational.academy/lessons/division-of-a-decimal-number-by-an-integer-c8t30e?step=2&activity=video		**Learn the strategy: (from 19 minutes)** https://classroom.thenational.academy/lessons/multiply-by-a-two-digit-number-using-long-multiplication-75k3cc?step=2&activity=video	**Learn the strategy:** **Use the long division strategy:** https://classroom.thenational.academy/lessons/use-the-formal-written-method-of-long-division-to-solve-appropriate-calculations-c8wk0c?step=2&activity=video https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/cc-6th-dividing-decimals/v/dividing-a-decimal-by-a-whole-number

2 Chapter 4: Decimals | | | Chapter 5: Measurements

Lesson 14: Dividing a Decimal by a 2-Digit Whole Number To divide decimals by 2-digit whole numbers	Addition and subtraction strategies and links	Recap year 5 measurement: Bk 5B, Chapter 11: Lesson 3: Converting Units of Length To convert units of length.	Recap year 5 measurement: Bk 5B, Chapter 11: Lesson 7: Converting Units of Mass To convert units of mass.	Lesson 1: Converting Units of Length To convert common measurements to metres, centimetres and millimetres.	Lesson 2: Converting Units of Length To convert units of measure into different units using decimals and fractions
Learn the strategy: **Use the long division strategy:** https://classroom.thenational.academy/lessons/use-the-formal-written-method-of-long-division-to-solve-appropriate-calculations-c8wk0c?step=2&activity=video https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-arithmetic-operations/cc-6th-dividing-decimals/v/dividing-a-decimal-by-a-whole-number	**Complete the online lesson:** **Addition:** https://classroom.thenational.academy/lessons/strategies-for-addition-6njk4d **Subtraction:** https://classroom.thenational.academy/lessons/strategies-for-subtraction-6mv32d	**Learn the strategy:** https://classroom.thenational.academy/lessons/converting-lengths-part-1-cgr3jd?step=2&activity=video https://classroom.thenational.academy/lessons/converting-lengths-part-2-64ukar?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/converting-between-units-of-metric-mass-6ww38d?step=2&activity=video	**Learn the strategy: (up to 23 minutes and 18 seconds)** https://classroom.thenational.academy/lessons/decimals-and-measures-convert-standard-lengths-60tkad?step=2&activity=video	

3 Chapter 5: Measurements

Lesson 3: Converting Units of Length To convert metres into kilometres as units of measure.	Lesson 4: Converting Units of Mass To convert units of mass from grams to kilograms using decimals and fractions.	Lesson 5: Converting Units of Volume To convert units of volume from millilitres to litres.	Converting units of time	Recap year 5 measurement: Bk 5B, Chapter 11: Lesson 14: Telling the Temperature (incl. negative)	Recap rounding Recap addition and subtraction in context
Learn the strategy:(from 23 minutes and 19 seconds) https://classroom.thenational.academy/lessons/decimals-and-measures-convert-standard-lengths-60tkad?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/decimals-and-measures-convert-between-standard-measures-6cupac?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/converting-measurements-cdj62t?step=2&activity=video	**Complete the online lesson:** https://classroom.thenational.academy/lessons/decimals-and-measures-convert-between-units-of-time-c4r66c?step=1&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/negative-numbers-in-context-68t66c?step=1&activity=video https://classroom.thenational.academy/lessons/further-addition-6rwk2t?step=2&activity=video	**Complete the online lessons:** **Rounding:**https://classroom.thenational.academy/lessons/rounding-to-a-required-degree-of-accuracy-6wu32t **Addition and subtraction:** https://classroom.thenational.academy/lessons/applying-addition-and-subtraction-74tp2d

Quality First Education Trust

4			Chapter 7: Percentage		
MNP Year 6 mid-year revision 6A assessment	**MNP Year 6 mid-year revision 6A assessment**	**Order of operations**	**Recap year 5 percentages: Bk 5B, Chapter 8, Lesson 2: Finding Percentages** To be able to convert values of an amount into %. To be able to convert fractions into percentages.	**Lesson 1: Finding the Percentage of a Number** To find the % of a whole number using division and multiplication; to use bar modelling as a pictorial approach to calculating %.	**Lesson 2: Finding the Percentage of a Quantity** To find the % of a quantity; to use bar model diagrams to support the division and multiplication of numbers towards the percentage.
Complete workbook 6A mid-year revision section A and part of section B. Questions 1 - 25	Complete workbook 6A mid-year revision remainder of section B and section C. Questions 26 - 45	<u>Learn the strategy: Complete the online lesson:</u> https://classroom.thenational.academy/lessons/order-of-operations-ctk3et	<u>Learn the strategy:</u> https://classroom.thenational.academy/lessons/understanding-percentage-6gvpad?step=2&activity=video	<u>Learn the strategy:</u> https://classroom.thenational.academy/lessons/finding-percent-of-a-quantity-6xh36d?step=2&activity=video	<u>Learn the strategy:(up to 5 minutes and 34 seconds)</u> https://classroom.thenational.academy/lessons/percentages-of-amount-part-2-c9j66c?step=2&activity=video **Method 3: (up to 4 minutes and 49 seconds)** https://classroom.thenational.academy/lessons/percentages-of-amount-6nj68r?step=2&activity=video
5 Chapter 7: Percentage			**Chapter 8: Ratio**		
Lesson 3: Finding Percentage Change To find % change in an amount over time; to calculate % change where the number gives rise to a decimal.	**Problem solving with percentages:**	**Fractions, decimals and equivalence problems**	**Lesson 2: Comparing Quantities** To find ratio of a quantity; to simplify ratios using division; compare more than two quantities using the term 'ratio'; to use bar models.	**Lesson 3: Comparing Quantities** To find ratio of a quantity; to simplify ratios using division; compare more than two quantities using the term 'ratio'; to use bar models.	**Lesson 4: Comparing Quantities** To compare quantity using both fractions and ratios; to use bar model diagrams to represent ratios.
<u>Learn the strategy:</u> https://classroom.thenational.academy/lessons/solve-problems-involving-the-calculation-of-percentages-of-amounts-c5gkge **(up to 2 minutes and 8 seconds)** https://classroom.thenational.academy/lessons/increase-by-a-percentage-69h68c?step=2&activity=video	<u>Learn the strategy: Complete the online lesson</u> https://classroom.thenational.academy/lessons/solve-problems-involving-the-use-of-percentages-for-comparison-6mtk6t	<u>Learn the strategy: Complete the online lesson</u> https://classroom.thenational.academy/lessons/recall-and-use-equivalences-between-fractions-decimals-and-percentages-6dh6cc	<u>Learn the strategy:</u> https://www.khanacademy.org/math/pre-algebra/pre-algebra-ratios-rates/pre-algebra-ratios-intro/v/ratios-intro	<u>Learn the strategy:</u> https://classroom.thenational.academy/lessons/use-ratio-to-express-relationships-70tpad?step=2&activity=video	
6 Chapter 8: Ratio		**Chapter 9: Algebra**		**Revisit**	**Catch up time**
Lesson 6: Comparing Numbers To compare numbers using ratios; to make decisions about simplifying ratios using division	**Problem solving using ratio and scaling**	**Lesson 2: Describing a Pattern** To generate and describe number patterns. (Could also do worksheets 3)	**Lesson 5: Writing Algebraic Expressions** To express algebraically a missing number. (Could also do worksheets L4)	**Revisit as needed: Multiplication and division** (including multi-step word problems and measures)	
<u>Learn the strategy:</u> https://classroom.thenational.academy/lessons/solve-problems-involving-the-relative-size-of-two-quantities-part-1-68r6ac?step=2&activity=video	<u>Learn the strategy: Complete the online lesson</u> https://classroom.thenational.academy/lessons/ratio-problems-c5hk4r	<u>Learn the strategy:</u> https://classroom.thenational.academy/lessons/consolidating-linear-sequences-and-representing-problems-with-algebra-71j3gr?step=2&activity=video	<u>Learn the strategy:</u> https://classroom.thenational.academy/lessons/reasoning-and-problem-solving-6mwkct?step=2&activity=video	<u>Learn the strategy: Complete the online lesson</u> https://classroom.thenational.academy/lessons/solve-problems-involving-division-with-remainders-part-1-6hjp6t	
Half term break					

Year 6 spring home learning overview 2020-21

Spring 2 2020-21

7 Chapter 9: Algebra	Recap year 5		Chapter10: Area & perimeter		
Lesson 10: Solving Equations To solve equations; to use equations to find unknown values.	**Recap year 5 area and perimeter:** Bk 5B, Chapter 12, **Lesson 1: Finding the Perimeter** To find the perimeter of shapes.	**Recap year 5 area and perimeter:** Bk 5B, Chapter 12, **Lesson 6: Measuring the Area** To measure the area of squares.	**Lesson 1: Finding the Area and the Perimeter of Rectangles** To find area & perimeter of rectangles; calculate perimeter using known area and vice versa.	**Recap year 5 area and perimeter:** Bk 5B, Chapter 12, **Lesson 7: Measuring the Area** To measure the area of a shape. (Measuring area of <u>compound shapes</u>)	**Lesson 2: Finding the Area of Parallelograms** To find and calculate the area of a parallelogram; to use materials and prior understanding of area to construct a formula for the area.
Learn the strategy: https://classroom.thenational.academy/lessons/expressing-missing-numbers-algebraically-ccwpcc?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/calculate-the-perimeter-of-simple-compound-shapes-c9gp8r?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/calculate-and-compare-the-area-of-rectangles-using-square-centimetres-cm-69h6cd?step=1&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/investigate-the-relationship-between-area-and-perimeter-and-use-this-knowledge-to-solve-problems-cct3cc?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/rectilinear-shapes-6wr34r?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/area-of-parallelograms-6wup2e?step=2&activity=video

8 Chapter 10: Area and Perimeter		Recap	Chapter 11: Volume		
Lesson 3: Finding the Area of Triangles To use prior knowledge of area to solve the area of a triangle; to use formula for the area of a rectangle to solve problems involving triangles.	**Lesson 4: Finding the Area of Triangles** To calculate the area of a triangle using a formula; to calculate the area of a triangle in multiple ways.	**Recap Year 5 volume:** Bk 5B, Chapter 13, Lesson 3: **Finding the Volume of Solids** To find the volume of solids.	**Lesson 1 and 2: Finding the Volume of Cubes and Cuboids** To find the volume of cubes and cuboids using materials. To determine formula for volume of cubes & cuboids & apply it to calculate volume.	**Lesson 4: Finding the Volume of Cubes and Cuboids** To calculate the volume of boxes using the formula for volume of a cube; to expose common misconceptions in volume.	**Recap Year 5 volume:** Bk 5B, Chapter 13, Lesson 6: **Converting Units of Volume** To compare and convert units of volume.
Learn the strategy: (up to 6 minutes and 45 seconds) https://classroom.thenational.academy/lessons/area-of-triangles-6cwkar?step=2&activity=video	**Learn the strategy: (up to 3 minutes)** https://classroom.thenational.academy/lessons/further-triangles-68u6ae?step=2&activity=video	**Learn the strategy:** https://vimeo.com/427271112/69062a1937 **And:** https://vimeo.com/427276443/4b13f4c7bb	**Learn the strategy:** https://classroom.thenational.academy/lessons/to-describe-volume-in-cubic-units-6hhkjd?step=2&activity=video **And:** https://classroom.thenational.academy/lessons/to-describe-volume-in-cubic-units-6hhkjd?step=2&activity=video		**Learn the strategy: (up to 4 minutes and 8 seconds)** https://classroom.thenational.academy/lessons/problem-solving-with-decimals-in-context-60u3gd?step=2&activity=video

9 'Holistic maths skills' days – explaining to others	Recap lesson	Chapter 12: Geometry		
Create a poster to show another child in year 3 how to complete these calculations: 79 x 68 and 18934 ÷ 16 <u>Remember the strategies:</u> **Multiplication:** Multiplication strategy **And:** Multiplication strategy 2 **Division:** https://classroom.thenational.academy/lessons/use-the-formal-written-method-of-long-division-to-solve-appropriate-calculations-c8wk0c?step=2&activity=video On your poster show your thinking in different ways. You could include using the part-whole model or represent the number with counters or by listing multiples or using different colours to show the place value of different digits. Be creative! Explain the methods on your poster to a family member or carer. Talk about all the different ways you have shown to solve the calculations and explain where another child may go wrong when using these methods.	**Recap volume of cubes and cuboids, including decimal amounts**	**Recap Year 5 geometry:** Bk 5B, Chapter 9, Lesson 1: **Knowing Types of Angles** To know angle name & qualities: acute, right, obtuse, reflex.	**Recap Year 5 geometry:** Bk 5B, Chapter 9, **Lesson 2: Measuring Angles** To measure angles using a protractor.	**Lesson 1: Investigating Vertically Opposite Angles** To investigate opposite angles; to use prior knowledge of angles to solve problems.
	Complete the online lesson: https://classroom.thenational.academy/lessons/decimals-and-measures-the-volume-of-cubes-and-cuboids-cdh3cr	**Learn the strategy:** https://classroom.thenational.academy/lessons/compare-and-order-acute-obtuse-and-reflex-angles-6dhk6d?step=2&activity=video	**Learn the strategy:** https://classroom.thenational.academy/lessons/reading-angles-on-a-protractor-part-1-6mt3gt?step=2&activity=video **Then:** https://classroom.thenational.academy/lessons/reading-angles-on-a-protractor-part-2-6mt30d?step=2&activity=video	**Learn the strategy:** https://vimeo.com/412752887/402efb9f17

10 Chapter 12: Geometry

Lesson 3: Investigating Angles in Triangles To determine and show the sum of the angles inside a triangle.	Lesson 4: Investigating Angles in Quadrilaterals To investigate and determine angles in quadrilaterals.	Recap Year 5 geometry: Bk 5B, Chapter 9, Lesson 5: Investigating Angles at a Point To investigate angles that, when combined, make 360°.	Lesson 6: Naming Parts of a Circle To name the parts of a circle; to calculate diameter and radius using parts of a circle.	Lesson 7: Solving Problems Involving Angles in a Circle To solve problems involving angles in a circle.	Lesson 8: Drawing Quadrilaterals To draw quadrilaterals with specific side lengths & parallel lines; to find perimeter of shapes and name trapeziums and parallelograms
Learn the strategy: https://vimeo.com/412302557/9fc6a6e402 And: https://classroom.thenational.academy/lessons/find-unknown-angles-in-triangles-6tgkcd?step=2&activity=video	Learn the strategy: https://vimeo.com/412302740/51f3e58179 And: https://classroom.thenational.academy/lessons/find-the-value-of-missing-angles-in-quadrilaterals-cdgk0r?step=2&activity=video	Learn the strategy: https://classroom.thenational.academy/lessons/calculating-angles-on-a-line-or-around-a-point-69h66t?step=2&activity=video Or: https://classroom.thenational.academy/lessons/find-the-value-of-missing-angles-6cr3je?step=1&activity=video	Learn the strategy: https://vimeo.com/412316220/595434faac And: https://classroom.thenational.academy/lessons/coordinates-and-shapes-to-illustrate-and-name-parts-of-a-circle-69hkec?step=2&activity=video	Learn the strategy: https://classroom.thenational.academy/lessons/coordinates-and-shapes-to-solve-practical-problems-involving-circles-68u36d?step=2&activity=video	Learn the strategy: (from 8 minutes and 23 seconds to 13 minutes and 3 seconds) https://classroom.thenational.academy/lessons/quadrilateral-problems-68t6cc?step=2&activity=video And: (up to 15 minutes and 40 seconds) https://classroom.thenational.academy/lessons/to-compare-and-classify-quadrilaterals-6rv62t?step=2&activity=video

11 Chapter 12: / Chapter 13: Position and Movement

Lesson 9: Drawing Triangles To draw triangles using measurements and angles as starting point; protractor to draw angles.	Lesson 10: Drawing Triangles To draw triangles using measurements and angles as starting point; protractor to draw angles.	Lesson 11: Drawing Nets of Three-Dimensional Shapes To construct the nets of 3-D shapes by identify the faces in them.	Lesson 12: Drawing Nets of Three-Dimensional Shapes To construct the nets of 3-D shapes by identify the faces in them.	Lesson 1: Showing Negative Numbers To represent negative numbers on both vertical and horizontal number lines.	Lesson 2: Describing Position To describe positions of objects on a coordinate grid; to use x & y axes to determine position on a grid.
Learn the strategy: Recap drawing angles using a protractor: https://classroom.thenational.academy/lessons/draw-angles-with-a-protractor-1-60rp4e?step=2&activity=video	Learn the strategy: https://classroom.thenational.academy/lessons/solve-problems-involving-scale-factor-in-shapes-c4u3ar?step=2&activity=video	Learn the strategy: https://classroom.thenational.academy/lessons/coordinates-and-shapes-to-recognise-nets-of-3d-shapes-crvk2r?step=2&activity=video	Learn the strategy: (as previous lesson) https://classroom.thenational.academy/lessons/coordinates-and-shapes-to-recognise-nets-of-3d-shapes-crvk2r?step=2&activity=video	Learn the strategy: https://www.khanacademy.org/math/cc-sixth-grade-math/cc-6th-negative-number-topic/cc-6th-neg-num-intro/v/negative-numbers-introduction Or: https://classroom.thenational.academy/lessons/negative-numbers-in-context-68t66c	Learn the strategy: https://vimeo.com/429428268/e97257c390

12 Recap lessons to revise and consolidate

Recap multiplication	Recap division	Recap problem solving	Easter Break
Complete the online lesson: https://classroom.thenational.academy/lessons/use-formal-written-methods-including-long-multiplication-to-solve-a-range-of-problems-61j38r	Complete the online lesson: https://classroom.thenational.academy/lessons/use-the-formal-written-method-of-long-division-to-solve-appropriate-calculations-c8wk0c	Complete the online lesson: https://classroom.thenational.academy/lessons/solve-problems-involving-division-with-remainders-part-1-6hjp6t	