



Year 5 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11
Phase 1	Number and Place Value			Addition and Subtraction			Multiplication and division			Measures Time	
Phase 2	Fractions			Geometry Shape, symmetry, position and direction			Fractions Decimals				
Phase 3	Measures Converting measures	Measures Length and perimeter		Geometry Angles	Fractions Percentages			Measures Volume			
Phase 4 (EoY)	Statistics	Number Prime numbers									

Ongoing throughout the year:

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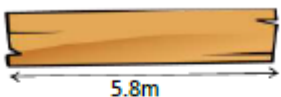



Year 5 Phase 3 Objectives

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	
Main Sessions	<p><u>Measurement: Converting units</u> Convert between different units of metric measure (for example, km and m; cm and m; cm and mm; g and kg; l and ml).</p> <p>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Solve problems involving converting between units of time.</p> <p><u>Perimeter and Area</u> Measure and calculate the perimeter of composite rectilinear shapes in cm and m.</p> <p>Calculate and compare the area of rectangles (including squares), and including using standard units, cm², m² estimate the area of irregular shapes.</p>			<p><u>Geometry: Angles</u> Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.</p> <p>Draw given angles and measure them in degrees (°).</p> <p>Identify: angles at a point and one whole turn (total 360 °), angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90°.</p>		<p><u>Fractions: Percentages</u> Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.</p> <p>Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.</p>		<p><u>Measures: Volume</u> Estimate volume (for example using 1cm³ blocks to build cuboids (including cubes) and capacity (for example, using water)).</p> <p>Use all four operations to solve problems involving measure.</p>	




S & D Sessions			
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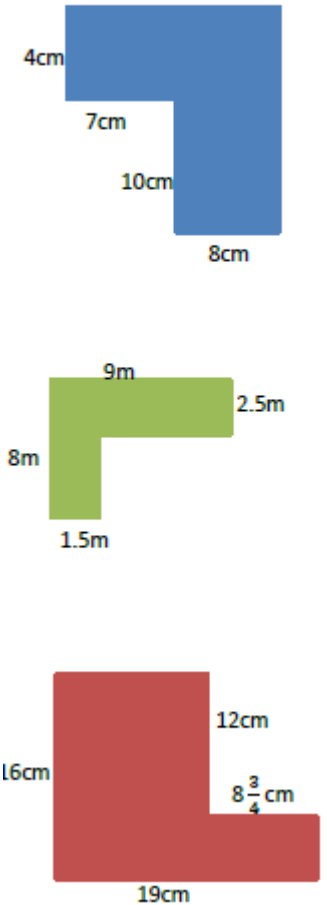
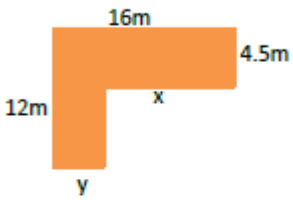

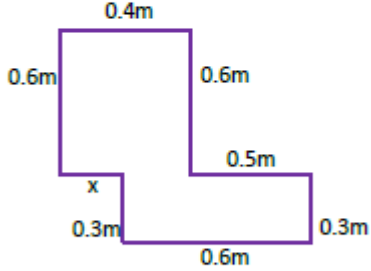
Year 5 MTP – Phase 3

Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Measurement: Converting units	Convert between different units of metric measure (for example, km and m; cm and m; cm and mm; g and kg; l and ml).	<ul style="list-style-type: none"> Use $<$, $>$ or $=$ to complete the statements below <ul style="list-style-type: none"> 750g  0.8kg 500ml  Half a litre 17mm  2cm – 5mm True or false? <ul style="list-style-type: none"> 1000m = 1km 1000cm = 1m 1000ml = 1l 1000g = 1kg Bryan is 2.68m tall. He is 99cm taller than his sister. How tall is his sister? Give your answer in centimetres. 	<ul style="list-style-type: none"> Adam makes 2.5 litres of lemonade for a charity event. He pours it into 650ml glasses to sell. He thinks he can sell 7 glasses. Is he correct? Prove it. A 5p coin has a thickness of 1.6mm <div style="text-align: center;">  </div> Jake makes a tower of 5p coins worth 90p. What is the height of the coins in cm? Laura buys 3500g of potatoes <div style="text-align: center;">  </div> and 1500g of carrots. She pays with a £20 note. How much change does she get? 	<ul style="list-style-type: none"> A plank of wood is 5.8m long. <div style="text-align: center;">  </div> Two lengths are cut from the wood. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid red; padding: 5px; border-radius: 10px;">175cm</div> <div style="border: 1px solid red; padding: 5px; border-radius: 10px;">$3\frac{4}{5}$ m</div> </div> How much wood is left? Cola is sold in bottles and cans. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  330ml </div> <div style="text-align: center;">  1.25 litres </div> </div> Yasmin buys 5 cans and 3 bottles. She sells the cola in 100ml glasses. <div style="text-align: center; margin-top: 20px;">  </div> She sells all the cola. How many glasses does she sell?

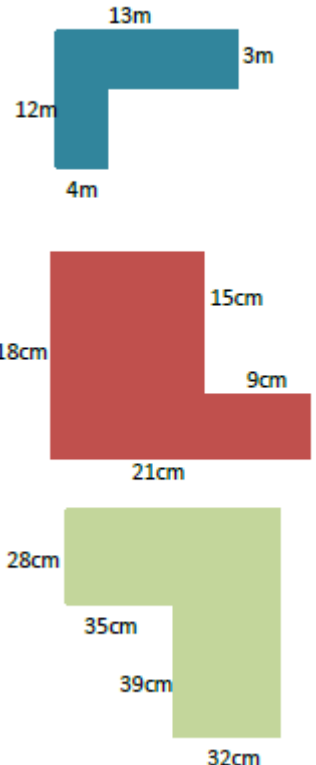



Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Measurement: Converting units</p>	<p>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</p>	<ul style="list-style-type: none"> Fill in the missing boxes. 6 inch = <input type="text"/> cm 1 yard = <input type="text"/> feet 1 ounce = <input type="text"/> g True or false? <input type="checkbox"/> There are 16 pounds in a stone. <input type="checkbox"/> There are 16 ounces in a pound. Complete the statements: I would measure milk in _____. I can measure the length of my car in _____. Is there more than one option? Which is the most reasonable and why? 	<ul style="list-style-type: none"> Half a galleon is the answer. What's the question? Odd one out. Which of these is different to the others? Explain why.  	<ul style="list-style-type: none"> Rita, Margret and Mable each buy some ribbon for presents from a shop. Rita buys 2 feet of ribbon. Margret buys three times as much as Rita does. Mable buys 15cm more than Margret. How many cm (approximately) of ribbon do they each buy? Mr Smith sells apples for 40p a kilogram. Mr Brown sells apples for 24p a pound. Who sells them cheaper? Simon travels 480 kilometres in a year. How many miles is this approximately?

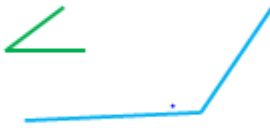
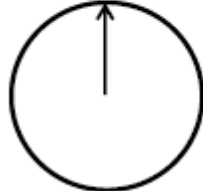
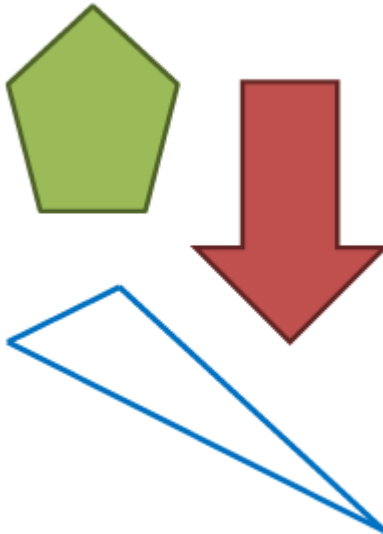


Domain	NC Objectives	Example tasks fluency	Example tasks Reasoning	Example tasks problem solving
Measures: Perimeter and Area	Measure and calculate the perimeter of composite rectilinear shapes in cm and m.	<ul style="list-style-type: none"> Find the perimeter of the following shapes. 	<ul style="list-style-type: none"> The length labelled 'x' is a multiple of 1.8. What could 'y' be? Explain to a partner why you have chosen these measurements.  <ul style="list-style-type: none"> Here is a square inside another square.  <p>The perimeter of the inner square is 16cm. The outer square's perimeter is four times the size of the inner square. What is the length of one sides of the outer square? How do you know? What do you notice?</p>	<ul style="list-style-type: none"> Investigate the different ways you can make composite rectilinear shapes with a perimeter of 54cm. Amy and Ayesha are making a collage of their favourite football team. They want to make a border for the canvas. <p>Here is the canvas.</p>  <p>They have a roll of blue ribbon that is 245cm long and a roll of red ribbon that is 2.7m long.</p> <p>How much ribbon will they have left over?</p>

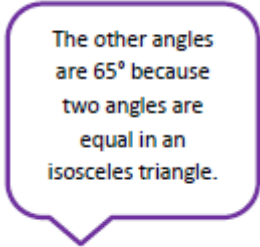


Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Measures: Perimeter and Area</p>	<p>Calculate and compare the area of rectangles (including squares), and including using standard units, cm², m² estimate the area of irregular shapes</p>	<ul style="list-style-type: none"> Estimate and work out the area of these shapes. Find the unknown sides first.  <p>Were you close?</p>	<ul style="list-style-type: none"> Put these amounts in order starting with the smallest. <div style="border: 1px solid red; padding: 5px; width: fit-content; margin: 5px;">2.7m²</div> <div style="border: 1px solid blue; padding: 5px; width: fit-content; margin: 5px;">27m²</div> <div style="border: 1px solid green; padding: 5px; width: fit-content; margin: 5px;">27000cm²</div> <p>How do you know?</p> <ul style="list-style-type: none"> Wiktorina says, <div style="border: 1px solid purple; border-radius: 15px; padding: 10px; width: fit-content; margin: 10px;"> <p>The area of squares and square numbers are related.</p> </div> <p>Do you agree? Explain why.</p>	<ul style="list-style-type: none"> Here is a square inside another square.  <p>The area of the inner square is 16m². The outer square's area is four times the size of the inner square. What is the length of one sides of the outer square? How do you know?</p> <ul style="list-style-type: none"> Investigate how many ways you can make different squares and rectangles with the same area of 84cm². What strategy did you use?

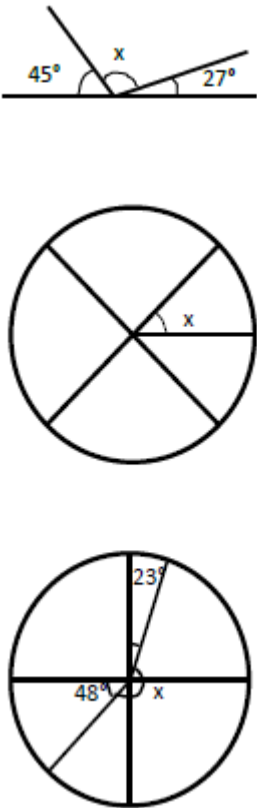

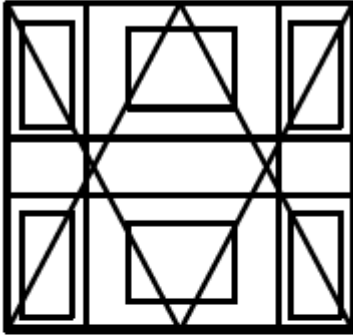


Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Geometry - Angles</p>	<p>Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles.</p>	<ul style="list-style-type: none"> If one angle in a triangle is 38° and another is 68°, what type of angle will the third be? Tick all the obtuse angles 47° 107° 98° 90°  <ul style="list-style-type: none"> Which number is an angle? <input type="text" value="79.4"/> <input type="text" value="-60"/> <p>Explain why.</p>	<ul style="list-style-type: none"> Odd one out. <input type="text" value="180°"/> <input type="text" value="45°"/> <input type="text" value="79°"/> <input type="text" value="225°"/> <p>Explain why.</p> <ul style="list-style-type: none"> Cut out a circle with a spinner in the centre.  <p>Put the arrow in the starting position above. Turn over a flash card with an angle on. Estimate the given angle by moving the spinner. Check how close you are.</p>	<ul style="list-style-type: none"> Estimate and measure the angles in these shapes.  <p>Record your results in a table. Work out how close you were. Did you notice anything or find any easier?</p>

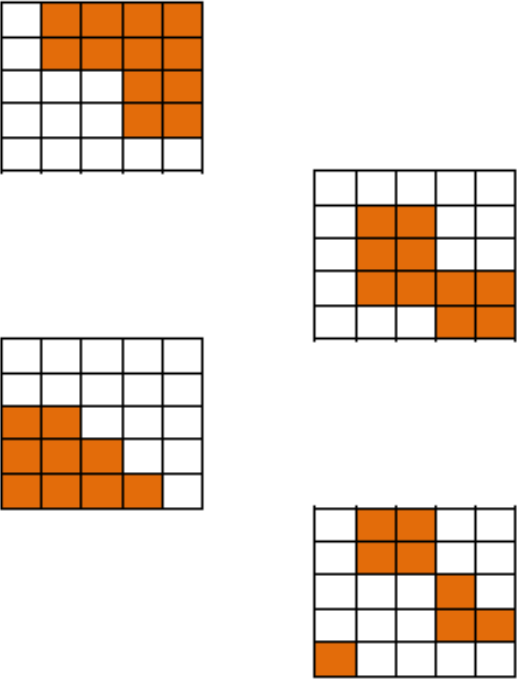


Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Geometry – Angles	Draw given angles and measure them in degrees ($^{\circ}$).	Complete Practically <ul style="list-style-type: none">Draw an obtuse angle that is a multiple of 5 and 3 Can your partner check it?Draw an acute angle that has a factor of both 4 and 6What do the angles in a triangle add up to?	Complete Practically <ul style="list-style-type: none">Class 5 are given one angle in an isosceles. It is 50° Carol says,  Is she correct? Explain why.	Complete Practically <ul style="list-style-type: none">Draw a range of angles for a friend. Have them order them, before measuring, from smallest to largest and check to see if they were correct.



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<p>Geometry – Angles</p>	<p>Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90°.</p>	<ul style="list-style-type: none"> Work out the missing angles. 	<ul style="list-style-type: none"> Gary says, <div style="border: 2px solid red; border-radius: 15px; padding: 5px; margin: 10px 0;"> If I turn the letter M by 180° then it looks like the letter W </div> Do you agree? Prove it. Design a 'fun house' for children to play in. It should have 'wonky' walls, windows and doors. Label the angle types. e.g. 	<ul style="list-style-type: none"> How many right angles can you find? <div style="text-align: center; margin: 10px 0;">  </div> Investigate the amount of obtuse and acute angles there could be in a pentagon. How many different pentagons can you create? Record the information in a table to show different acute and obtuse angles. Create your own missing angles for a partner. Include information relating to quarter, half and full turns.






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<p>Fractions: Percentages</p>	<p>Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.</p>	<ul style="list-style-type: none"> There are 100 malteasers in a bag. 56 were eaten. How many are left? Write this as a fraction and as a decimal. There are 200 lego pieces in a box. Theo uses 114 of them to build a robot. Write the amount he used as a percentage out of 100 Fill in the missing boxes to make the statement true: $\square \% = \frac{\square}{100} = 0.1$ 	<ul style="list-style-type: none"> Clare reads 150 pages of her 500 page book. She says, "I have $\frac{350}{500}$ pages left to read." Can she write this as a percentage out of 100? Explain why. True or false? You can write 12.5% as a decimal Explain your answer. Lilly has a 100 square grid. She colours in 25% of them and says, "I have coloured in $\frac{1}{4}$" Is she right? Explain why. 	<ul style="list-style-type: none"> This 50 square grid showing a percentage out of 100 has been cut up. Work out the percentage from the pieces below. 

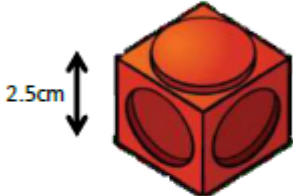
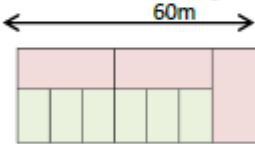





Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving						
Fractions: Percentages	Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	<ul style="list-style-type: none"> Ash spends $\frac{3}{5}$ of his money on a coat and 30% on shoes. He started with £55. How much does he have left? A painter uses $\frac{1}{25}$ of white paint to paint a wall. What percentage does he have left? Here are a mix of equivalent percentages, fractions and decimals. Put them into correct piles. (Cut up and put in an envelope) 	<ul style="list-style-type: none"> Blake is working out how much money he can spend on his dad's birthday present. He wants to spend 60% on a camera and $\frac{4}{9}$ on a t-shirt. Explain to Blake why this is not possible. If... $0.1 = \frac{1}{10}$ $0.2 = \frac{2}{10}$ Then... $0.15 = \frac{1.5}{10}$ Do you agree? Explain why. 	<ul style="list-style-type: none"> Bingo! Each child makes a grid of 6 and writes down 6 different, sensible (linking to objective) fractions or percentages. Read out decimals. First to mark off their whole board wins! <table border="1" style="margin-left: auto; margin-right: auto;"> <tbody> <tr> <td style="text-align: center;">$\frac{1}{10}$</td> <td style="text-align: center;">75%</td> </tr> <tr> <td style="text-align: center;">80%</td> <td style="text-align: center;">$\frac{15}{100}$</td> </tr> <tr> <td style="text-align: center;">$\frac{10}{50}$</td> <td style="text-align: center;">40%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> In pairs, take a pack of cards of different fractions, decimals and percentages. Turn them over one at a time. The first person to write an equivalent fraction, decimal or percentage on their whiteboard wins a point. 	$\frac{1}{10}$	75%	80%	$\frac{15}{100}$	$\frac{10}{50}$	40%
$\frac{1}{10}$	75%									
80%	$\frac{15}{100}$									
$\frac{10}{50}$	40%									



Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
Measures: Volume	Estimate volume (for example using 1cm ³ blocks to build cuboids (including cubes) and capacity (for example, using water)).	<p>Complete practically</p> <ul style="list-style-type: none">Here is a litre jug with some water in.  <p>Here is a glass that holds 300ml. It also has some water in.</p>  <p>Estimate how much liquid there is altogether.</p>	<p>Complete practically</p> <ul style="list-style-type: none">Here is one side of a cuboid.  <p>What could the whole cuboid look like? Investigate the different types with a partner.</p>	<p>Complete practically</p> <ul style="list-style-type: none">1 litre is approximately equal to 1 and three quarter pints. Use this information to draw and work out how many pints are in 10 litres. <i>(A bar model will help.)</i>



Domain	NC Objectives	Example tasks fluency	Example tasks reasoning	Example tasks problem solving
<p>Measures: Problem solving</p>	<p>Use all four operations to solve problems involving measure.</p>	<ul style="list-style-type: none"> A tower is made of red and green cubes. For every 1 red cube there are 2 green cubes. Each cube has a height of 2.5cm. The tower is 30cm tall. How many green cubes are in the tower?  <ul style="list-style-type: none"> The diagram is made up of two different sized rectangles.  <p>For each large rectangle the length is double the width. The length of the diagram is 60m. Find the area of one of the small rectangles.</p>	<ul style="list-style-type: none"> The perimeter of the rectangle is 33cm.  <p>Ajay says,</p> <div style="border: 1px solid red; border-radius: 15px; padding: 5px; display: inline-block;"> <p>Rounded to the nearest whole number the length of the rectangle is 13cm.</p> </div> <p>Do you agree? Explain why.</p> <ul style="list-style-type: none"> Here is a square with an equilateral triangle inside it.  <p>The perimeter of the triangle is 54cm. Find the perimeter of the square.</p>	<ul style="list-style-type: none"> Ellie, Shauna and Megan receive their pocket money on a Friday. <p>Shauna receives two times more than Ellie receives.</p> <p>Megan receives £5 more than Shauna receives.</p> <p>Altogether, their mum hands out £22.50</p> <p>How much money do they each receive?</p> <p><i>(A bar model will help.)</i></p> <ul style="list-style-type: none"> Lollies are sold in two sizes, small and large.  <p>Sanjay buys two small lollies for 92p. Jenny buys 5 small lollies and 3 large lollies and pays with a £10 note. Jenny receives £4.16 change. How much does one large lolly cost?</p>