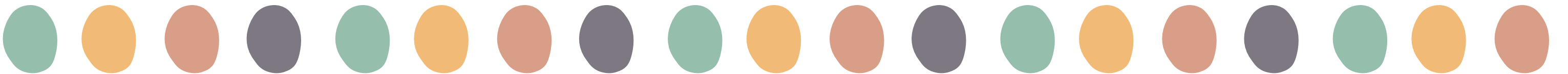


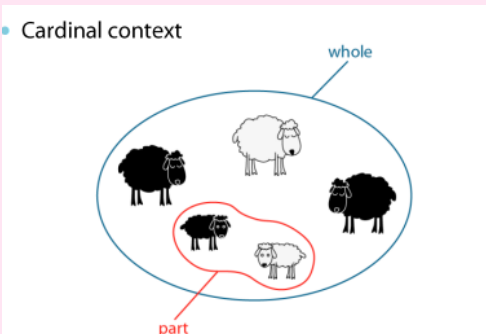
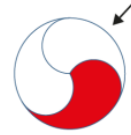
Y3- Overview

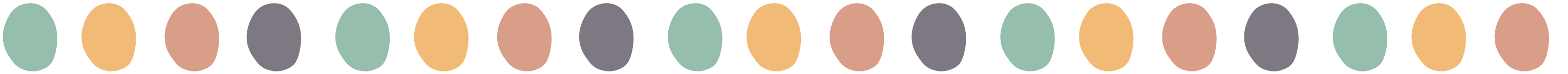
	Autumn 1			Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2		
Unit	1	2				3	4	5	6	7	8	9	10	11

	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

Summer 1	Unit fractions as part of a whole (2 weeks)
Ready to progress	3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency).
NCETM documents	WHOLE DOCUMENT- https://www.ncetm.org.uk/media/lqyn40yl/ncetm_spine3_segment01_y3.pdf#page=4 TEACHING POINT 1 AND 2 https://www.ncetm.org.uk/media/3fbfwvryc/ncetm_spine3_segment02_y3.pdf#page=4
Small steps	- To identify a whole and the parts that make it up. - To explain why a part can only be defined in relation to a whole. - To identify the number of equal or unequal parts in a whole. - To identify equal parts when they do not look the same. - To explain the size of a part in relation to the whole. - To construct a whole when given a part and the number of parts. - To identify how many equal parts a whole has been divided into. - To use fraction notation to describe an equal part of the whole. - To represent unit fractions in different ways. - To solve problems involving identifying equal parts and the whole.
Links	NCETM-UP TO SLIDE 109 https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fhgpnbdp4%2Fcp-year-3-unit-8-unit-fractions.pptx&wdOrigin=BROWSELINK OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/unit-fractions-as-part-of-a-whole/lessons?sid=9c1bcd=EOR6JIRvxD&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Spring%20Block%203%20SOL%20Fractions%20A.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcrjq/mastery_assessment_y3.pdf
Reasoning	pot the Mistake You are told a pizza is cut into 6 parts. Someone says, "I ate 4, so there are 3 parts left." What is the mistake? Explain using the idea of a whole. True or False? "One slice is a quarter." True or false? Can you explain your answer, thinking about the whole? What Do You Notice? Look at these shapes split into parts. Which ones are divided into equal parts? Which are not? What do you notice about how they are split? Odd One Out Which shape shows equal parts, even though they don't look the same? Why is it the odd one out? What Comes Next? If 1/4 of a bar is 3 cm, what is the full length of the bar? What would 2/4 and 3/4 be? What comes next? What Do You Notice? 1/5 of a ribbon is 10 cm. Can you work out 2/5, 3/5, and the whole ribbon? What do you notice about the pattern? Ordering Look at these shapes: one is split into 2 parts, one into 4 parts, and one into 8 parts. Order them from fewest parts to most. Which has the biggest part? What Comes Next? A cake is cut into 10 equal slices. You eat one. That's 1/10. What would two slices be? What comes next? Write each using fraction notation. What Do You Notice? Show 1/2 in a circle, a bar, and a square. What do you notice about how they look? Are they all the same size? True or False? A shape is split into 4 equal parts. Someone colors 3. They say they colored 3/4. True or false? Explain your thinking.



	2, 4 and 8 times tables: using times tables to solve problems										
Problem solving	 Click on me										
Glossary	- Whole - The whole is all the parts or everything, the total amount. - Part - A part is some of the whole. - Equal - We say that two or more things are equal if they have the same quantity or value. - Unequal - We say that two or more things are unequal if they do not have the same quantity or value. - Construct - Constructing something involves making something by joining parts together. - Fraction - A fraction shows us how many equal parts in a whole. - Division bar - The division bar is the horizontal line separating the two values in a fraction. - Denominator - A denominator is the bottom number in a fraction. It shows how many parts a whole has been divided into. - Numerator - A numerator is the top number in a fraction. It shows how many parts we have. - Half - A half is one equal part of a whole that has been divided into 2 equal parts. - Third - A third is one equal part of a whole that has been divided into 3 equal parts. - Quarter - A quarter is one equal part of a whole that has been divided into 4 equal parts. - Fifth - A fifth is one equal part of a whole that has been divided into 5 equal parts.										
Stem sentences	If Europe is the whole, then _____ is part of the whole. If the United Kingdom is the whole, then _____ is part of the whole. If _____ is the whole, then _____ is part of the whole. If the week is the whole, then _____ is part of the whole. If the school day is the whole, then _____ is part of the whole. A part is always smaller than the whole. If _____ is the whole, then _____ is part of the whole. The whole has been divided into _____ equal/unequal parts. I have folded my whole length of paper into _____ equal/unequal parts The parts are equal. I know this because the number of _____ in each part is the same. The parts are unequal. I know this because the number of _____ in each part is not the same. Equal sized parts do not have to look the same. Different parts of the same-sized whole can be compared based on their size. As the whole increases in size and the size of the selected parts remains the same, each part becomes smaller in relation to the whole. The whole has been divided into _____ equal parts. _____ of the parts has been shaded. The denominator is _____ because the whole is divided into _____ equal parts. The numerator is one because one part is shaded. The whole has been divided into _____ equal parts. Each equal part is one _____ of the whole. _____ of the whole ribbon has been cut off The whole has been divided into _____ equal parts. Each equal part is one _____ of the whole.										
Representations	■ Cardinal context 	<table><tr><th>Say</th><th>Write</th></tr><tr><td>'The whole has been divided...'</td><td>The division bar: –</td></tr><tr><td>'...into 3 equal parts.'</td><td>The denominator: 3</td></tr><tr><td>'One of the parts has been shaded.'</td><td>The numerator: 1</td></tr></table>	Say	Write	'The whole has been divided...'	The division bar: –	'...into 3 equal parts.'	The denominator: 3	'One of the parts has been shaded.'	The numerator: 1	1 3 ← numerator ← denominator  representation one-third 1 3 notation
Say	Write										
'The whole has been divided...'	The division bar: –										
'...into 3 equal parts.'	The denominator: 3										
'One of the parts has been shaded.'	The numerator: 1										

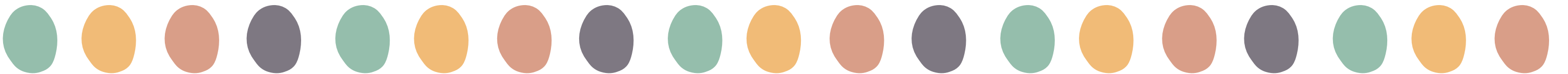


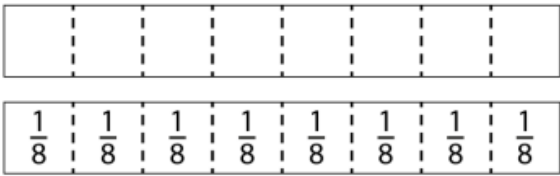
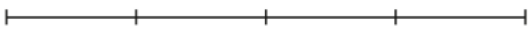
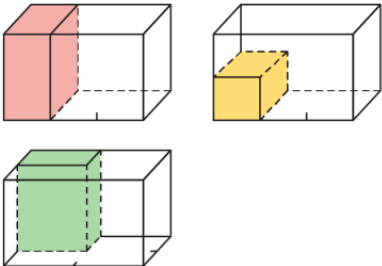
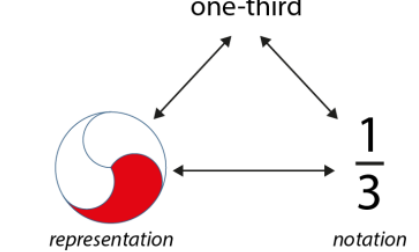
Y3- Overview

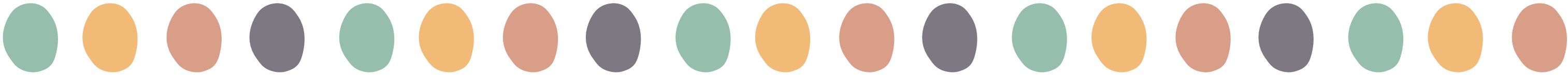
	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2			
Unit	1	2			3	4	5	6	7	8		9	10	11

	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

Summer 1	Identify parts and wholes in different contexts (1 week)
Ready to progress	3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency).
NCETM documents	TEACHING POINT 3 AND 4- https://www.ncetm.org.uk/media/3fbfwr-yc/ncetm_spine3_segment02_y3.pdf#page=4
Small steps	- To identify parts and wholes by exploring how lines and 3D objects are made up of smaller parts. - To recognize and describe parts and wholes in a variety of real-life and mathematical contexts. - To identify equal parts in 2D shapes even when they appear different in size or shape. - To recognize equal parts in 3D objects, understanding that equal does not always mean identical. - To solve problems by applying knowledge of parts and wholes across a range of contexts.
Links	NCETM-109 to 152 https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fhgpnbdp4%2Fcp-year-3-unit-8-unit-fractions.pptx&wdOrigin=BROWSELINK OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/identify-parts-and-wholes-in-different-contexts/lessons?sid-caf8e3=10CkrkqnT&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Spring%20Block%203%20SOL%20Fractions%20A.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcr-jq/mastery_assessment_y3.pdf
Reasoning	Apply your understanding of parts and wholes to solve this real-world problem: You are sharing a chocolate bar equally between 10 people. You give 1/10 to one person and 9/10 to the rest. What do you notice about 1/10 + 9/10? Can you continue this pattern? Interpret this situation to identify the relevant parts and wholes: You see that 2/10 + 8/10 = 1 and 3/10 + 7/10 = 1. What does this tell you about how parts combine to make a whole? Choose a model or diagram to represent your thinking: Draw or describe how you could show a similar pattern using eighths. Can you write your own examples like 1/8 + 7/8 = 1? Reason about part-whole relationships to solve this: The answer is 5/10. What could the question be? Think of a word problem or a number sentence involving fractions that would have this as the answer. Explain and justify your solution using the language of parts and wholes: How do your examples show an understanding of how parts come together to make a whole? Can you describe your thinking clearly using fractions?



	Identify parts and wholes in different contexts (1 week)
Problem solving	Click on me
Glossary	- Whole - The whole is all the parts or everything, the total amount. - Part - A part is some of the whole. - Equal - We say that two or more things are equal if they have the same quantity or value. - Unequal - We say that two or more things are unequal if they do not have the same quantity or value. - Set - A collection of items.
Stem sentences	The whole has been divided into _____ equal parts. Each equal part is one _____ of the whole. _____ of the whole ribbon has been cut off The whole has been divided into _____ equal parts. Each equal part is one _____ of the whole. The whole has been divided into _____ equal parts. One of these parts is highlighted. This part is one _____ of the whole line. The whole has been divided into _____ equal parts. One parts is one _____ of the whole. Equal parts of the whole do not have to look the same.
Representations	 Fractional notation and names – cardinal context  - The whole has been divided into three equal parts. - One plate of biscuits is one-third of the whole. Fractional notation and names – measurement context (length):  - The whole has been divided into four equal parts. - One of these parts is highlighted. This part is one-quarter of the whole line. Fractional notation and names – measures context (volume):  

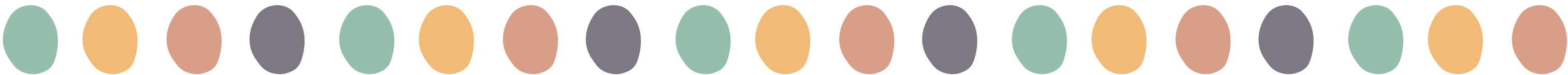


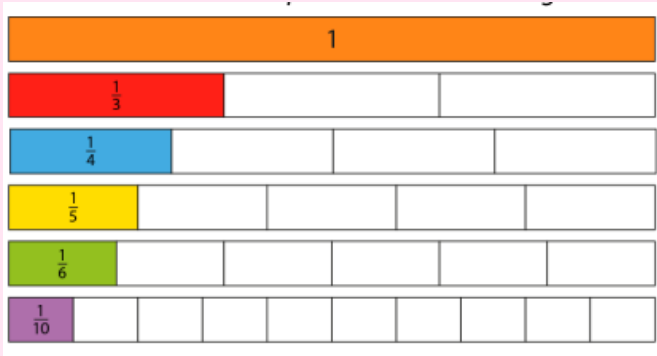
Y3- Overview

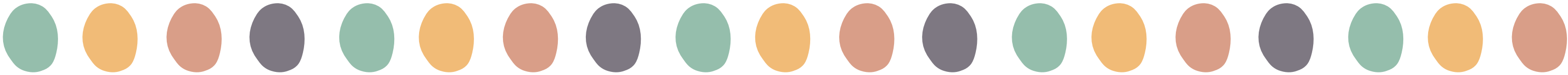
	Autumn 1			Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2			
Unit	1	2				3	4	5	6	7	8		9	10	11

	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

Summer 1	Compare and order unit fractions (1 week)
Ready to progress	3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency).
NCETM documents	TEACHING POINT 5 and 6 https://www.ncetm.org.uk/media/3fbfwr-vyc/ncetm_spine3_segment02_y3.pdf#page=4
Small steps	- To compare unit fractions by understanding that a larger denominator means a smaller part of the whole. - To compare and order unit fractions by reasoning about the size of their denominators. - To identify when unit fractions cannot be compared because they do not refer to the same whole. - To solve problems by comparing unit fractions in mathematical and real-life contexts. - To solve more complex problems by comparing and ordering unit fractions across a range of contexts
Links	NCETM-152 to 184 https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fhgpnbdp4%2Fcp-year-3-unit-8-unit-fractions.pptx&wdOrigin=BROWSELINK OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/compare-and-order-unit-fractions/lessons?sid-a13fd=Nb-EswFzIK&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Spring%20Block%203%20SOL%20Fractions%20A.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcr-jq/mastery_assessment_y3.pdf
Reasoning	Spot the mistake Six tenths, seven tenths, eight tenths, nine tenths, eleven tenths ... and correct it. What comes next? 6/10, 7/10, 8/10, 12/10, 11/10, What do you notice? 1/10 of 10 = 1 2/10 of 10 = 2 3/10 of 10 = 3 Continue the pattern. What do you notice? What about 1/10 of 20? Use this to work out 2/10 of 20, etc. True or false? 2/10 of 20cm = 2cm 4/10 of 40cm = 4cm 3/5 of 20cm = 12cm Odd one out Which is the odd one out in each of these trios 1/2 3/6 5/8 3/9 2/6 4/9 Why? What do you notice? Find 2/5 of 10 Find 4/10 of 10 What do you notice? Can you write any other similar statements? Ordering Put these fractions in the correct order, starting with the smallest. 4/8 3/4 1/4



	Identify Compare and order unit fractions																				
Problem solving	Click on me																				
Glossary	• Whole - The whole is all the parts or everything, the total amount. • Part - A part is some of the whole. • Denominator - A denominator is the bottom number in a fraction. It shows how many equal parts a whole has been divided into. • Unit fraction - A unit fraction is a fraction where the numerator is 1																				
Stem sentences	The whole is divided into _ equal parts. Each equal part is _____ of the whole. When comparing unit fractions, the greater the denominator, the smaller the fraction. When comparing unit fractions, the smaller the denominator, the greater the fraction When we compare the fractions, the whole has to be the same. The whole is divided into _____ equal parts. Each equal part is _____ of the whole. If one ninth is a part, then the whole is _____ times as much. Take _____ parts and put them together to make one whole. If one _____ is a part, then the whole is _____ - times as much. Take _____ parts and put them together to make one whole.																				
Representations	 <table><tr><th>Part</th><th>Part as a fraction of the whole</th><th>Number of equal parts in the whole</th><th>Whole</th></tr><tr><td></td><td>$\frac{1}{2}$</td><td>2</td><td></td></tr><tr><td></td><td>$\frac{1}{3}$</td><td>3</td><td></td></tr><tr><td></td><td>$\frac{1}{4}$</td><td>4</td><td></td></tr><tr><td></td><td>$\frac{1}{5}$</td><td>5</td><td></td></tr></table>	Part	Part as a fraction of the whole	Number of equal parts in the whole	Whole		$\frac{1}{2}$	2			$\frac{1}{3}$	3			$\frac{1}{4}$	4			$\frac{1}{5}$	5	
Part	Part as a fraction of the whole	Number of equal parts in the whole	Whole																		
	$\frac{1}{2}$	2																			
	$\frac{1}{3}$	3																			
	$\frac{1}{4}$	4																			
	$\frac{1}{5}$	5																			

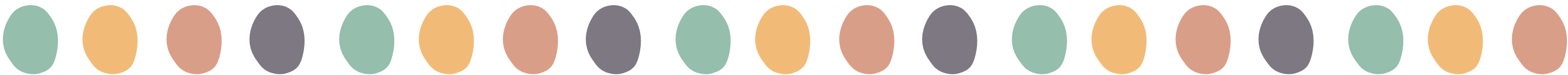


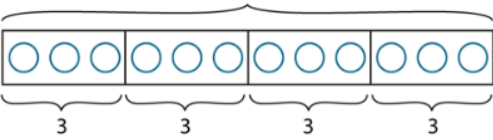
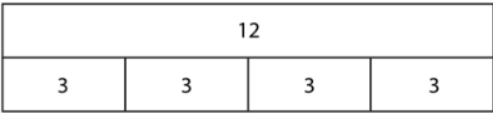
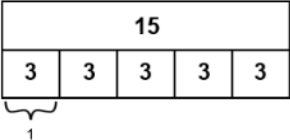
Y3- Overview

	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2			
Unit	1	2			3	4	5	6	7	8		9	10	11

	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

Summer 1	Calculate the value of a part (fractions as operators) (1 week)
Ready to progress	3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. 3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency).
NCETM documents	
Small steps	- To construct a whole when given one part and the fraction it represents. - To use knowledge of the relationship between parts and wholes to solve problems. - To use parts and wholes to find a unit fraction of a set of objects. - To calculate the value of parts and wholes by understanding division and division facts. - To connect division with finding a fraction of a quantity to calculate parts and wholes.
Links	NCETM - from slide 185 https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fhgpnbdp4%2Fcp-year-3-unit-8-unit-fractions.pptx&wdOrigin=BROWSELINK OAK https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/calculate-the-value-of-a-part-fractions-as-operators/lessons?sid-eccbf4=Vs4sMwJ5Hb&sm=0&src=3 WHITE ROSE https://assets.whiteroseeducation.com/new-schemes/Y3%20Spring%20Block%203%20SOL%20Fractions%20A.pdf Mastery with greater depth https://www.ncetm.org.uk/media/oaqfcvjq/mastery_assessment_y3.pdf
Reasoning	Spot the mistake Six tenths, seven tenths, eight tenths, nine tenths, eleven tenths ... and correct it. What comes next? 6/10, 7/10, 8/10, 12/10, 11/10, What do you notice? 1/10 of 10 = 1 2/10 of 10 = 2 3/10 of 10 = 3 Continue the pattern. What do you notice? What about 1/10 of 20? Use this to work out 2/10 of 20, etc. True or false? 2/10 of 20cm = 2cm 4/10 of 40cm = 4cm 3/5 of 20cm = 12cm Odd one out Which is the odd one out in each of these trios ½ 3/6 5/8 3/9 2/6 4/9 Why? What do you notice? Find 2/5 of 10 Find 4/10 of 10 What do you notice? Can you write any other similar statements? Ordering Put these fractions in the correct order, starting with the smallest. 4/8 ¾ 1/4



	Calculate the value of a part (fractions as operators) (1 week)
Problem solving	 <u>Click on me</u>
Glossary	- Construct - Construct means to make or build something. In the context of this lesson, it means to make or build a whole from equal parts. - Times as much - Times as much is a phrase that is used to compare and describe objects. - Set - A set is a collection of things (objects or numbers). - Unit fraction - A unit fraction is any fraction where the numerator is one. - Divide - When we divide, we split something into equal parts or groups. We use the ÷ symbol to mean divide.
Stem sentences	The whole is ____ oranges. The whole has been divided into 2 equal parts. Each part of $\frac{1}{2}$ of the whole. $\frac{1}{2}$ of ____ oranges is ____ oranges.
Representations	   $\frac{1}{5}$ of 15  $15 \div 5 = 3$ so $\frac{1}{5}$ of 15 = 3