

**Unit 11**  
**Fractions**

Five daily lessons

**North West Consultants**

**Year 3**  
**Summer term**

This Unit Plan is designed to guide your teaching.  
You will need to adapt it to meet the needs of your class.

**Unit Objectives**  
**Year 3**

- Compare 2 familiar fractions
- Know that  $\frac{1}{2}$  lies between  $\frac{1}{4}$  and  $\frac{3}{4}$
- Estimate a simple fraction (proportion) of a shape

Pages

**Link Objectives**

**Year 2**


**Year 4**

- Begin to recognise that two quarters and one half are equivalent

- Begin to use ideas of simple proportion
- Recognise the equivalence of decimal, fraction forms of one half, one quarter and tenths

**Resources needed to teach this unit:**

- Circles of Card
- Number lines
- Interlocking disks
- Whiteboards

Planning Sheet	Day 1	Unit 11: Fractions		Term: Summer	Year Group: 3
Oral and Mental		Main Teaching			Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions	
		<p>Compare two familiar fractions.</p> <p><b>Vocabulary</b>            Fraction            Equal parts            Greater than            Less than</p>	<p>Draw this shape on the board.</p>  <p><b>Q. How is this shape divided?</b></p> <p>Children to discuss with partners and share ideas. Emphasise that this shape is cut into 3 pieces but not into 1/3 because the pieces are not equal.</p> <p>Draw a number line on the board from 0 to 1</p> <p>Ask the children to draw a similar number line on their whiteboards.</p> <p>Ask the children to mark <math>\frac{1}{2}</math> on their line.</p> <p>Get a volunteer to mark <math>\frac{1}{2}</math> on class line.</p> <p><b>Q. Will <math>\frac{1}{4}</math> be greater or less than <math>\frac{1}{2}</math>?</b></p> <p>Ask children to mark <math>\frac{1}{4}</math> on their number lines.</p> <p><b>Q. How did you know where to mark <math>\frac{1}{4}</math>?</b></p> <p>Children to share ideas and emphasise that <math>\frac{1}{4}</math> is half of <math>\frac{1}{2}</math></p> <p>Now ask children to mark <math>\frac{3}{4}</math></p> <p><b>Q. How do we know where to mark <math>\frac{3}{4}</math>?</b></p> <p>Again children to share ideas as above.</p> <p>Give children a selection of fractions to mark on a number line.</p>	<p>Using number line 0 to 1 ask children to help marking fractions from main activity.</p> <p>Children to explain methods they used to help them mark on fractions.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 20px;"> <p>By the end of this lesson children should know:</p> <p>How to compare familiar fractions and use this knowledge to mark fractions on a number line.</p> </div>	

Planning Sheet	Day 2	Unit 11: Fractions	Term: Summer	Year Group: 3
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>Know that <math>\frac{1}{2}</math> lies between <math>\frac{1}{4}</math> and <math>\frac{3}{4}</math>.</p> <p><b><u>Vocab</u></b></p> <p><b>Equal Between Shared Thirds</b></p> <p><b><u>Resources</u></b></p> <p><b>Circles of card Number lines</b></p>	<p>Remind children of the work they did yesterday.</p> <p>Draw on the board a number line 0 to 1.</p> <p>Ask for volunteers to put on <math>\frac{1}{4}</math>.</p> <p><b>Q. How did you know where to put <math>\frac{1}{4}</math>?</b></p> <p>Children to offer ideas, emphasise that number line is divided into 4 equal parts.</p> <p>Now ask for volunteer to put <math>\frac{3}{4}</math> on number line.</p> <p><b>Q. Where do we put <math>\frac{1}{2}</math>?</b></p> <p>Children to discuss and share ideas.</p> <p>Expect children to say that <math>\frac{1}{2}</math> is the same as <math>\frac{2}{4}</math>, which is half way between <math>\frac{1}{4}</math> and <math>\frac{3}{4}</math>.</p> <p><b>Q. Would it be better to have 1 cake shared between 2 children or 3 cakes shared between 4?</b></p> <p>Children to discuss with partners and explain their reasoning.</p> <p>Do the activity practically.</p> <p>Ask other similar questions.</p> <p>Children to devise problems demonstrating fractions of quantities or shapes.</p>	<p><b>Q. Who would get most pizza, Sam who shared his pizza with 2 of his friends or Kate who shared her 2 pizzas with 4 friends?</b></p> <p>Give children time to discuss this with a partner and then ask for their reasoning.</p> <p>Demonstrate the division using circles of card to represent pizza.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>By the end of this lesson children should know:</p> <p>That <math>\frac{1}{2}</math> lies between <math>\frac{1}{4}</math> and <math>\frac{3}{4}</math></p> </div>

Planning Sheet	Day 3	Unit 1: Counting to 100		Term: Autumn	Year Group: 3
Oral and Mental		Main Teaching			Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions	
		<p>Estimate a simple fraction (proportion) of a shape.</p> <p><b><u>Vocab</u></b></p> <p>Fraction Approximately Estimate</p> <p><b><u>Resources.</u></b></p> <p>Whiteboards Interlocking disks</p>	<p>Use two interlocking disks (yellow and blue) to represent fractions.</p> <p>Move disks to show <math>\frac{1}{4}</math>.</p> <p>Q. What fraction of the shape is yellow?</p> <p>Children to discuss this with a partner and write their answers on the whiteboard.</p> <p><b>Q. What fraction of the shape is blue?</b></p> <p>Again allow children to discuss answer and share ideas.</p> <p>Give the children interlocking disks of two colours and ask them to work with a partner to show different fractions. e.g. <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math>, <math>\frac{5}{10}</math> etc</p> <p>Give the children 1 to 20 number lines marked in ones or tens and ask them to estimate and mark where different fractions would be. e.g. six and a half, seventeen and a quarter</p> <p>Differentiate this by size of number line and fractions.</p>	<p>Children to have interlocking disks.</p> <p><b>Q. Show <math>\frac{1}{4}</math> on your disks.</b></p> <p><b>Q How did you decide where this would be?</b></p> <p>Expect the children to explain that the shape needed to be divided into approximately 4 equal parts</p> <p><b>Q. Now show <math>\frac{1}{3}</math> on your disks.</b></p> <p>Again ask the children to explain how they knew where this would be.</p> <p>Repeat with <math>\frac{2}{10}</math>, <math>\frac{6}{10}</math>, <math>\frac{2}{3}</math></p> <div style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p>By the end of this lesson children should know:</p> <p>How to estimate a simple fraction of a shape and quantity.</p> </div>	

Planning Sheet	Day 4	Unit 11: Fractions		Term: Summer	Year Group: 3
Oral and Mental		Main Teaching			Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions	
		<p>Estimate a simple fraction (proportion) of a shape.</p> <p><b><u>Vocab</u></b></p> <p>Approximately Fraction Estimate</p> <p><b><u>Resources</u></b></p> <p>Large number line Jar of 100 marbles</p>	<p>Using large number line with only 1 and 100 marked.</p> <p>Ask the children for a whole number between 1 and 100 and mark this on the line.</p> <p><b>Q. Where would half of this number be?</b></p> <p>Children to discuss this with a partner and then ask for a volunteer to mark this number on the line.</p> <p><b>Q. How did you decide where to put the number?</b></p> <p>Allow children to discuss and then explain their reasoning.</p> <p>Expect them to say they estimated half way, or divided the line into 2.</p> <p>Repeat with different numbers.</p> <p>Extend questioning to include <math>\frac{1}{4}</math> of number.</p> <p>Expect children to explain that they split the line into four pieces.</p> <p>Children to work in pairs using number lines as in main activity.</p>	<p>Show the children a full jar containing 100 marbles.</p> <p>Tip out approximately half of the marbles.</p> <p><b>Q. How many marbles in the jar now?</b></p> <p>Children to discuss with partners and explain their answers.</p> <p>Put some marbles back in the jar until it is approximately <math>\frac{3}{4}</math> full.</p> <p><b>Q. How many marbles in the jar now?</b></p> <p>Again ask the children to explain their answers.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p>By the end of this lesson children should know:</p> <p>How to estimate fractions of quantities.</p> </div>	

<b>Planning Sheet</b>	<b>Day 5</b>	<b>Unit 11: Fractions</b>	<b>Term: Summer</b>	<b>Year Group: 3</b>
<b>Oral and Mental</b>		<b>Main Teaching</b>		<b>Plenary</b>
<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Objectives and Vocabulary</b>	<b>Teaching Activities</b>	<b>Teaching Activities/Focus Questions</b>
		<p><b>Compare 2 familiar fractions</b>  <b>Know that <math>\frac{1}{2}</math> lies between <math>\frac{1}{4}</math> and <math>\frac{3}{4}</math></b>  <b>Estimate a simple fraction (proportion) of a shape</b></p> <p><b><u>Vocab</u></b>  Estimate  Share  Divide</p> <p><b><u>Resources</u></b>  Circles of paper</p>	<p>Show the children 2 containers of marbles, 1 containing 100 marbles, container A, and the other, container B, 150 marbles. Tip out <math>\frac{1}{4}</math> of A and half of B.</p> <p><b>Q which container has most marbles left?</b></p> <p>Children to discuss with partner and then offer explanation.</p> <p>Expect the children to explain that <math>\frac{3}{4}</math> of 100 is 75 and half of 150 is 75 so both containers have approximately the same number of marbles.</p> <p><b>Q. If 3 people share 2 pizzas, how many pizzas would 6 people need to have the same amount to eat?</b></p> <p>Give the children circles of paper to represent pizza to help them find the answer.  Encourage the children to work in groups to solve this problem.</p> <p>Share solutions and reasoning.</p> <p>Children to write their own questions involving fractions.</p>	<p>Use one of the children's problems and get the class to solve this.</p> <p>Ask children to explain methods and reasoning.</p> <div style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p>By the end of this lesson children should know:</p> <p>How to solve problems that involve fractions.</p> </div>