



*Hooked on Thinking*  
Working With and For Local Families

**Recent research shows us that:** A Chinese proverb suggests ‘Tell me and I’ll forget; show me and I may remember; involve me and I’ll understand.’ How to involve or engage today’s learner is at the forefront of much educational research that resonates well with our ethos at Hindhayes.

**Developing children’s understanding of fractions at Hindhayes -**

We advocate that the children engage in a wide range of practical experiences linked to real life, such as making sandwiches, sharing fruit and pouring milk into cups at snack time. Rich use of vocabulary is used alongside these experiences to reinforce the concept of sharing, half, whole and eventually quarters. We want future experiences to be related back to these early concepts so that children can reignite previous learning and make further sense of the concepts. As the idea of fractions become more ingrained, the use of pictures can be used to incorporate a wider backdrop of everyday life such as animals in a field, houses along a street. Further use of concrete learning should still be used at different points, to allow for new connections such as finding half of a shape. Investigating ‘twists’ and misconceptions involving fractions are crucial to assessing how deep a child’s understanding is. As children develop their understanding of fractions further, we advocate the use of bar models to illustrate how to find a fraction of an amount. In year 2, we have purposefully moved the fractions unit after multiplication and division as we want the children to use and apply their knowledge of their times tables, doubles and halves to fractions. This also allows some learners to continue developing their understanding at a pace that is suited to their needs.

Essential Prior Knowledge	Development of skills <b>Foundation Stage</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<p>-To understand what a whole cake, biscuit, apple etc means. -Pupils immerse themselves in everyday experiences such as folding shapes in half, discussing how their sandwich is cut etc.</p> <p>From PSED- to understand ‘share’ including taking turns.</p>	<p>ELG Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</p> <p><b>Children are introduced to the concept of doubles by matching, building and exploring sets that are the same (within 10). Children are encouraged to talk about what they notice when 2 sets are the same and when they are not the same. Counting and addition skills are used to count the 2 sets and find out how many there are altogether. Being able to visualise equal sets and make links between numbers and their number doubles provide firm foundations for year 1. The use of numicon plates and tens frames representations help to exemplify the pattern of odd and even numbers. These patterns are discussed and used to help the children sort them into 2 groups.</b></p>	<p>-recognise, find and name a half as one of two equal parts of an object, shape or quantity -recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</p> <p><b>Children continue to develop their understanding of doubles and halves through numbersense and multiplication and division. This learning is cemented through visual representations, manipulating concrete apparatus and discussion. The numbersense animations provide reasoning rich and talk rich opportunities to predict, prove and recall facts.</b> <b>2021-2022 – the fraction unit has been taken out of the long term overview to prioritise other units.</b></p>	<p>-recognise, find, name and write fractions <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity -write simple fractions for example, <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></p> <p><b>Children explore and investigate finding half of regular shapes and irregular shapes. The concept of a half is one part of a whole shared into 2 equal parts is explored. Other fractions are met and investigated – a quarter is one part of a whole shared into four equal parts, a third is one part of a whole shared into three equal parts. Children are challenged with ‘it is a half’ and ‘is it a half?’ problems. Children meet this unit after their multiplication and division unit. Children will use their developed skills of adding two equal groups and dividing by 2 to secure finding half of an amount. Bar models are used to demonstrate and calculate finding fractions of given amounts.</b></p>	<p>-count up and down in tenths; -recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 -recognise, find and write fractions of a discrete set of objects: unit fractions and non unit fractions with small denominators -recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators -recognise and show, using diagrams, equivalent fractions with small denominators -add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>] -compare and order unit fractions, and fractions with the same denominators -solve problems that involve all of the above.</p> <p><b>Year 3 teachers will use ready to progress materials and transition notes to establish the next steps needed for this unit.</b></p>
	<p>Key vocab Sharing half</p>	<p>Key Vocab - Know the language of double and half Know the meaning of the word ‘equal’</p>	<p>Key Vocab Whole, equal parts, four equal parts, one half, two halves, a quarter, two quarters</p>	

