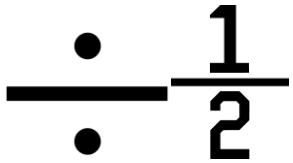
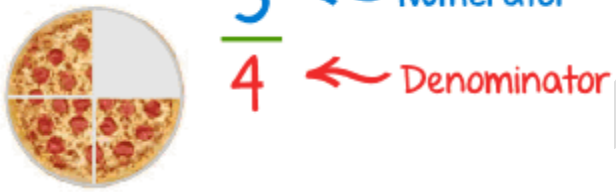
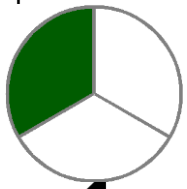
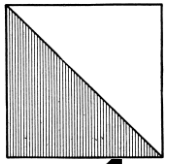
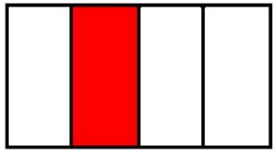
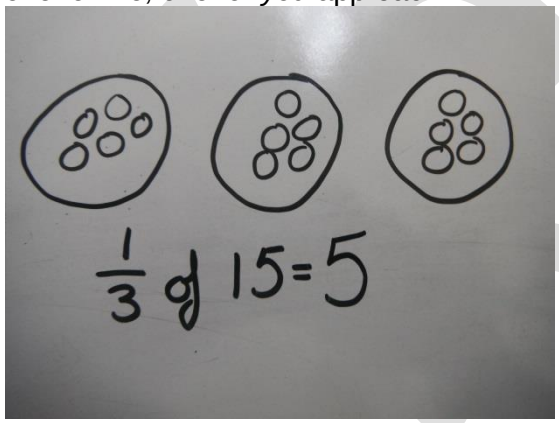
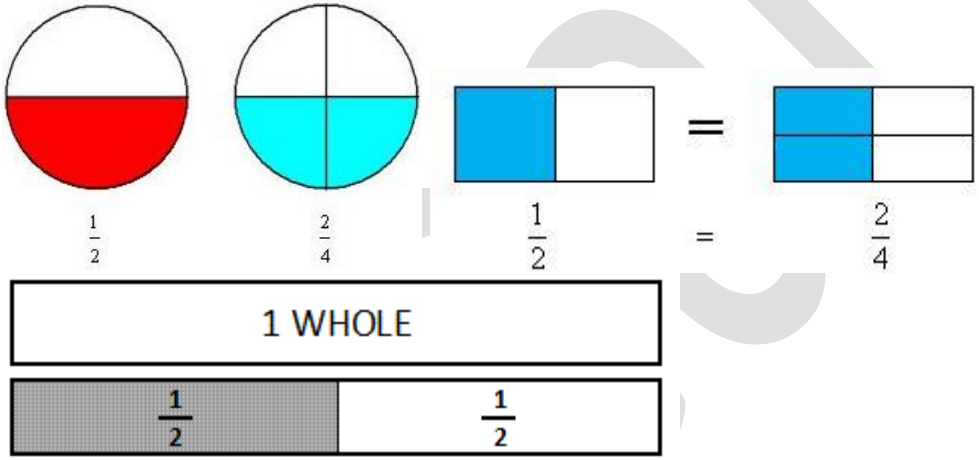
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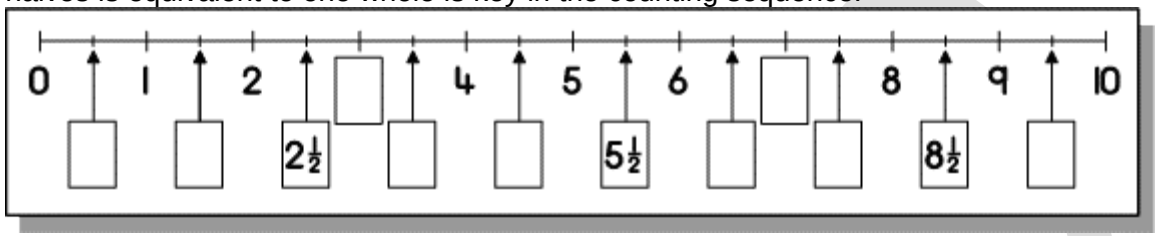
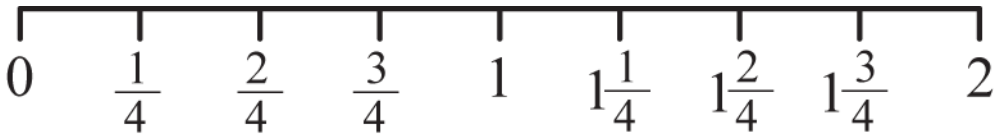
Year 2 Fractions

By the end of Year Two, children have been taught to:

Objective	Why is it important? Things to watch out for! Taught strategies
Recognise the denominator as how many parts the whole is divided into and the numerator as how many parts 'we have'	A good place to start when focussing on fractions is by going back to what children know. In Year R and Year 1 children are taught the concept of what a half is through an immersion of visual images, real life context and practical experiences. During Year 2 children are introduced to the number form of a half opposed to just talking about and looking at visual images of a half. Children are also introduced to the division sign in Year 2, which is an ideal opportunity to develop an understanding of the link between the two.  When comparing the two, children often say 'there is a line with something above it and something below it', in addition to 'the line is dividing two things'. By doing this, it makes the link between division and fractions explicit. Maths has its own specialised language, the numerator and denominator being some that either you know or you don't. The words do not give children any clue as to what they mean or their orientation to each other in the fraction. The denominator is the amount of parts the whole has been cut into and the numerator is the amount of parts you have. Through practical activities and other ways of making the words memorable is the only way to reinforce the meaning of the words. Using silly voices or creating images to make it memorable is a way that can work for some children. Darthvader (with the voice) splitting the whole in half with his lightsaber is one thing to try if you are feeling theatrical. 
recognise, find, name and write (unit fractions where the numerator is one) 1/3, 1/4, 2/4 and (non-unit) ¾ of a	Children starting Year 2 will have experienced visual representations and practical experiences of halves and quarters from Year 1. To take this understanding a step forward, children are introduced to the numerical written form of fractions and the related vocabulary (see above). For example knowing that quarters are a whole divided into four equal parts is crucial in helping children to internalise and relate the pictorial/practical to the written from where four is the denominator.

length, shape, set of objects or quantity	The term quarter and a half do not give children a verbal clue as to how many parts the whole has to be divided into, whereas a third does because a third sounds similar to the number three. Again they have to internalise that: halves refer to two parts and quarters refer to four parts. Many children call quarters fourths because to them it makes more sense. As long as children know quarters refer to four parts when it is spoken about it is not a major issue if they call quarters fourths at this point.  $\frac{1}{3}$ One part is shaded out of the whole which is divided into three parts.  $\frac{1}{2}$ One part is shaded out of the whole which is divided into two parts.  $\frac{1}{4}$ One part is shaded out of the whole which is divided into four parts. Finding halves, quarters and thirds of shapes and amounts of objects requires different levels of thinking. For example, finding a third of a shape involves comparing the relative size of the shape and trying out where children would need to either cut or draw a line to divide the shape. Some children fold the shape (if it is paper) to test out their ideas, whereas some measure the shape with a ruler and divide the total amount of centimetres. Whereas finding a third of fifteen objects does not involve cutting items or drawing lines, fractions of amounts involves sharing out the amount into three equal parts – many children do this by doing the *one for me, one for you* approach.  During these types of tasks, children are always encouraged to use equipment and draw pictorial representations to help develop their understanding. Make it memorable and enable children to make links between other mathematical concepts.

	Moving on from finding unit fractions, children are asked to find several parts of the whole for example ¾. To be able to do this children need to be secure finding a ¼ first and then think about if ¼ is 2 sweets, ¾ would be 6 sweets. Due to the fact that this task involves two steps in finding the answer, children often find a quarter of the sweets and then think they have finished. Revisiting the initial question is always key to ensuring children complete the whole task.	
write simple fractions e.g. $^1/_2$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $^1/_2$.	When children are asked to find and write *simple fractions* they need to be able to draw on the knowledge they have developed for Year R and Year 1 and build on the understanding of written numerical fractions. To be able to find ½ of a shape or an amount, children have to internalise that the deonominator is telling them to divide the whole in to two parts and then count/take half of it so they have ½. Common errors children make when writing fractions is writing the denominator where the numerator should be. Recognising and finding equivalent fractions at this stage needs to be practical and visual, so children can see that the fractions are the same size for example ½ = 2/4 .  Extending and deepening children's understading of equivalent fractions can be done by putting in 'red herrings' for example 'Is ½ a square equivalent to 2/4 of a triangle?' OR 'Is ½ a two finger kit kat equivalent to 2/4 of a four finger kit kat?' This allows children to reason that the size of the whole can make a difference to the outcome. Likewise asking questions like 'Would you rather have 2/4 or ½ of 12 sweets?', which makes children apply there previous knowledge – many children say 2/4 because they hear the numerator is 2 compared to the numerator 1 in a half, even though it is exactly the same.	
Begin to count in	To be able to count confidently with fractions, children need to be able to internalise what the fraction	**Spot the mistake**

fractions ½, 1, 1 ½ , 2, 2 ½, 3, 3 ½ , 4……	being counted look like, add on the next fraction being counted and recognise equivalence. For example when counting in halves a child might count ½, 2/2, 3/2, 4/2 opposed to ½, 1, 1 ½, 2. Knowing that two halves is equivalent to one whole is key in the counting sequence.   	7, 7 ½ , 8, 9, 10 8 ½, 8, 7, 6 ½, … and correct it **What comes next?** 5 ½, 6 ½ , 7 ½ , ….., …. 9 ½, 9, 8 ½, ……, …..

Year 2