Number Champions
1 2 3 4 5
fun + skills = confidence

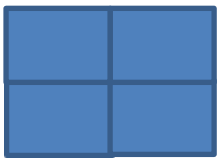
# Resource for Year 2 Core Curriculum

## Division: Understand fractions with 1 in top row ('numerator') ½ ⅓ ¼ and draw these on a square and rectangle.

It is really important for the child to understand (i) the relationship between 'whole' and 'part' and (ii) the concept of all the parts being the same or equal. When all the parts are equal, each represents the same **fraction.** Children will have heard people talk about 'a half' and 'a quarter' in everyday contexts, such as when sharing out food, or talking about time. If the child is confident, then you can go immediately to the section on fractions below.

Vocabulary
The top row of a fraction is the 'numerator' and the bottom row is the 'denominator'. So in 1/3 the numerator is 1 and the denominator is 3. You don't need to use these words, but you should be aware of them in case the child asks. You can say 'When a square is cut into 3 equal parts and you have 1 part, you have one third of the square' – this echoes the 'stem sentence' used below.

**Whole and part - fun and practica**l.
Start with a rectangle. (Use paper or an old greetings card with a clear picture.)
Check that the child knows that the shape is a 'rectangle'.
Fold then cut the rectangle into 4 smaller rectangles each the same size.
Again check that the child knows that each smaller shape is a rectangle.
Ask the child how you can check that the parts are the same size. (Eg, put them on top of each other.)
Get the child to put the pieces back together to make the whole rectangle.



Say 'The big rectangle is the whole and the small rectangles are the parts.'
Which is bigger – the whole or one of the parts? (The whole.)
Which is smaller - the whole or one of the parts? (The part.)
How many parts are there?' (Four)
Are all the parts the same size? (Yes)
What do you get when you join together all four parts? (The whole big rectangle.)

**Simple fractions**
Children need to learn:

- To write the fraction themselves. Give lots of practice looking at pictures of an object split into equal fractional parts. Say the stem sentence from the table below aloud as they write the notation 1/2, 1/3, 1/4.
- To read the fraction use the name 'one-half', 'one-third', 'one-quarter'.
- To link the name, written notation and a fraction of a length, shape or set of objects. They need to be able to move between the model, the name and the written notation.

This NRICH link giving diagrams to show simple fractions with shapes and counters may be helpful:
https://nrich.maths.org/content/id/6938/fractions%20cards.pdf

The examples below show how to demonstrate fractions as model, name and notation.

**A whole apple.**

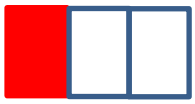
**Divide the apple into 2 equal parts.**

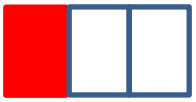
| Model | Say stem sentence | Write | Notation |
|---|---|---|---|
| | 'The apple has been divided… | Write the division bar | $\frac{\quad}{\quad}$ |
|  | ..into 2 equal parts.. | Write '2' as the 'denominator' (bottom line) | $\frac{\quad}{2}$ |
| one half | ..and we have 1 of these parts | Write '1' as the numerator | $\frac{1}{2}$ |
| | One part is one half of the whole apple | | |

**A whole rectangle**

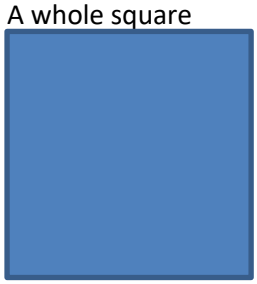
**Divide the rectangle into 3 equal parts**

**Shade one part so you can see it clearly**

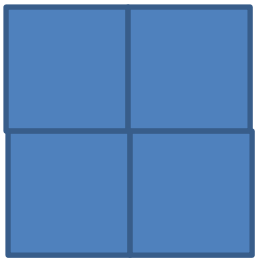


| Model | Say | Write | Notation |
|---|---|---|---|
| | 'The rectangle has been divided… | Write the division bar | $\frac{\quad}{\quad}$ |
|  | ..into 3 equal parts.. | Write '3' as the denominator | $\frac{\quad}{3}$ |
| one third | ..and 1 of these parts is shaded | Write '1' as the numerator | $\frac{1}{3}$ |
| | One part is a third of the whole rectangle | | |

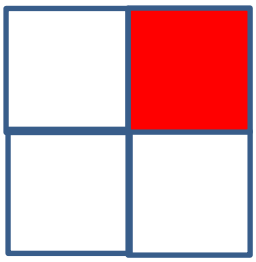
A whole square

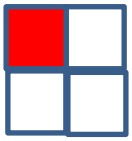


Divide the square into 4 parts



Shade one part so you can see it clearly



| Model | Say | Write | Notation |
|---|---|---|---|
| | 'The square has been divided… | Write the division bar | ——— |
|  | ..into 4 equal parts.. | Write '4' as the denominator | ——— 4 |
| one quarter | ..and 1 of these parts is shaded | Write '1' as the numerator | 1 ——— 4 |
| | One part is a quarter of the whole square | | |

This resource is aimed at fractions with 1 in the top row – the 'numerator'. If the child asks about fractions with numerators bigger than 1 – ie 2, 3, etc – or if it is appropriate for you to mention them, this video clip shows you how to do so at the Year 2 level. It uses clear language and works through all fractions of ½, ¼ and 1/3.
https://www.youtube.com/watch?v=UBiYzF-0txw&feature=youtu.be It lasts 5:38, but you probably won't need to watch to the end.