# Maths Week 3 Fractions

There are flashback starters for each day on the slides.

#### Lesson 1 - Halves

In this lesson we are going to introduce fractions.

Today we will focus on finding half of a shape.

Using a square piece of paper, we will fold it into different halves to show that there is more than one way of representing half.

At the end there is a reasoning activity in which we encourage the children to explain which is the odd one out. We have provided some sentence starters to help with this.

<u>Resources</u>: squares to fold (on next slide if you would like to print them out)



# Flashback 4

- I) What is  $2 \times 8$ ?
- 2) There are 5 flowers in each vase. How many flowers altogether?



- 3) Complete the sequence. 2, 4, 6, \_\_\_\_, \_\_\_
- 4) Find the sum of 3, 4 and 7



Day 1

Year 2

5) What's the time?



## What do you know about fractions?

You have one minute to tell someone or write down as many facts as you can about fractions!



Which of these shapes have been divided into equal parts? Equal parts mean that they are the same.



Well done, the shapes circled have been divided into equal parts!



#### Birthday Cake Problem







These twins need to share a whole Birthday cake.

The girl wants pink icing. The boy wants chocolate icing.

They need half each.



How many different ways can you fold the paper so that the twins have the same amount of cake with their preferred icing?





Did you fold your paper in these ways?

Can you fold the whole shape in half in a <u>different</u> way?



The shape has been divided into equal parts. We have shaded pink Here is how we can show this as a fraction!



What does the 1 represent?

What does the 2 represent?

Explain?



You may want to watch this video. https://www.bbc.co.uk/bitesize/topics/z3 rbg82/articles/zt7nfrd



#### <u>Activity 2</u>:

#### Which one is the Odd One Out?



Can you use these sentence starters to help you?



This is true because	I think that
This is not true because	I can prove my thinking by
I know this is correct because	I think that
I know this is incorrect because	It must be because
I can show you	If then

#### Lesson 2 - Quarters

In this lesson we will continue on from yesterday's fractions work but now look at quarters.

It is helpful to regularly remind your child that the bottom number of the fraction tells you how many parts there are, and then top number tells you how many parts are shaded.

Investigation on slide 30: activity to upload

<u>Resources</u>: paper rectangles to fold - there are some on the next slide (15) that you can print out

Different shapes to fold for activity to be uploaded (investigation) - there are some on slide 16 for you to print out









What can you remember about fractions? Tell someone what you remember!



2



<u>Vocabulary</u> equal parts whole half

Which shapes have been divided into fractions?



When you've given it a go, have a look on the next page for the answers!

Which shapes have been divided into fractions?



Can you explain why these have been circled. <u>Hint</u>: use the word 'equal parts' to explain.

# Today we are going to learn about quarters!

We know something is a quarter when it is divided into 4 equal parts.

Here are some examples:







You might want to watch this video to help you learn about quarters! https://www.bbc.co.uk/bitesize/topics/z3rbg82/articles/zq2yfrd



Burlington Bear thinks he can fold a rectangle into quarters in 3 different ways.

Is this true or false? Why don't you try and find out!



How many ways can you divide this shape into quarters?

Here are some ways you could split a rectangle into quarters! I wonder how many of these ways you found...



# In the last lesson we learnt how to identify and write a fraction.



The top number is how many parts are shaded, in this case there is 1.

The bottom number in the fraction is how many parts there are. In this case (when looking at halves) there are 2. Now we know how to write fractions, let's try these, the first one has been done for you.



#### 4

There are 4 parts so 4 goes at the bottom and 1 part is shaded so 1 goes at the top.

When we have one part shaded out of 4 we call this one quarter. Sometimes you need to show more than 1 quarter.

Let's learn how to shade in more than 1 quarter and how to say and write these fractions with Mr Johnson.



#### Can you shade in the correct amount for each of these? You could draw these in your book or print out this sheet.



3 2 - -4 4 Can you explain to someone how you would complete this table?



What fractions have I shaded here? You can say or write your answers. Remember to look at how many parts there are and how many parts are shaded.



# <u>Activity to upload</u> <u>Investigation</u>

Split a piece of paper into 4 parts and write these fractions on it.

Fold different shapes (on slide 16) into different fractions and place them onto your piece of paper. (If this is taking too long you can draw the shapes in.)

<u>1</u> 4	24
3 4	1 2



#### Lesson 3 - Thirds

In this lesson we will be looking at finding a third of a shape. By this point we will have looked at halves and quarters so you could encourage your child to explain how many parts there will be when looking at a third.

You will need colouring pens/pencils, paper shapes on suggested slides below

Activity 1: Flashback,

Activity 2: Folding, shading and labelling rectangles into half, quarter, third - you might want to print out slides 31, 32, 33 for the rectangles

Optional Activity: Folding different shapes to show fractions - you might want to print out slide 40 for the shapes.

<u>Challenge Activity</u>! Slide 41 - Labelling the fraction of the shape that is shaped. Compare the fractions using the greater than, less than or equal signs - you could print this page out or your child could draw them on paper.

Super Challenge Activity: Slide 42 - You could print this page out or your child could solve it on paper.

# Flashback 4

- What is 8 ÷ 2?
- 2) Sam has 10 pairs of socks. How many socks altogether?



Day 3

Year 2

#### 5) What's the time?

3) Use < , > or = to compare.  
$$5 \times 4 \bigcirc 5 \times 5$$

4) Calculate 42 + 10



Can you fold the rectangle into half? Can you shade and label it as half?



Now can you fold it into quarters? Can you shade and label: One quarter, two quarters, three quarters

#### Now can you fold this rectangle into thirds?



I wonder how many parts this will be...

Think about the word third, what number do you relate that to? That's right, when we are finding a third of something it means we split it into three equal parts!



Here are some more examples of shapes split into thirds. Count how many equal parts each shape has.



Think about what we have learnt already this week, and what we have just learnt about fractions before you answer this question. On the next slide Mr Johnson will explain the answer.



Talk to an adult about your thinking! Watch the video below to see Mr Johnson explain the previous question.



<u>Optional Activity</u> Choose a shape from below.

Can you show these different fractions with the shapes?

# $\frac{1}{2} \frac{1}{4} \frac{2}{4} \frac{3}{4} \frac{1}{3}$



Challenge Activity!

Can you label the fraction that is shaded.

Can you then compare the fractions using the greater than, less than or equal signs.

# Super challenge!

Dora says,



I have one third of a pizza because I have one slice and there are three slices left.

Do you agree? Explain your reasoning.

# Lesson 4 - Finding half of a number

In this lesson we will apply what we've learnt about finding half of a shape, but this time to finding half of a number. The children may think back to dividing by 2.

We encourage the children to use the stem sentence:

The whole is \_\_\_\_\_. Half of \_\_\_\_\_ is \_\_\_\_\_.

Activity to upload: Slide 49.

# Flashback 4

- I) Divide 12 by 2
- One triangle has 3 sides.
  How many sides do 5 triangles have?



Day 4

White Rose Maths

5) What's the time?

Year 2

3) Use < , > or = to compare.  
$$3 \times 2 \bigcirc 2 \times 3$$

4) Calculate 75 — 10

So far this week we have learnt about finding a fraction of a <u>shape</u>, but today we are going to learn about finding a fraction of a <u>number</u>.

James has 20 sweets. He gives half of them to his friend. How many do they have each?

Can you come up with a clever method to work this out? Once you've had a think about it, go to the next slide to see Mr Johnson explain it.

# Watch the video below to see Mr Johnson explain the square and counter method.



Your turn!

Kim has 26 cakes. She gives half to her friend. How much do they have each?



The whole is \_\_\_\_\_. Half of \_\_\_\_\_ is \_\_\_\_\_

Can you find half of each of these counters/number below? You could use something at home to help you, for example pasta or counters.



#### The whole is \_\_\_\_\_. Half of \_\_\_\_\_ is \_\_\_\_\_.



# Challenge!

- 1. If 12 is half, what is the whole number?
- I have a secret number.
  I halved it and then halved it again.
  I ended with the number 3.
  What was my secret number?





# Let me know if you work out my numbers!

## Lesson 5 - Mental Maths - The '9' Trick!

Focus - To add and subtract 9 to and from any 2 digit number.

- Recap/Introduce We will look at what we know about the number 9. Discuss near 10s and what happens when we add/subtract 10 from a 2 digit number.
- Teach Using knowledge of near 10s, we look at using an empty number line to help support the children to visualise adding/subtracting 9 from a 2 digit number by compensating.
- Apply Apply the '9' trick strategy to add and subtract 9 to and from any 2 digit number.

# Flashback 4

- I) Is 13 odd or even?
- 2) Divide IH by 2



Day 5

Year 2

5) What's the time?

- 3) There are 5 players on a football team. How many players on 4 football teams?
- 4) How much money is there altogether?











#### What happens to a number when we add or subtract 10?



Let's look at a hundred square and use dienes to help us.



23+10=33

23 - 10 = 13

#### Let's learn the '9' trick!

We can use an empty number line to add or subtract 9.

Click to learn the

Adding 9

+ 10 then -1 because you've added one more than you need.

#### Subtracting 9

-10 then +1because you've subtracted one too many.



We call this strategy 'compensating'.

Can you solve these using the new '9' trick mental strategy?

Mila
5 + 9 = ?
11 + 9 = ?
21 + 9 = ?
19 - 9 = ?
26 - 9 = ?

Medium
18 + 9 = ?
28 + 9 = ?
29 + 19 = ?
31 - 9 = ?
37 - 29 = ?

Extra Hot
12 + 9 = ?
42 + 19 = ?
42 - 19 = ?
70 - 29 = ?
45 - 39 = ?