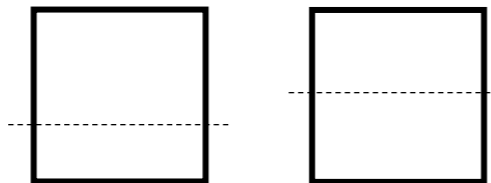


# Year 1 Unit 10: Fractions (1 week)

## Before you start...

- What experiences have pupils had with halving and doubling sets and amounts?
- What misconceptions might pupils have about halving?
- How secure are pupils in identifying half and whole turns?

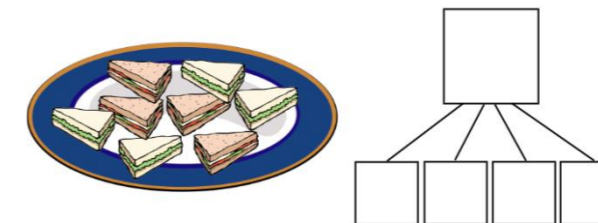


## What is a fraction?

The unit looks at fractions as division of a whole and fractions as an operator. These are both key ideas in building an understanding of fractions and this [article](#) explains more.

## Fraction misconceptions

- Pupils may find the concept of equal and unequal parts challenging, particularly when finding half or quarter of an area or object.
- When finding a fraction of an area or object, pupils may not recognise that the parts do not have to be the same shape in order to be equal.



## Understanding one half

- L1 Identify half of a shape or object
- L2 Find half of a quantity

The unit focuses on understanding fractions in terms of part-whole relationships and the use of equal parts. The standard  $\frac{a}{b}$  notation for fractions is not used and so the focus is placed on developing a conceptual understanding of fractions as equal parts of a whole or quantity. In Lesson 1, pupils explore equal and unequal parts before attaching the concept of half to a shape or object being split into two equal parts. They then explore 3-D objects such as fruits and vegetables and discuss how these can be cut approximately in half, emphasising the need for two equal parts. This provides opportunities for consolidation of language of approximation: it is 'nearly' or 'about' half. In Lesson 2, pupils find half of a quantity within 20, again with a focus on equal and unequal groups. This provides opportunities to consolidate number sense through comparing numbers. A part-whole model is used to conceptually demonstrate dividing a whole quantity into two equal parts and pupils should have opportunities to explore different strategies for doing this.

? How can you ensure that pupils have multiple opportunities to hear and use part-whole language and 'equal parts' throughout this lesson?

## Understanding one quarter

- L3 Identify quarter of a shape or object
- L4 Find quarter of a quantity

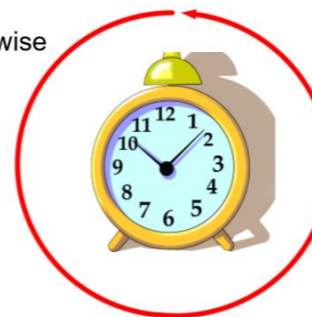
Lessons 3 and 4 follow a similar pattern to Lessons 1 and 2 to allow pupils to make connections between strategies for finding a half and a quarter, again with an emphasis on equal and unequal parts. Opportunities should be taken for pupils to compare strategies and outcomes and identify that one quarter of a shape or object is one of four equal parts. A part-whole model with four parts is used to share an object into four equal parts, and this model is built upon in Lesson 4 when pupils find quarter of a quantity within 20. Concrete and pictorial representations are used throughout to emphasise the equal parts.

- ? How will you support pupils to make connections between the different representations of a quarter used in these lessons?
- ? What everyday experiences can you connect this to, to support understanding?

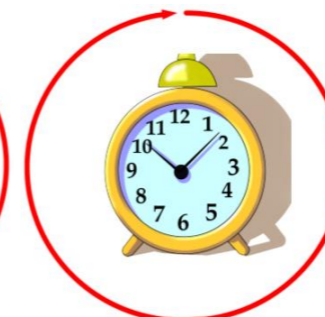
The Big Picture for the unit – based on the tale of Anansi and Turtle – provides lots of opportunities for pupils to discuss equal and unequal groups. The context of a tea party is used throughout the unit.



anti-clockwise



clockwise



## The part-whole model

This [article](#) from NRICH provides an explanation of part-whole language in relation to teaching fractions.

There are no consolidation lessons in this unit. Consider how the key ideas developed can be consolidated in transitions and Maths Meetings.

## Using turns

- L5 Identify half, quarter and three-quarter turns

Pupils have explored half and quarter turns in an earlier unit related to time however, this should be connected to new contexts and experiences. Through practical experiences of following and giving instructions, pupils consolidate these turns before identifying quarter and three-quarter turns, seeing that the direction they face will depend on whether the turn is made clockwise or anti-clockwise. Connections are made between one half turn being equal to two quarter turns. Pupils then transfer this knowledge to pictorial and written instructions for following a path.

- ? How will you make connections between this use of fraction language and the representations that have come before?
- ? How can you make use of positional and directional language across the curriculum?