Non-unit fractions

National Curriculum attainment targets

- Recognise, find and write fractions of a discrete set of objects: non-unit fractions with small denominators
- Solve problems that involve the above

Lesson objectives

- Recognise, find and write non-unit fractions of a set of objects
- Solve fraction problems and reason mathematically

Previous related lessons

Unit 2, Week 2, Lesson 2

Prerequisites for learning

Pupils need to:

- understand unit fractions
- understand how to find fractions of a number

Vocabulary

numerator, denominator, whole

Future related lesson

Unit 10, Week 2, Lesson 2

Success criteria

Pupils can:

- see how many squares in a whole
- work out the unit fraction of an amount
- work out the non-unit fraction of an amount

Getting Started

- Choose an activity from Number – Fractions.

Collins Connect
Year 3, Unit 6, Week 2

Teach

Resources

mini whiteboard, pen and eraser (per child), interlocking cubes (per class)

You may also want to use real interlocking cubes alongside the slides.

- Say: **We have looked at unit fractions where the numerator is always 1. Today we are going to investigate fractions where the numerator is greater than one.**
- Write $\frac{1}{3}$ on the board.
- Ask: **What does this fraction mean?** Share ideas and establish that the denominator tells us that the whole needs to be divided into three groups. The numerator tells us that we are talking about one of those groups.
- Display: Slide 1.
- Say: **Here is my thirds snake. He is called my thirds snake as he is made up of three equal parts.**
- Point to each of the parts in turn and say one third each time.
- Point to two cubes together and ask: **What fraction of the snake is two cubes?** Write $\frac{2}{3}$ on the board.
- Display: Slide 2.
- Say: **This is my sixths snake as he is made of six equal parts.**
- Ask: **What fractions can I write to show his colours?** Share children's ideas.
- Establish that the blue cubes are two-sixths and the yellow cubes are four-sixths of the snake. Write the fractions on the board next to the appropriate cubes.

As you draw the line between the numerator and denominator, use the language "out of". Say: **Four out of six cubes are yellow.**

- Ask: **In the fraction four-sixths, where does the four come from? What does the six refer to?**
- Ask: **Can my snake be described using any other fractions?** Share children's ideas and focus on thirds.
- Say: **He can be broken into three equal pieces so each of those is one third.** Draw the divisions on the slide.
- Ask: **What fraction of the snake is blue? What fraction is yellow?** Record the fractions on the board.
- Write on the board: $\frac{2}{3}$ of 6 = 4.
- Display: Slide 3.
- Repeat with this snake looking at ninths and thirds, if appropriate.
- Ask: **What fraction of the snake is green?**

Individualised Learning

Refer to Activity 2 from the Learning activities on page 252.

Pupil Book 3B – Page 21: Fractions snakes

Resources: coloured pencils (per child), squared paper (per child), interlocking cubes (per child)

Progress Guide 3 – Extension, Year 3, Unit 6, Week 2, Lesson 2: Non-unit fractions

Plenary

Resources

mini whiteboard, pen and eraser (per child)

- Say: **I am thinking of a snake. He is one-third blue and two-thirds red. Draw him on your white board. Write R for red and B for blue.**
- Look at children's snakes. Choose some snakes that are different and ask children to come to the front and show them to the class. Discuss why they all show one-third and two-thirds.
- Choose one and say that was the same as the one you were thinking of.
- If all the snakes are only made of three squares, say: **I can't see any snakes that are the same as the one I am thinking of. Draw another snake with your partner.**
- Say: **I am thinking of a snake that is two-fifths yellow and three-fifths green.**
- Repeat the above.

Homework Guide 3

Year 3, Unit 6, Week 2, Lesson 2: First to one

Resources: paper clip and pencil - for the spinner (per child), coloured pencil (per child)

Overcoming Barriers

- If children do not have a secure understanding of unit fractions then they will find non-unit fractions a challenge. Spend more time on the understanding of unit fractions.