

Beanbag Maths 3

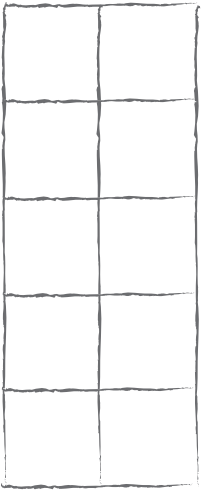
A fractions, decimals and percentages activity for groups or pairs

What you will need per group – outdoor activity

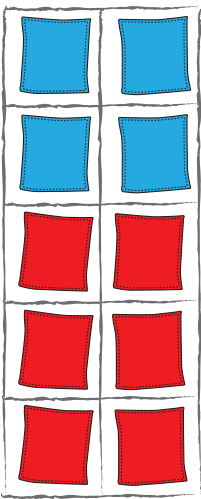
- Basket or box of 10 beanbags in a mixture of colours
- Chalk
- Numicon Large Foam 10-shape (optional)

What to do – outdoor activity

- This part of the activity needs to take place in the playground or a large open space.
- Divide up into groups of 4.
- Draw a 10-frame (as shown below) on the playground with chalk. (You could use a Numicon Large Foam 10-shape to draw around, if available.)



- Draw a line a short distance away to indicate the start line, where the runners line up. At the start line, place a box or basket of different-coloured beanbags.
- In your group, take it in turns to run from the start line to the 10-frame and place one beanbag at a time into each section of the frame.
- Continue until your team has completely filled the frame.
- As a team, rearrange the beanbags into groups of different colours, placing them back in the 10-frame.
- Work out the percentage, fraction and decimal fraction of the total for each colour in your 10-frame. For example, here 60%, $\frac{6}{10}$ or 0.6 are red, and 40%, 0.4 or $\frac{4}{10}$ are blue.

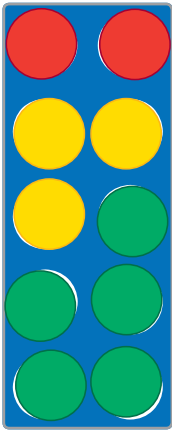


What you will need per pair – indoor activity

- A copy of this sheet (**Please note:** this is an A3 document and needs to be printed at 100%)
- Numicon Feely Bag
- 20 Numicon Counters **or** Pegs (in a mixture of colours)
- Two Numicon 10-shapes **or** a copy of this sheet

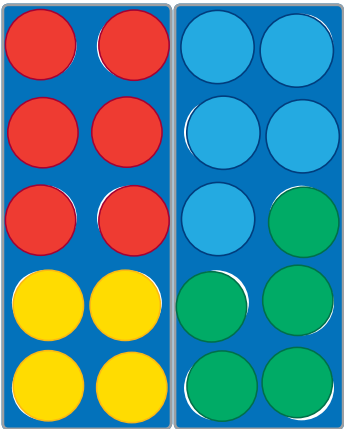
What to do – indoor activity

- This part of the activity follows on from the outdoor activity.
- In pairs, each take a Numicon 10-shape (or use the template on this sheet). Put 20 counters into the bag.
- Take it in turns to select a counter from the bag (without looking) and place it onto your 10-shape. Continue taking turns until you have completely covered your 10-shape.
- On your 10-shape, rearrange the counters into groups of different colours.
- With your partner, can you work out the fraction, percentage and decimal fraction of the total for each colour of counter on your 10-shape? For example, here $\frac{3}{10}$ or 30% or 0.3 are yellow, $\frac{5}{10}$ 50% or 0.5 are green and $\frac{2}{10}$ or 20% or 0.2 are red.



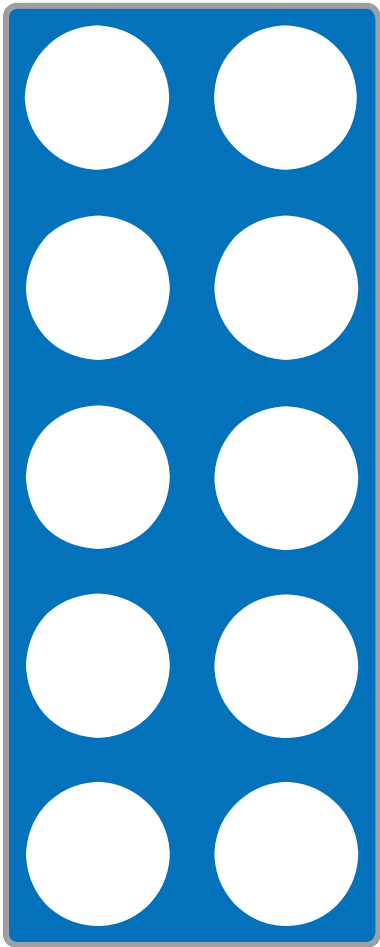
Extensions and questions

- Compare your fractions: who has more blue counters? By what fraction/percentage/decimal?
- In pairs, combine your two Numicon 10-shapes. Rearrange the counters from your 10-shapes into groups by colour. Identify the fraction, decimal and percentage for each colour, out of 20. (See example below.)



- Try to simplify any of the fractions.
- Using the fractions, decimals or percentages you have worked out, represent the colours on a pie chart.
- Represent the percentages, fractions or decimals you found on a number line.

Player 1



Player 2

