



## LESSON: EQUIVALENT FRACTIONS

### CURRICULUM LEVEL 3

#### PURPOSE

Students investigate equivalent fractions using Fraction Action cards. Pairs of equivalent fractions are matched using the fraction bars as a guide. Students see that all fractions shown on a fraction cards are equivalent fractions.

#### EQUIPMENT

- One pack of Fraction Action Cards per group

#### ACTIVITY

Organise the students into groups of four. Give each group a set of Fraction Action cards. Have the groups set aside all cards that show just one fraction. These cards are not used in this lesson.

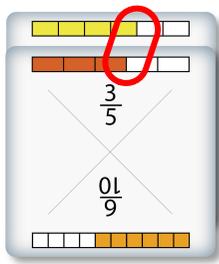
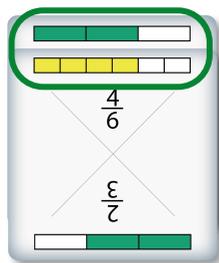
#### MATCHING PAIRS

Groups organise their cards to show matching bar pairs. For two fraction bars to be a pair they must:

1. Be different colours
2. Have their coloured area the same length

To illustrate a matching pair, show one card showing  $\frac{2}{3}$  (green) and another showing  $\frac{4}{6}$  (yellow). Align the cards so that the green and yellow bars are showing one above the other, with the bars aligned. Explain that we can tell they are a matching pair as the coloured areas of the bar are exactly the same length and the colours are different (green and yellow).

It is important to be careful in matching coloured area lengths. For example, the  $\frac{4}{6}$  and  $\frac{3}{5}$  coloured areas are similar lengths but not exactly the same, so they do not form a pair.



Have groups form as many matching pairs as they can. Some cards will not have a match, others might have more than one possible match. A full pack should be able to form 13 matching pairs with four cards left over.

Have the students look at the cards used for each matching pair. Get them to talk about what they notice and what might be happening. Most pairs will have exactly the same card for both bars. For cards showing just two fractions, a matching pair will always match the top and bottom fractions.

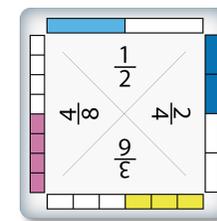
Have students write equations for their matching pairs, e.g.,  $\frac{2}{3} = \frac{4}{6}$  and  $\frac{4}{8} = \frac{1}{2}$ .

#### HALF CARD EXPLORATION

A half card is a fraction card showing  $\frac{1}{2}$  (the half bar is pale blue). Some half cards show different sets of fractions.

Challenge the groups to try to find two fraction bars on half cards with different colours that are not a matching pair.

As they realise that all fraction bars on the half cards match, ask them to show that they do all match.



#### FOLLOW UP

Explain what the fraction bars represent. The total number of pieces is the denominator, the number on the bottom of the fraction. The number of coloured pieces is the numerator, the number on the top of the fraction. The length of the whole bar (all pieces coloured or not) represents one whole. The length of the coloured area represents the value of the fraction.

The mathematical term for the matching pairs is 'equivalent fractions'. These are fractions with the same value but written with different denominators.

This lesson can be run as an introduction to the Fraction Action game. Or, once students are familiar with the game, to help with understanding the mathematics of fraction addition.

**Where to next? More ideas at [CreativeMaths.net](http://CreativeMaths.net) – and do give us feedback as to what worked for you.**

You can order Fraction Action cards at [CreativeMaths.net](http://CreativeMaths.net)

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