# Strengthen Activities

## MISCONCEPTION

**Children may confuse the place value and size of a number. They may, for example, see 2 ones and 7 hundredths as 2·7, missing that the value of the tenth is 0.**

**STRENGTHENING UNDERSTANDING**

1. On a whiteboard, ask children to write down the number one and two hundredths as a decimal. Using place value counters, can children show the number that they have written?
2. Discuss the value of each digit and how children know its worth.
3. Ask children to draw and label a place value grid, inserting the number and the place value counters in the correct place. Do their numbers and place value counters really represent one and two hundredths? Encourage children to justify and prove their number is correct.

**ASSESSMENT CHECKPOINT**

Can children confidently identify the tenths and hundredths values in 3·04?

**RESOURCES**

Whiteboard and pens, place value counters (ones, tenths and hundredths)

## MISCONCEPTION

**When comparing decimals, children may not start by looking at the largest place value and then the next largest place value and so on.**

**STRENGTHENING UNDERSTANDING**

1. Write down the numbers 4·26 and 2·89 on a whiteboard. Ask children to compare the two decimal numbers and work out which is greater - encourage children to explain their reasons. (Check children understand that 'decimal number' means the whole number, not only the part after the decimal point.) Some children may find it helpful to make the numbers with place value counters in a place value grid.
2. If children are struggling, ask them to consider how they would compare two whole numbers like 15 and 21. Which column would they compare first - the greatest value or smallest value column first? Encourage children to notice that as there is a difference in the greatest value column, we can already decide on which number is larger and so there is no need to compare the other columns.
3. Link this idea to decimal numbers, comparing the greatest value column, in this case ones. 4 is greater than 2, so 4·26 is the greater number. Ask: *Why do we not need to worry about the other columns?* (We only look at them when the greater value columns have the same value.) Now add the number 4·9 and ask them to put the three numbers in order. Confirm that as the ones digit is the same in two cases, then we look at the next greatest value column, which is the tenths.

**ASSESSMENT CHECKPOINT**

Can children compare and order the numbers 3·86, 3·68 and 4·2?

**RESOURCES**

Whiteboard and pens, place value counters (ones, tenths and hundredths)

## MISCONCEPTION

**Children may not understand that within a number with one decimal place, the tenths digit determines what whole number the number will round to.**

**STRENGTHENING UNDERSTANDING**

1. Say you are going to round 1·3, 1·4 and 1·8 to the nearest whole number. Ask: *Do they all round to 1?* If children say yes, ask them to place the numbers on a number line and then decide which whole number they are closest to.
2. Draw out that looking at the ones number didn't help us see which whole number to round to, and instead the tenths digit shows us how close to each whole number the number is.
3. Show children different decimal numbers but hide the ones unit. Ask them to say whether it will round up or down based on the tenths digit they can see.

**ASSESSMENT CHECKPOINT**

Can children round 1·9 and 2·2 to the nearest whole number without using a number line?

**RESOURCES**

Whiteboards and pens, blank number lines