### Fractions Year 4

**Selected Programme of Study Statements**

Pupils should be taught to:

- recognise and show, using diagrams, families of common equivalent fractions.
- solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundredths
- recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places
- solve simple measure and money problems involving fractions and decimals to two decimal places

**The Big Ideas**

Fractions arise from solving problems, where the answer lies between two whole numbers.

Fractions express a relationship between a whole and equal parts of a whole. Children should recognise this and speak in full sentences when answering a question involving fractions. For example in response to the question *What fraction of the chocolate bar is shaded?* The pupil might say *two sevenths of the whole chocolate bar is shaded.*

Equivalency in relation to fractions is important. Fractions that look very different in their symbolic notation can mean the same thing.

**Mastery Check**

Please note that the following columns provide indicative examples of the sorts of tasks and questions that provide evidence for mastery and mastery with greater depth of the selected programme of study statements. Pupils may be able to carry out certain procedures and answer questions like the ones outlined but the teacher will need to check that pupils really understand the idea by asking questions such as “Why?”, “What happens if …?”, and checking that pupils can use the procedures or skills to solve a variety of problems.

<table>
<thead>
<tr>
<th>Mastery</th>
<th>Mastery with greater depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put these fractions on the number line:</td>
<td>Insert the symbol $&gt;$, $&lt;$ or $=$ to make each statement correct.</td>
</tr>
<tr>
<td>$\frac{2}{3}$, $\frac{1}{2}$, $\frac{3}{6}$, $\frac{4}{9}$</td>
<td>$\frac{2}{3}$ of 5 $\bigcirc$ $\frac{1}{4}$ of 4</td>
</tr>
<tr>
<td>$\frac{4}{5}$, $\frac{7}{10}$, $\frac{5}{10}$, $\frac{2}{5}$</td>
<td>$\frac{1}{2}$ of 7 $\bigcirc$ $\frac{5}{2}$ of 14</td>
</tr>
<tr>
<td>Put these fractions on the number line:</td>
<td>$\frac{2}{3}$ of 9 $\bigcirc$ $\frac{1}{3}$ of 18</td>
</tr>
<tr>
<td>$\frac{4}{5}$, $\frac{7}{10}$, $\frac{5}{10}$, $\frac{2}{5}$</td>
<td>Make up 3 similar statements using $&gt;$, $&lt;$ or $=$.</td>
</tr>
</tbody>
</table>
### What’s the same, what’s different?

Children should be able to express the ideas that:
- They are all divided into 4 equal parts
- Each part represents a quarter of the whole
- Each of the parts in the triangle are the same shape and area (congruent)
- The shapes in the square are different but each has the same area (not congruent)
- The bananas represent fractions of quantities.

### 2 paper strips are ripped. Identify which original paper strip is longer. Explain your answer.

![Paper strips](image)

### How many ways can you express \( \frac{2}{8} \) as a fraction?

Eight girls share six bars of chocolate equally. Twelve boys share nine bars of chocolate equally. Who gets more chocolate to eat, each boy or each girl. How do you know?

Draw a diagram to explain your reasoning.

Eight girls share six bars of chocolate equally. Twelve boys share nine bars of chocolate equally. Clare says each girl got more to eat as there were fewer of them. Rob says each boy got more to eat as they had more chocolate to share. Explain why Clare and Rob are both wrong.