

Number sense 4.12	Length of unit: 2 weeks	Week beg:	Year:4	Teacher:
<p>Success criteria</p> <p>Pupils can represent and explain how the multiplicative nature of the number system extends into decimal numbers, as whole numbers are divided by 10 or 100, and connect this understanding to units of measure.</p> <p>Pupils can represent and explain the relationship between decimals and fractions. They can use this understanding to solve problems.</p>	<p>Prior Learning:</p> <p>Check that children can already</p> <ul style="list-style-type: none"> ● count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number ● recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ● compare and order numbers up to 1000 ● identify, represent and estimate numbers using different representations ● read and write numbers up to 1000 in numerals and in words ● solve number problems and practical problems involving these ideas ● count up and down in tenths, recognising that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 ● recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ● recognise and show, using diagrams, equivalent fractions with small denominators ● add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{2} = \frac{6}{7}$] ● compare and order unit fractions and fractions with the same denominator ● solve problems that involve all of the above (fractions) ● tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks ● estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m. / p.m., morning, afternoon, noon and midnight ● know the number of seconds in a minute and the number of days in each month, year and leap year ● compare durations of events, [for example, to calculate the time taken by particular events or tasks] 	<p>Resources</p> <p>Maths vocabulary book</p> <p>Using and Applying in every maths lesson</p> <p>Assessment through guided maths</p> <p>Think Maths!</p> <p>Pitch and Expectations Y4 and Y5</p> <p>Mind the Gap (L3 to L4)</p> <p>Overcoming Barriers to Learning – L3 to 4 and L4 to 5 (available online)</p> <p>Securing Level 3 and Securing Level 4 documents</p>		

Guidance

Pupils are taught throughout that decimals and fractions are different ways of expressing numbers and proportions.

Pupils' understanding of the number system and decimal place value is extended at this stage to tenths and then hundredths. This includes relating the decimal notation to division of whole numbers by 10 and later 100.

They make comparisons and order decimal amounts and quantities that are expressed to the same number of decimal places. They should be able to represent numbers with one or two decimal places in several ways, such as on number lines.

They extend the use of the number line to connect fractions, numbers and measures.

See also guidance in 4.7.

Learning objectives

Pupils should be taught to:

Fractions (including decimals)

- count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten
- recognise and show, using diagrams, families of common equivalent fractions
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundredths
- recognise and write decimals equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$
- find the effect of dividing a one or two digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
- 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

Measurement

- convert between different units of measure [for example kilometer to metre]

Pupil outcomes:

I can represent and explain how $\frac{3}{4}$ is equivalent to 0.75, $\frac{75}{100}$ and $75 \div 100$.

I can say which of 4.3kg and 3520g is the greater weight and explain why rounding both weights to the nearest kg gives the same result.