

Addition – Year 4

Selected National Curriculum Programme of Study Statements Pupils should be taught to:

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why
- count backwards through zero to include negative numbers (subtraction only)

The Big Ideas (NCETM)

It helps to round numbers before carrying out a calculation to get a sense of the size of the answer. For example, $4786 - 2135$ is close to $5000 - 2000$, so the answer will be around 3000. Looking at the numbers in a calculation and their relationship to each other can help make calculating easier. For example, $3012 - 2996$. Noticing that the numbers are close to each other might mean this is more easily calculated by thinking about subtraction as difference.

Stage 1

Column addition with numbers up to 3-digits. Ensure number sentences chosen would not be more suited to an efficient strategy.

$$\begin{array}{r} 789 \\ + 642 \\ \hline 1431 \\ \hline 11 \end{array}$$

Stage 2

Column addition with numbers up to 4-digits. Ensure number sentences chosen would not be more suited to an efficient strategy.

$$\begin{array}{r} 3982 \\ + 1766 \\ \hline 5748 \\ \hline 11 \end{array}$$

End of year expectation

Multistep problem in context involving addition. (Provide a mixture of opportunities to apply mental and formal strategies taught)

Some children vote for their favourite ice-cream flavour.

Ice-cream flavour	Number of children
vanilla	87
chocolate	154
strawberry	?
mint	38
Total	402

How many children vote for strawberry?

$$\begin{array}{r} 154 \\ + 87 \\ \hline 241 \\ \hline \end{array} \quad \begin{array}{r} 241 \\ + 38 \\ \hline 279 \\ \hline \end{array}$$

Strawberry = 123

Subtraction – Year 4

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- solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why
- count backwards through zero to include negative numbers (subtraction only)

The Big Ideas (NCTEM)

It helps to round numbers before carrying out a calculation to get a sense of the size of the answer. For example, $4786 - 2135$ is close to $5000 - 2000$, so the answer will be around 3000. Looking at the numbers in a calculation and their relationship to each other can help make calculating easier. For example, $3012 - 2996$. Noticing that the numbers are close to each other might mean this is more easily calculated by thinking about subtraction as difference.

Stage 1

Column subtraction up to 3-digits. Ensure number sentences chosen would not be more suited to a more efficient mental strategy.

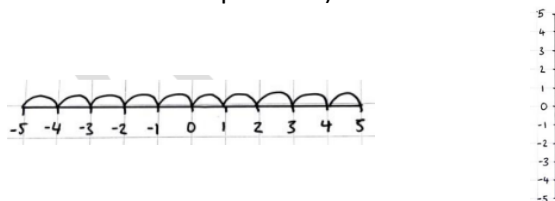
$$\begin{array}{r} \overset{8}{9} \overset{2}{8} \overset{1}{2} \\ - 457 \\ \hline 475 \end{array}$$

Stage 2

Column subtraction with numbers up to 4-digits. Ensure number sentences chosen would not be more suited to a more efficient mental strategy

$$\begin{array}{r} \overset{1}{2} \overset{8}{8} \overset{6}{7} \overset{1}{4} \\ - 1949 \\ \hline 1925 \end{array}$$

Count backwards through zero (linking with temperature).



End of year expectation

Two-step problem in context, deciding which methods to use and why. (Provide a mixture of opportunities to apply mental and formal strategies taught)

Ken is playing a game. He has 4,289 points.

Then he scores another 355 points.

Ken's target is 6,000 points.

How many **more** points does Ken need to reach his target?

$$\begin{array}{r} \overset{5}{6} \overset{9}{2} \overset{9}{8} \overset{10}{9} \\ - 4289 \\ \hline 1711 \end{array}$$

$$\begin{array}{r} \overset{6}{1} \overset{7}{3} \overset{10}{5} \overset{11}{5} \\ - 1355 \\ \hline 1356 \end{array}$$

