

# Numeracy Framework

Year 6

## Identify processes and connections

- transfer mathematical skills to a variety of contexts and everyday situations
- identify the appropriate steps and information needed to complete the task or reach a solution
- select appropriate mathematics and techniques to use
- select and use suitable instruments and units of measurement
- choose an appropriate mental or written strategy and know when it is appropriate to use a calculator
- estimate and visualise size when measuring and use the correct units

## Represent and communicate

- explain results and procedures clearly using mathematical language
- refine informal methods of recording written calculations, moving to formal methods of calculation when developmentally ready
- use appropriate notation, symbols and units of measurement
- select and construct appropriate charts, diagrams and graphs with suitable scales

## Review

- select from an increasing range of checking strategies to decide if answers are reasonable
- interpret answers within the context of the problem and consider whether answers, including calculator displays, are sensible
- draw conclusions from data and recognise that some conclusions may be misleading



## I am able to (use number skills to)...

- read and write numbers to 1 million and to 3-place decimals in the context of measures
- use a range of mental strategies to recall multiplication tables up to  $10 \times 10$  and use to solve division problems
- multiply numbers and decimals by a multiple of 10, e.g.  $15 \times 30$ ,  $1.4\text{cm} \times 20$
- use understanding of simple fraction, decimal and percentage equivalences, e.g. find 25% of 60cm and know that this is equivalent to 1 of 60cm
- calculate simple percentage quantities based on 10%, e.g. 20%, 5%, 15%
- use simple ratio and proportion, e.g. mixing paint
- add and subtract numbers using whole numbers and decimals when working with measures
- multiply 2- and 3-digit numbers by a 2-digit number
- divide 3-digit numbers by a 2-digit number
- check answers using inverse operations
- estimate by rounding to the nearest 10, 100, 1 000 or whole number
- use the terms profit and loss in buying and selling activities and make simple calculations for this
- understand the costs, benefits and risks of using bank accounts



## I am able to (use measuring skills to)...

- use a range of scales and measuring instruments, e.g. scales where there are 4 equal divisions between major units
- record measurements in different ways, e.g.  $2.3\text{kg} = 2\text{kg } 300\text{g}$
- use the language of imperial units in daily use, e.g. miles, pints
- use and interpret timetables and schedules to plan events and activities and make calculations as part of the planning process
- estimate how long a journey takes
- use stopwatches to time events in minutes and seconds to the nearest tenth of a second
- measure and record temperatures involving positive and negative readings
- calculate temperature differences, including those involving temperature rise and fall across  $0^\circ\text{C}$



## I am able to (use data skills to)...

- represent data using:
  - lists, tally charts, tables and diagrams, frequency tables
  - bar charts, grouped data charts, line graphs, conversion graphs
- extract and interpret information from an increasing range of diagrams, timetables and graphs, including simple pie charts
- use averages and range to describe a data set.

