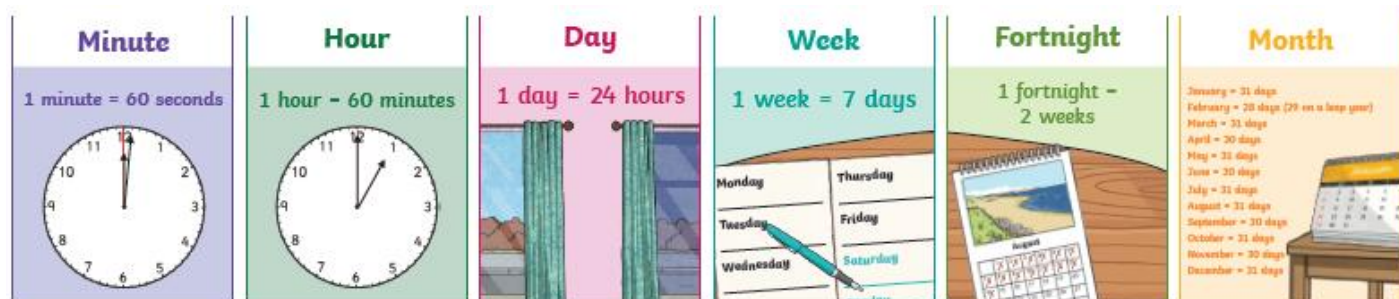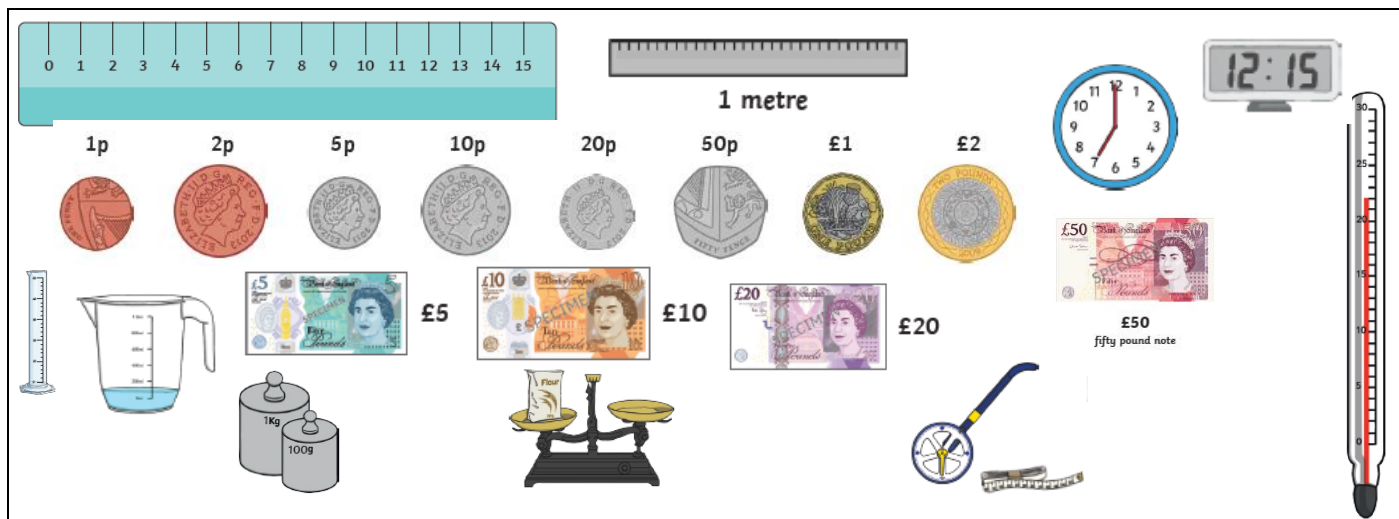# Year 5 measurement

Prior Knowledge
Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres (Y4)
Convert between different units of measure (Y4)
Find the area of rectilinear shapes by counting squares (Y4)
Measure the perimeter of simple 2-D shapes (Y3)
Add and subtract amounts of money to give change, using both £ and p in practical contexts (Y2/3)
Estimate, compare and calculate different measures, including money in pounds and pence (Y4)
Read, write and convert time between analogue and digital 12 and 24-hour clocks (Y3/4)
Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days (Y3/4)

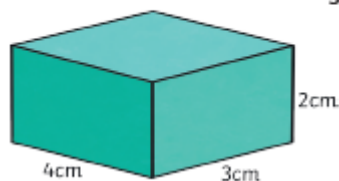| measurement	Working Towards	Within	Expected	Above
Convert between different units of metric measure				
Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints				
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres				
Calculate and compare the area of rectangles (including squares) including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes				
Estimate volume and capacity				
Solve problems involving converting between units of time				
Use all four operations to solve problems involving measure using decimal notation including scaling.				

Highlights: _____

_____

Glossary

vocabulary	word class	definition
length	noun	the measurement or extent of something from end to end; or the greatest of three dimensions of an object
height	noun	the measurement of someone or something from head to foot or from base to top
mass	noun	(in general use) weight
weight	noun	a body's relative mass or the quantity of matter contained by it; the heaviness of a person or thing
capacity	noun	the maximum amount that something can contain
volume	noun	the amount of space that a substance or object occupies, or that is enclosed within a container
time	noun	a point of time as measured in hours and minutes past midnight or noon
day	noun	each of the twenty-four-hour periods, reckoned from one midnight to the next, into which a week, month, or year is divided, and corresponding to a rotation of the earth on its axis
week	noun	a period of seven days
month	noun	each of the twelve named periods into which a year is divided
year	noun	the period of 365 days starting from the first of January
temperature	noun	the degree or intensity of heat present in a substance or object
pound	noun	a unit of weight equal to 16 oz. / the basic monetary unit of the UK, equal to 100 pence
pence	noun	plural form of penny.
perimeter	noun	the continuous line forming the boundary of a closed geometrical figure
analogue	adjective	showing the time by means of hands or a pointer rather than displayed digits
o'clock	adverb	used to specify the hour when telling the time (abbreviation of 'of the clock'
noon	noun	twelve o'clock in the day; midday
midnight	noun	twelve o'clock at night
leap year	noun	a year, occurring once every four years, which has 366 days including 29 February as an intercalary day
rectilinear	adjective	contained by, consisting of, or moving in a straight line or lines
digital	adjective	showing the time by means of displayed digits rather than hands or a pointer
month	noun	a period of 28 days or four weeks
metric	adjective	relating to or based on the metre as a unit of length
imperial units	adjective	relating to or denoting the system of non-metric weights and measures (the ounce, pound, stone, inch, foot, yard, mile, acre, pint, gallon, etc.) formerly used for all measures in the UK, and still used for some
irregular	adjective	not even or balanced in shape or arrangement

1 metre

12:15

1p 2p 5p 10p 20p 50p £1 £2

£5 £10 £20

£50
fifty pound note

1Kg 100g

Minute	Hour	Day	Week	Fortnight	Month
1 minute = 60 seconds	1 hour – 60 minutes	1 day = 24 hours	1 week = 7 days	1 fortnight – 2 weeks	January = 31 days February = 28 days (29 on a leap year) March = 31 days April = 30 days May = 31 days June = 30 days July = 31 days August = 31 days September = 30 days October = 31 days November = 30 days December = 31 days

Monday Thursday
Tuesday Friday
Wednesday Saturday

Volume

3D shapes have volume.

length × height × depth = volume

4cm × 2cm × 3cm = 24cm³

2cm
4cm 3cm

Area of Compound Shapes

To find the area of a compound shape, divide the shape into rectangles with known dimensions:

7cm

5cm
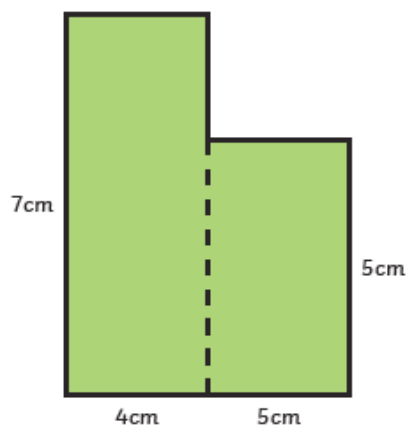
4cm 5cm

Area = 7cm × 4cm + 5cm × 5cm
= 28cm² + 25cm²
= 53cm²

Area of Irregular Shapes

To find the area of an irregular shape, find the number of whole squares and part squares.
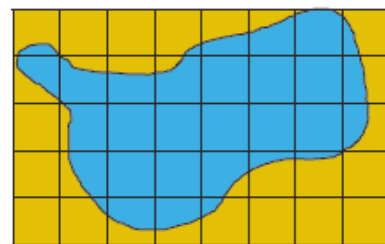
Whole squares = 10
Part squares = 22

Estimate of area = whole squares + half part squares

= 10cm² + 11cm² = 21cm²

*There are other ways to estimate the area of irregular shapes.

Year 6
• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 2 decimal places where appropriate
• Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places
• Convert between miles and kilometres
• Recognise that shapes with the same areas can have different perimeters and vice versa
• Recognise when it is possible to use formulae for area and volume of shapes
• Calculate the area of parallelograms and triangles
• Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units