

Unit Title: Understanding Common Measures And Shape
Unit Level: Level 2
Unit Credit Value: 3
GLH: 24
LASER Unit Code: WJD479
Ofqual Unit Code: T/504/8520

This unit has 9 learning outcomes.

LEARNING OUTCOMES		ASSESSMENT CRITERIA	
The learner will:		The learner can:	
1.	Be able to calculate, measure and record time in different formats.	1.1	Measure and record durations of time using appropriate measuring instruments, for example, clocks, watches or timers.
		1.2	Convert between units of time, for example, second, minute, hour, day, week, month and year.
		1.3	Calculate durations of time using 12 and 24 hour clock times, for example, number of hours worked in a day, journey times from timetables, cooking times from recipes.
		1.4	Calculate directions of time using a calendar, for example, term dates, holiday dates and return dates of holidays of different numbers of days/weeks.
2.	Be able to estimate, measure and compare temperature, including reading scales and conversion tables.	2.1	Measure temperature using thermometers with scales in degrees Centigrade ($^{\circ}\text{C}$) and degrees Fahrenheit ($^{\circ}\text{F}$).
		2.2	Compare temperatures on the same scale ($^{\circ}\text{C}$ or $^{\circ}\text{F}$), for example, compare the temperatures in different places from weather charts on TV or in holiday brochures.
		2.3	Convert between temperatures in degrees Centigrade ($^{\circ}\text{C}$) and degrees Fahrenheit ($^{\circ}\text{F}$) using conversion tables.
		2.4	Estimate temperature in degrees Centigrade ($^{\circ}\text{C}$) and degrees Fahrenheit ($^{\circ}\text{F}$) in practical contexts, for example, room temperature, central heating settings, settings for cool, medium and hot ovens.

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3.	Be able to estimate, measure and calculate with length, distance, weight and capacity using common metric and imperial units.	3.1	Estimate lengths, distances, weights and capacities in appropriate metric or imperial units.
		3.2	Measure lengths, distances, weights and capacities in appropriate metric or imperial units using appropriate measuring instruments.
		3.3	Convert between metric units for length, weight and capacity.
		3.4	Convert between imperial units for length, weight and capacity (for example, yard, feet, inches, miles, tons, pounds, ounces, pints and gallons).
		3.5	Identify approximate equivalencies between common metric and imperial units of measurement for length, distance, weight and capacity.
		3.6	Convert between common metric and imperial units of measurement for length, distance, weight and capacity using approximate conversion factors and conversion tables.
		3.7	Construct and use conversion graphs to convert between common metric and imperial units of measurement for length, distance, weight and capacity.
		3.8	Calculate with units of measure in the same system in practical contexts, for example, number of shelves that can be cut from a length of timber, area of carpet for a room and the cost.
4.	Be able to find dimensions from scale drawings.	4.1	Find real length using simple scales such as 1cm represents 1m, identifying the units from the scale.
		4.2	Find real length using scales written as ratios identifying that scale is independent of units so that, for example, if the scale were 1:100 on a plan, 1cm would represent 1m.

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		4.3	Work out actual measurements from simple plans and scale drawings with different scales, for example, 1:20, 1:10 and 1:50.
		4.4	Work out distances from a scale on a map, for example, from a road map or OS map.
5.	Be able to calculate compound measures and rate of exchange.	5.1	Calculate miles per gallon.
		5.2	Calculate distance, time and average speed using the formula $\text{speed} = \frac{\text{distance}}{\text{time}}$.
		5.3	Calculate density (for example, g/cm^3 , people per km^3) using formula $\text{density} = \frac{\text{mass}}{\text{volume}}$.
		5.4	Use exchange rates to convert between different currencies, recognising that the buying and selling rates are different and may vary on a daily basis, for example, calculate the price of items in different currencies, calculate the value of currency brought back from a holiday.
6.	Be able to recognise and use common 2-D representations of 3-D objects.	6.1	Identify 3-D objects represented in 2-D form.
		6.2	Identify parallel lines, on diagrams and in practical situations.
		6.3	Use the properties of parallel lines to solve everyday problems, for example, to find the amount of ceiling coving, measure the corresponding floor measurements.
7.	Know how to find the perimeter of regular and composite 2D shapes, including circles.	7.1	Find the perimeter of regular and composite shapes recognising the perimeter of a shape is the length of its boundary.
		7.2	Find the perimeters of regular and composite shapes where some of the lengths are missing and need to be calculated from information on other edges.

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		7.3	Find practically the relationship between the diameter and the circumference of a circle by measuring and express as a simple formula in words, identifying its approximate value.
		7.4	Work out the circumference of different circles using the given formulae $C=\pi d$ and $C=2\pi r$ with π as 3.14.
8.	Know how to find the area of regular and composite shapes including circles and triangles, using given formulae.	8.1	Identify area as being measured in square units.
		8.2	Identify that dimensions must be measured in the same units to calculate area.
		8.3	Find the areas of regular shapes rectangles, triangles, circles, using given formulae.
		8.4	Find the areas of composite shapes (for example, non-rectangular) by breaking them down into regular shapes.
9.	Know how to find the volume of regular 3- D shapes (cuboids, cylinders, triangular prisms) using given formulae.	9.1	Identify that volume is measured in cubic units.
		9.2	Identify that units must be measured in the same units to calculate volume.
		9.3	Identify that the formula for the volume of regular 3-D shapes is derived from the area of the 'end' of the shape multiplied by its length.
		9.4	Find the volume of regular 3-D shapes, using given formulae, including the volumes of cuboids, cylinders and triangular prisms.

Assessment Guidance:

NA

Additional Information:

NA