Year 10 Foundation Scheme of Learning

MODULE 2

Bishop Chadwick Catholic Education Trust

Bespoke revision

Perimeter, area & volume

Bounce back: Constructions & Loci

Quadratic equations

Compound measures

Percentages, including interest

Year 11

Indices & standard form

Bounce back: Quadratic equations

Construction s & Loci

Probability & diagrams

Perimeter, area & volume

Averages

Angles & Transformation s

Straight line & other graphs

Expressions & equations

Graphs

Year 10

Fractions & percentages

Sequences

Pythagoras & Trigonometry

Ratio & proportion

Pythagoras & Trigonometry

Handling data & measures of location

Angles in parallel lines, lines & polygons

Fractions & percentages

Data handling

Year 9

Algebra: including substituting & brackets

Sequences & Indices

Number; including index laws

Area of trapezia & circles; Line symmetry & reflections

Standard form & number sense

Brackets, equations & inequalities

Sets & probability

Proof

Multiplicative reasoning

Working in Cartesian plane

Ratio & proportion

Year 8

Fraction arithmetic

Geometric reasoning

Prime numbers

Ratio & scale

Multiplying & dividing fractions

Representing data, tables & probability

Operations with equations & directed numbers

Fraction & % of amounts

Fractions, decimals & percentages

Use and understand algebraic notation

Place value and ordering, including decimals

Year 7

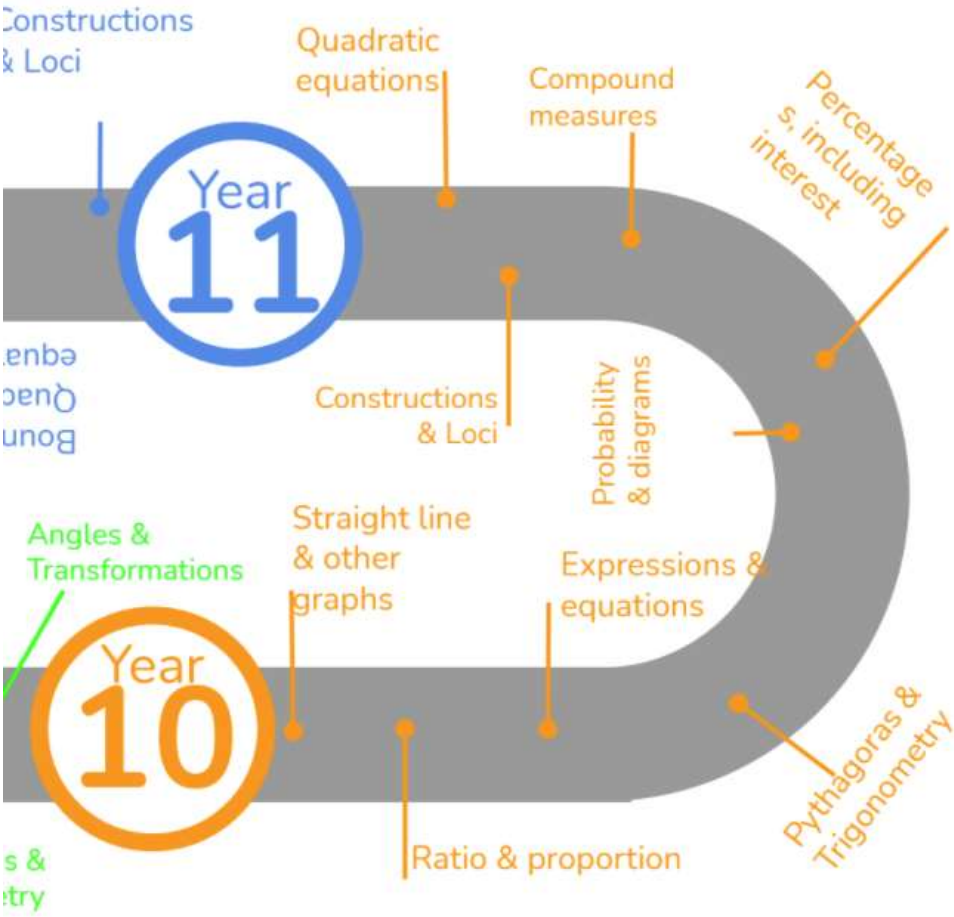
Problem solving with four main operations

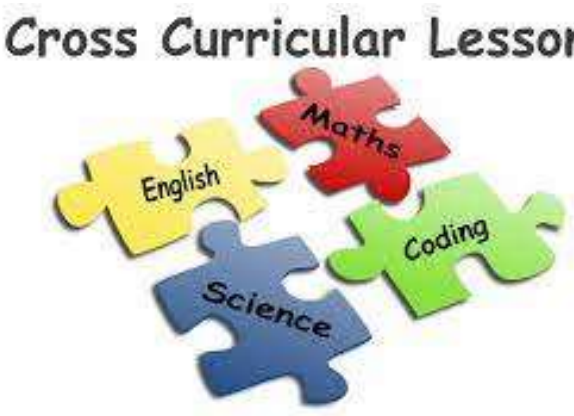
Equality & Equivalence - solving equations

Sequences

Core/Foundation 2021/22 *(includes Y11 bounce back)*

This is what your child will be taught as part of the GCSE foundation course in Year 10 in their MATHS lessons.

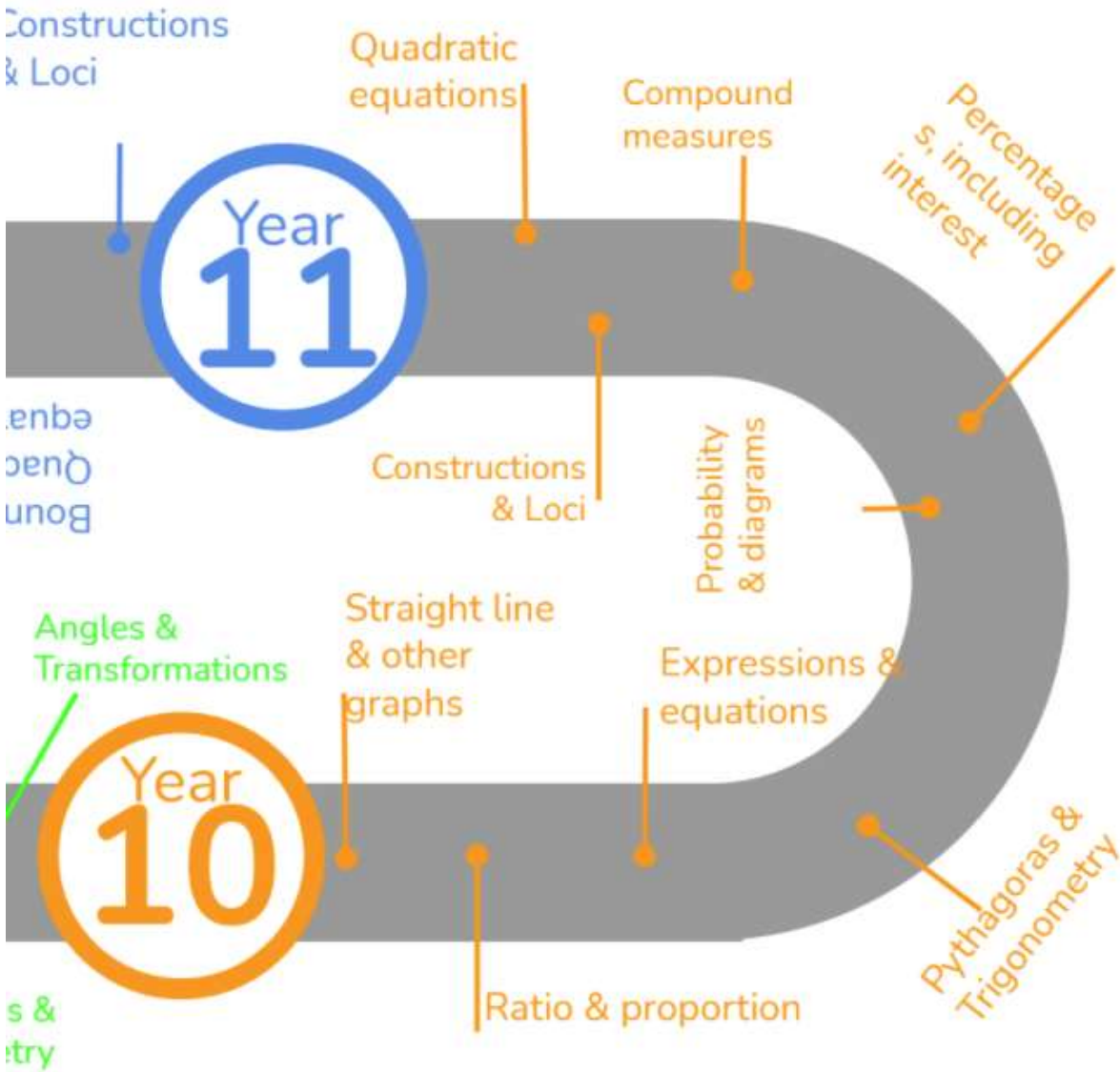




They will have also have specific lessons linked to other subjects and a diet of retrieval built into their lessons.

In Year 10 Module 2 your child will study the following topics:

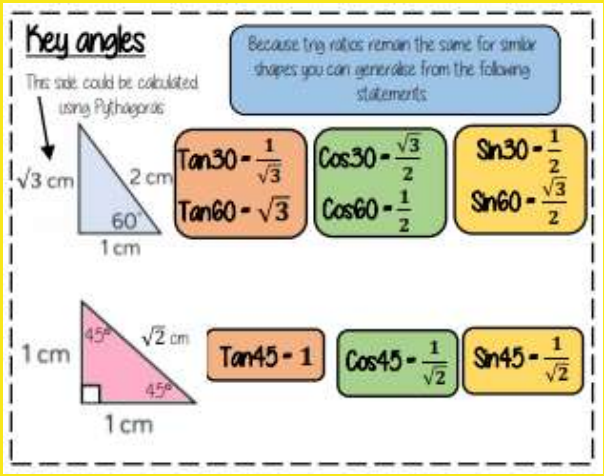
- Pythagoras and Trigonometry
- Probability and Diagrams
- Percentages including Interest
- Compound Measures

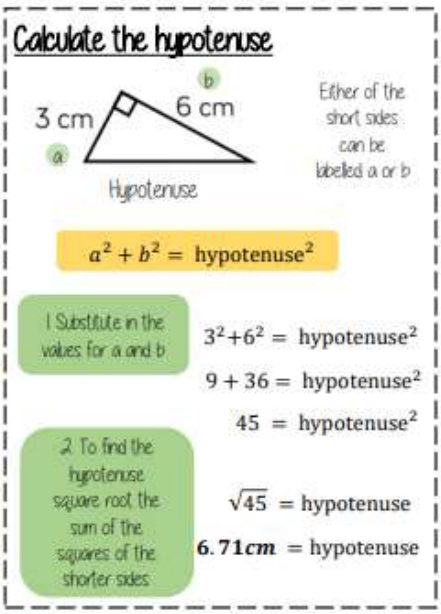


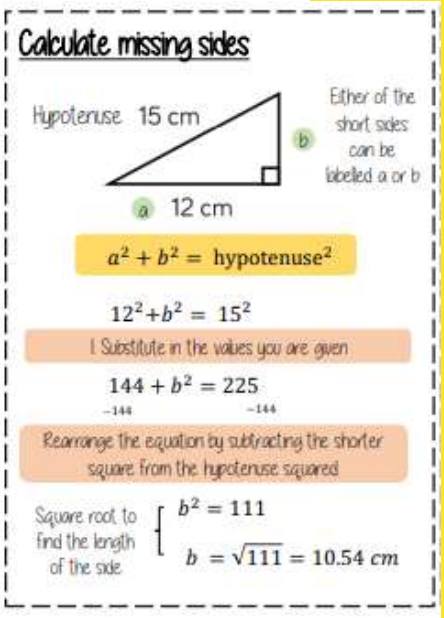
Pythagoras and Trigonometry

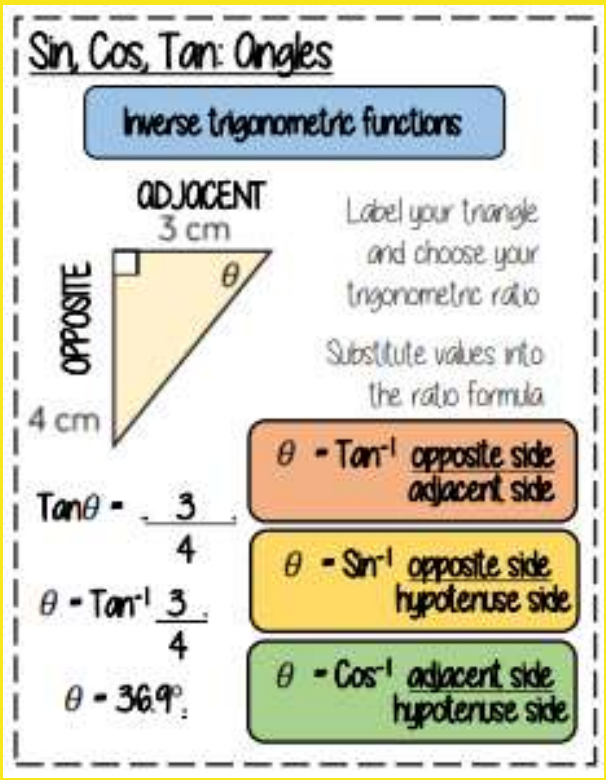
Topics covered in this unit include:

- Finding the hypotenuse
- Finding the shorter side
- Understanding and using SOH CAH TOA
- Recognising when to use each method
- Introducing exact trigonometric values









Keywords

Enlarge: to make a shape bigger (or smaller) by a given multiplier (scale factor)
Scale Factor: the multiplier of enlargement
Constant: a value that remains the same
Cosine ratio: the ratio of the length of the adjacent side to that of the hypotenuse. The sine of the complement
Sine ratio: the ratio of the length of the opposite side to that of the hypotenuse
Tangent ratio: the ratio of the length of the opposite side to that of the adjacent side
Inverse: function that has the opposite effect
Hypotenuse: longest side of a right-angled triangle. It is the side opposite the right-angle

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In this unit your child will study:

- Basic probability and the probability scale
- Experimental probability
- Sample space diagrams
- Frequency trees
- Venn diagrams
- Probability trees

Probability and Diagrams

Likeliness of a probability

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Impossible
0 or 0%

Even chance
0.5, $\frac{1}{2}$ or 50%

Certain
1 or 100%

The more likely an event the further up the probability it will be in comparison to another event (It will have a probability closer to 1)

Sum to 1

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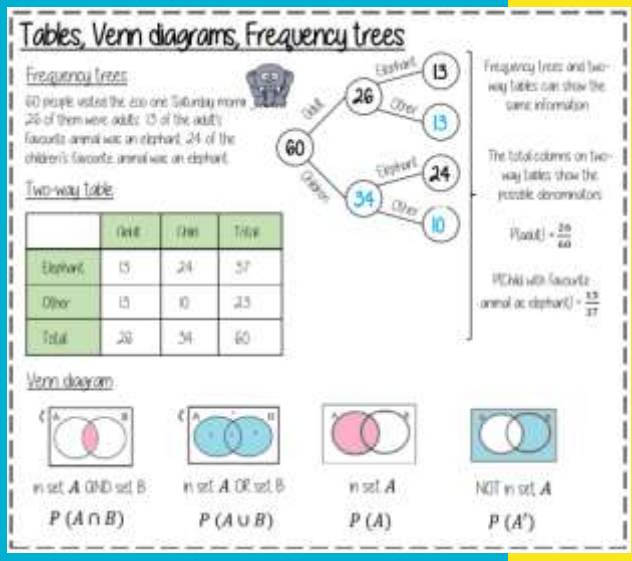
Probability is always a value between 0 and 1

The probability of getting a blue ball is $\frac{1}{5}$

∴The probability of **NOT** getting a blue ball is $\frac{4}{5}$

The sum of the probabilities is 1

Tables, Venn diagrams, Frequency trees



Sample space

The possible outcomes from rolling a dice

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The possible outcomes from tossing a coin	1	2	3	4	5	6
H	1,H	2,H	3,H	4,H	5,H	6,H
T	1,T	2,T	3,T	4,T	5,T	6,T

P (Even number and tales) = $\frac{3}{12}$

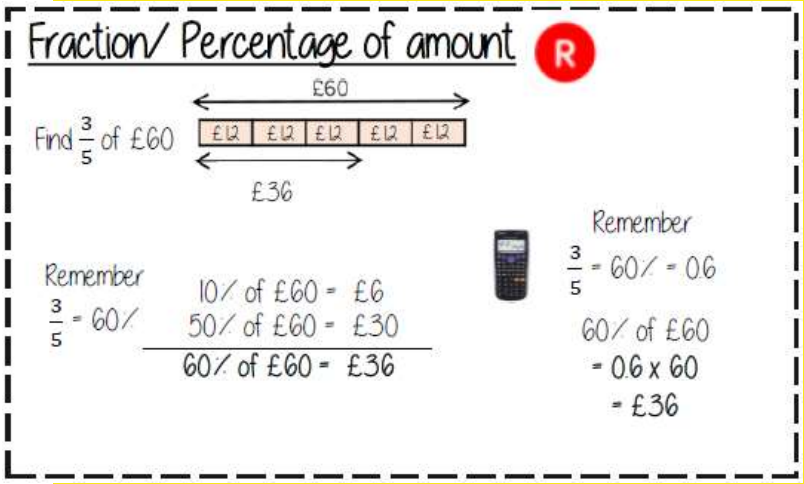
Keywords

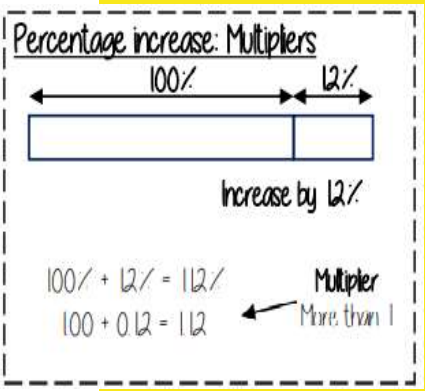
Event: one or more outcomes from an experiment
Outcome: the result of an experiment
Intersection: elements (parts) that are common to both sets
Union: the combination of elements in two sets
Expected Value: the value/ outcome that a prediction would suggest you will get
Universal Set: the set that has all the elements
Systematic: ordering values or outcomes with a strategy and sequence
Product: the answer when two or more values are multiplied together

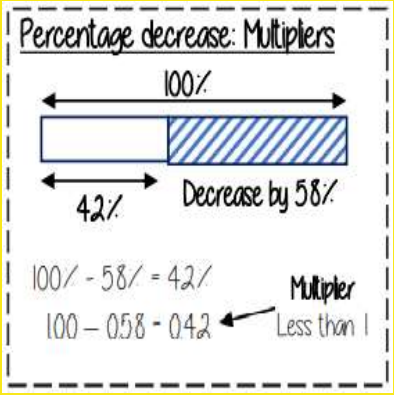
Percentages including Interest

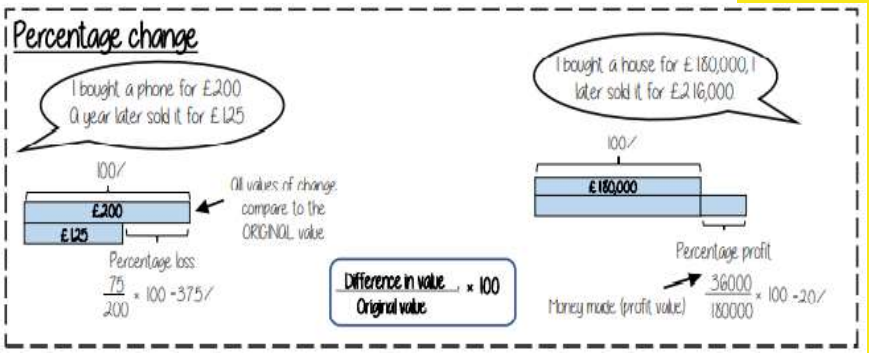
Topics covered in this unit include:

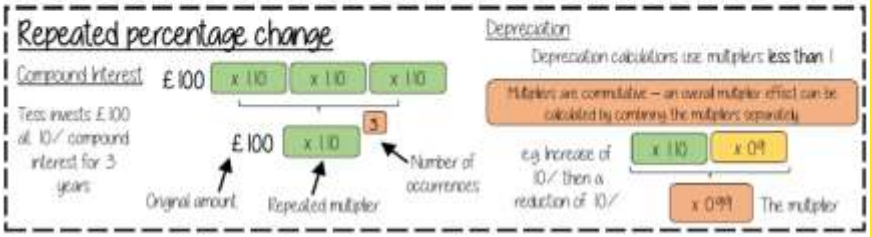
- Calculating percentages
- Calculating percentage increase and decrease
- Percentage change
- Reverse percentages
- Simple and Compound Interest

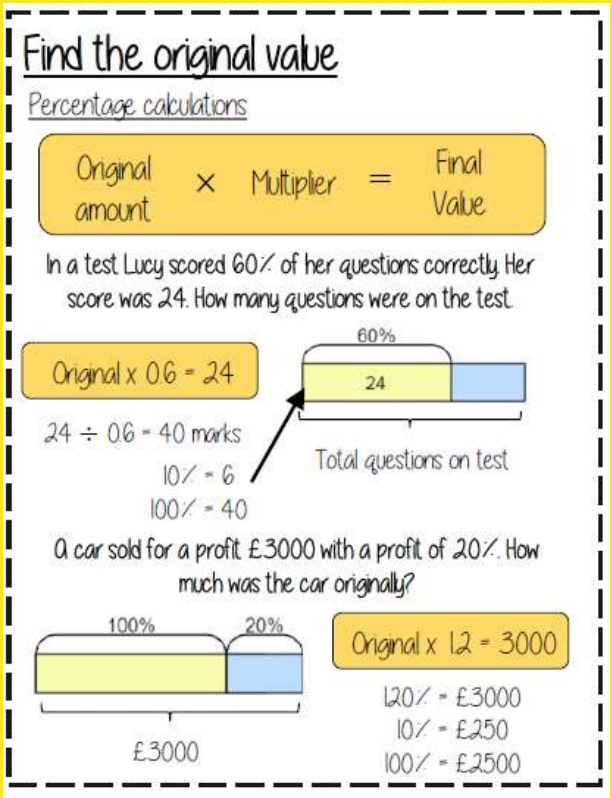












Keywords

Percent: parts per 100 – written using the / symbol
Decimal: a number in our base 10 number system. Numbers to the right of the decimal place are called decimals
Fraction: a fraction represents how many parts of a whole value you have
Equivalent: of equal value
Reduce: to make smaller in value
Growth: to increase/ to grow
Integer: whole number, can be positive, negative or zero
Invest: use money with the goal of it increasing in value over time (usually in a bank)

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Compound Measures

In this unit your child will study:

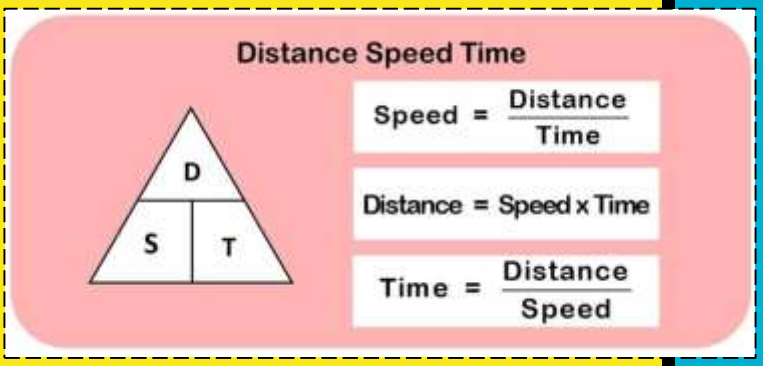
- Speed, distance, time
- Density, mass, volume
- Force, pressure, area

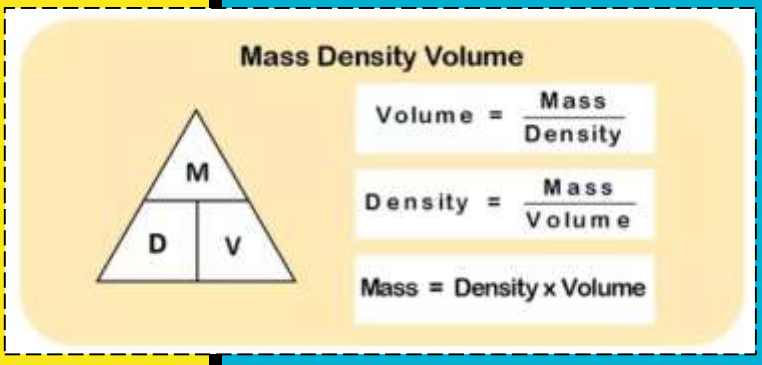
This is a cross-curricular topic with links to Science

MATHS

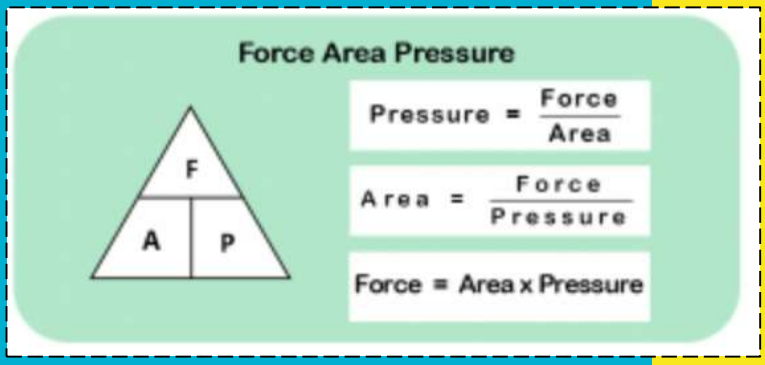
Cross Curricular Links

SCIENCE





Compound Measurement: A measure made up of two or more measurements (e.g. speed, pressure, density)



We recommend pupils have a Casio scientific calculator.
The Casio calculator featured is the one we use when demonstrating in lessons.

On our school website there is a calculation policy showing the methods we use for common operations. It can be found at: Our School > Policies