



Swainswick Mathematics concepts

Whole school definition: **Mathematics** is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy

Key concepts

Nine **key concepts** of Mathematics repeat annually throughout the curriculum. These provide lenses through which to consider the different aspects of Mathematics:

Number

Pattern

Shape and space

Measure

Geometry

Statistics

Algebra

Fractions, decimals and percentages.

Reasoning

<u>Concept</u>	<u>Why learn this concept?</u>	<u>Year group</u>
Number	The first mathematical skills is basic number sense. Number sense is the order and value of numbers. A number is a mathematical object used to count.	EYFS – year 6
Pattern	A pattern is a repeated design or recurring sequence. This could be an ordered set of numbers, shapes or mathematical objects arranged according to a rule.	EYFS – year 6
Shape and Space	Shape and space refers to the properties of objects and the consequences of how these objects are positioned. Space is a set with added structure. Shape is the form of an object and how it is laid out in space.	EYFS – year 6
Measure	Measure is a number that shows the size or amount of something. Usually, the number is in reference to some standard measurement.	<u>Year 1-6</u>
Geometry	Geometry is a branch of mathematics concerned with questions of shape, size, relative position of figures and the properties of space.	<u>Year 1-6</u>
Statistics	Statistics is the study of collection, analysis, interpretation, presentation and organisation of data.	<u>Year 1-6</u>
Algebra	Algebra is a branch of mathematics dealing with symbols and the rules for manipulating those symbols.	<u>Year 5-6</u>
Fractions, decimals and percentages	Understanding what fractions, decimals, and percentages mean is essential to be able to calculate and solve maths problems quickly. They will also come up all the time in later life, from dealing with money to cooking.	<u>Year 1-6</u>
Reasoning	Mathematical reasoning is the skill that enables a learner to make use of all other mathematical skills. With mathematical reasoning, mathematics makes sense and can be understood.	<u>Year 1-6</u>