Maths			**Year: 7/8 Year 1**		
AUTUMN		**SPRING**		**SUMMER**	
Half term 1	**Half term 2**	**Half term 3**	**Half term 4**	**Half term 5**	**Half term 6**
Theme/ topic: **Solving problems with number, including fractions and percentages**	**Theme/ topic:** **Number sense**	**Theme/ topic:** **Fractions** **Sequences**	**Theme/ topic:** **Algebraic Notation**	**Theme/ topic:** **Sequences** **Directed Number** **Standard Form**	**Theme/ topic:** **Multiplicative Reasoning** **Metric Units** **Prime Numbers**
By the end of this half term pupils will know	By the end of this half term pupils will know	By the end of this half term pupils will know	By the end of this half term pupils will know	By the end of this half term pupils will know	By the end of this half term pupils will know
The formal methods for addition, subtraction, multiplication and division. Equivalences between common fractions and percentages.	Equivalences between more fractions and percentages. Representations of decimals and fractions on number lines and diagrams.	Addition and subtraction of fractions requires a common denominator. The difference between arithmetic and geometric sequences.	Methods for solving equations using inverse operations.	Arithmetic sequences can be written as nth terms. Convention of using indices to represent repeated multiplication.	The metric system and how it is used. Methods of rounding and approximating. How to prove something mathematically. What prime numbers are.
They will understand	**They will understand**	**They will understand**	**They will understand**	**They will understand**	**They will understand**
Inverse operations.	Number bonds. Place value.	Equivalent fractions.	Represent unknowns and variables using	Mathematical sequences – describe using term-to-term	Ratio and scale.

Commutative and distributive laws.	Estimation. Negative numbers. Understand fractions as divisions and also as part of a whole.	Mathematical sequences (arithmetic and geometric)	letters in conjunction with numbers.	rules and position-to-term rules. Using algebra with directed numbers. Standard Form as a way of representing very large / very small numbers.	Multiplicative reasoning. Rounding. Proof. Prime numbers as the building blocks for integers.
They will know how to	**They will know how to**	**They will know how to**	**They will know how to**	**They will know how to**	**They will know how to**
Solve problems using their arithmetic skills involving integers, fractions and percentages. They will use the correct terminology when talking about fractions and decimals.	Ordering integers, decimals and fractions. Convert fluently between fractions, decimals and percentages.	Apply the four rules of number to fractions. Recognise, describe and continue sequences.	Solve linear equations. Substitute values into expressions and formulae. Expand brackets.	Apply the four rules of number (including BIDMAS) to directed numbers. Work with powers and numbers using the additional and subtraction laws of indices. Convert between standard form and usual representation of numbers.	Convert between different metric units. Solve problems involving ratio and proportion. Round numbers to a given number of decimal places or significant figures. Find and use multiples, factors, LCM and HCF.
Link to prior learning	**Link to prior learning**	**Link to prior learning**	**Link to prior learning**	**Link to prior learning**	**Link to prior learning**

Mental methods for calculating with integers Basic understanding of fractions and decimals and percentages.	Order integers, decimals and fractions on a number line.	Basic understanding of fractions. Multiples and factors.	Using letters to represent unknowns	Sequences. Powers of 10. Directed numbers.	Measurements within the metric system.