TOPIC OVERVIEW DOCUMENT

YEAR 7

TOPIC OVERVIEW:

In this unit you will study algebraic thinking

Your previous studies on the understanding of number patterns, sequences, equivalence, inverse operations and missing-number problems will support your learning in this topic as you will have begun to use letters and symbols to represent unknowns, describe simple relationships and formulae, generate linear sequences and solve simple equations involving one or two unknowns,

Algebraic thinking in Year 7 prepares you to confidently use letters to represent numbers, recognise and generalise patterns, simplify expressions and solve equations. These foundations will help you work with brackets, equations, inequalities, sequences and indices in Year 8.

Key Vocabulary (T2)	Key Vocabulary (T3)	Core knowledge	Disciplinary Skills
recognise, identify, describe, represent, compare, predict, continue, generate, calculate, substitute, simplify, solve, check, justify, explain, reason, generalise, relationship, pattern, rule, equivalent, increase, decrease, unknown, method, operation, inverse, sequence, systematic, consistent.	Sequence. Linear sequence. Expression. Like term Equation	Understand what a sequence is , identify patterns and make predictions. Understand the concept of algebra, using letters to represent unknown or general numbers. Understand the meaning of key notations and conventions (ab is a x b) Understanding the concept of equality (=) the same as, showing a balance between both sides of the equation and making a change to one side requires making a change to the other to maintain balance.	You can identify and generalise patterns, use letters and algebraic notation to represent unknowns, understand equality and equivalence, and use mathematical reasoning to justify predictions and maintain balance in equations.

Checkpoint: Vocab/ Knowledge/ Disciplinary skill(s)	What does this assessment look like?	Which disciplinary skills do I need to be successful?
Checkpoint 1: Sequences	You will complete a skills check You will be reassessed during the Mastery lesson	Find the next terms in a linear sequence, draw the next term in a sequence.
Checkpoint 2: Understand and use algebraic notation	You will complete a skills check You will be reassessed during the Mastery lesson	Find an output of a function machine, understand what an inverse is.
Checkpoint 3: Equality and equivalence	You will complete a skills check You will be reassessed during the Mastery lesson	Use fact families and the whole part model.

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Milestone assessment: The average of the following skills checks : Sequences: Understand and use algebraic notation; Equality and equivalence		
Vocab quiz: Sequence. Linear sequence. Expression. Like term Equation	**Knowledge tasks:** Understand what a sequence is , identify patterns and make predictions. Understand the concept of algebra, using letters to represent unknown or general numbers. Understand the meaning of key notations and conventions (ab is a x b) Understanding the concept of equality (=) the same as, showing a balance between both sides of the equation and making a change to one side requires making a change to the other to maintain balance.	**Disciplinary tasks:** Students can identify and generalise patterns, use letters and algebraic notation to represent unknowns, understand equality and equivalence, and use mathematical reasoning to make predictions, justify relationships and maintain balance when working with equations.

How can I **achieve** in this topic?

- Complete tasks on SPARX
- Engage 100% in lessons
- Make good notes/examples in lessons and use them

Further research:

- Home | NRICH
- Maths - BBC Bitesize