Year 7

Topic: Sequences (chapter 1)

Prior learning:
Repeating patterns, spotting patterns and continuing lists
Finding the difference between pairs of numbers

Learning sequences			Endpoints
Acquiring	**On track**	**Extending**	
■ Finding the next term in a simple sequence ■ Drawing the next term in a sequence	■ Working out the term-to-term rules for sequences including non-linear ■ Linking a pictorial sequence to a linear sequence ■ Finding the next term in a sequence	■ Complex missing terms in sequences ■ Plotting non-linear sequences ■ Generate a sequence from the nth term ■ Identify the nth term of a sequence	▪ **To continue sequences given in a variety of forms** ▪ **To identify linear and non-linear sequences** ▪ **To generate sequences given rules including term to term** ▪ **To find missing terms** ▪ **To plot coordinates** ▪ **To draw graphs of sequences** ▪ **Generate from the nth term (H)** ▪ **Find the nth term (H)**
Working towards	**Advancing**		
■ Working out the term-to-term rules for linear sequences ■ Plotting coordinates on a graph	■ Identifying whether a sequence is linear or non-linear ■ Plotting linear sequences ■Finding more than one way to continue a sequence		

Main Learning Steps (row label for the above)

Assessments	• Check of understanding in class and homework • End of unit test

Where will we use these ideas again: Calculators should be used throughout this unit, building on teaching efficient use of calculators and informal estimation Graphs (Year 8)	Substitute values into single expressions (WRM2) Number Sense (WRM 8)

Year 7

Topic: Algebraic notation (chapter 2 and 3)

Prior learning:
Familiarity with operations
Concept of inverse

Sequences
Single function machine
Basic substitution

	Learning sequences			Endpoints
	Acquiring	**On track**	**Extending**	
Main Learning Steps	■ Understand basic algebraic notation ■ Substitute numbers into one-step function machines	■ Using inverse operations for function machines ■ Substituting numbers into basic algebraic expressions ■ Basic collect like terms	■ Collect like terms including with indices ■ Multiply and divide with algebra	▪ **To understand algebraic notation** ▪ **Find inputs and outputs of one-step function machines** ▪ **To find inputs and outputs of a series of function machines** ▪ **To find the operation of function machines** ▪ **To substitute numbers into algebraic expressions** ▪ **Understand the difference between like and unlike terms when two expressions are equivalent** ▪ **To solve one-step equations** ▪ **To simplify expressions** ▪ **To multiply and divide with algebra (H)**
	Working towards	**Advancing**		
	■ Understand inverse operations ■ Substitute numbers into a series of function machines ■ Interpreting algebraic expressions ■ Identify like and unlike terms	■ Collect like terms ■ Solve on step equations ■ Substituting numbers into formula and nth term ■ Use the equivalence sign		
Assessments	• Check of understanding in class and homework • End of unit test			

Where will we use these ideas again: Directed number (WRM9) Substitute values into single operations and expressions	Brackets, equations, inequalities (WRM 8) Forming and solving equations (Year 8) Two-step equations (WRM9)

Year 7

Topic: Place Value, Ordering and Rounding (chapter 4)

Prior learning:
Understanding of place value
Understanding integers
Read, write and partitioning smaller numbers

Comparing and ordering integers (ascending, descending)
Calculations with integers

	Learning sequences			Endpoints
	Acquiring	**On track**	**Extending**	
Main Learning steps	■ Order integers ■ Be able to compare integers and state the larger	■ Round decimals ■ Complete multiplications and divisions with 10, 100 and 1000	■ Estimate numbers in complex calculations ■ Understand what standard form means ■ Write numbers in standard form and from standard form	• **To order and compare integers** • **To round to the nearest 10,100,1000** • **To be able to order decimals** • **To be able to round decimals** • **To round significant figures** • **To be able to estimate** • **To complete multiplications and divisions with 10,100,1000** • **To understand standard form and write numbers in standard form (H)**
	Working towards	**Advancing**		
	■ Round integers to the nearest 10, 100 and 1000 ■ Order decimals	■ Be able to estimate numbers in simple calculations ■ Round to significant figures including with decimals		
Assessments	• Check of understanding in class and homework			

Where will we use these ideas again:	
Throughout all topics in maths an understanding of WRM4 is essential Multiplying and dividing fractions (WRM 8)	Fractions and percentages (WRM 8) Fractions addition and subtraction (Year 8)