

## Armfield Academy – Mathematics Department



## Year 7 Curriculum Overview

## \*\*Note: Objectives in blue are additional higher content for extension\*\*

Half Term 1		
Week	Curriculum Overview	
WCCK		
2	- Describe and continue sequences in diagram and number forms, both linear and non-linear	
3	Understanding and using algebraic notation	
4	- Using single function machines and series or two function machines with numbers, bar models and letters	
5	- Forming and substituting into expressions, including generating sequences.	
	- Representing functions graphically	
6	Equality and equivalence	
7	- Understanding equality and fact families	
	- Forming and solving one-step equations	
Halt Term 2		
Week		
8	Equality and equivalence	
	- Understanding equality and fact families	
	- Forming and solving one-step equations	
9	Place value and ordering	
	- Decimal place value to hundredths	
10	- Working out and using number lines	
	- Comparing and ordering numbers	
	- The range and the median	
11	<ul> <li>Rounding to positive powers of ten and to one significant figure</li> </ul>	
	- Exploring and using standard form	
12	Fraction, decimal and percentage equivalence	
	<ul> <li>Representing tenths and hundredths on diagrams and number lines</li> </ul>	
	- Interchanging between fractions, decimals and percentages for multiples of tenths and quarters	
13	Recap and assessment week	
14	Fraction, decimal and percentage equivalence	
	- Interpreting pies charts	
	- Equivalent fractions	
Week		
15	Fraction, decimal and percentage equivalence	
	<ul> <li>Converting between any fraction, decimal and percentage</li> </ul>	
	- Exploring fractions above one	
16	Problem solving with addition and subtraction	
	- Use formal methods of addition with integers and decimals	
17	- Addition in standard form	
	- Improper fractions	
18	Problem solving with multiplication and division	
19	<ul> <li>Multiplying by 10, 100 and 1000; unit conversions</li> </ul>	
20	- Formal methods of multiplication and division	
	HCF and LCM (Highest Common Factor and Lowest Common Multiple)	
	- Areas of triangles, rectangles and parallelograms	
	- Finding fractions and percentages of amounts	
	- Solving 2-step equations (with and without a calculator)	
	- Introduction to order of operations	
	- Area of a trapezium	
	- Algebraic area	
	Half Term 4	
Week		
21	Fractions and percentages of amounts	
	- Find a traction of an amount	
	- Use a given fraction to find the whole of other fractions	

	- Find a percentage of an amount with and without a calculator	
	- Solve problems with fractions greater than one and percentages over 100%	
22	Four operations with directed numbers (negative numbers)	
23	<ul> <li>Ordering directed numbers; with and without context</li> </ul>	
24	<ul> <li>Add, subtract, multiply and divide with directed numbers</li> </ul>	
	- Choosing which method to use	
	<ul> <li>Order of operations with negative numbers</li> </ul>	
	Negative square roots	
25	Recap and assessment week	
26	Adding and subtracting fractions	
	<ul> <li>Adding and subtracting fractions with a common denominator, including with answer above one</li> </ul>	
	<ul> <li>Revisit equivalent fractions</li> </ul>	
	<ul> <li>Adding and subtracting fractions with simple different denominators e.g. quarters/eighths, thirds/sixths</li> </ul>	
	<ul> <li>Add and subtract fractions with any denominators</li> </ul>	
	- Add and subtract simple algebraic fractions	
Half Term 5		
Week	Curriculum Overview	
27	Adding and subtracting fractions continued	
28		
29	Constructing, measuring and using geometric notation	
30	<ul> <li>Drawing and measuring lines and angles using a ruler and protractor</li> </ul>	
31	<ul> <li>Understanding and using notation for lines and angles</li> </ul>	
	- Understand parallel and perpendicular	
	<ul> <li>Recognise types of triangle, quadrilateral and other polygons</li> </ul>	
	- Drawing triangles given SSS, SAS, ASA	
	- Drawing and interpreting pie charts	
32	Geometric Reasoning	
	<ul> <li>Calculating using angles at a point, angles on a straight line and vertically opposite angles</li> <li>Calculating using angles in triangles and used distances</li> </ul>	
	- Calculating missing angles in triangles and quadrilaterais	
	- Parallel lines rules	
	- Angles in a polygon Proof of angles rules	
	- Proof of angles rules	
Week		
22	Geometric Reasoning continued	
34		
35	Numher sense	
36	- Mental arithmetic strategies	
50	- Using known facts to derive other facts, including algebraic expressions	
37	End of year examinations	
38	Sets and probability	
39	- Identify and represent sets	
	- Interpret and create Venn diagrams	
	- Understand and use the union and intersection of sets	
	- Generate sample spaces for single events	
	- Understand and use the probability scale	
	<ul> <li>Know and use the fact that probabilities of all possible outcomes sum to one</li> </ul>	
	- Understand the complement of a set	