



Denton Community College 2019/20

Departmental Curriculum Map Template

Subject: Mathematics

Year Group: 7



	Autumn 1		Autumn 2		Spring 1	Spring 2	Summer 1		Summer 2	
Topics	Sequences (Week 1 - 4)	Algebraic Thinking (Week 5 - 8)	Place Value (Week 1-3)	Fraction, Decimal, Percentages (Week 4 - 6)	Addition and Subtraction (Week 1 - 3)	Multiplication and Division (Week 4 - 6)	Constructing, Measuring and using Geometric Notation (Week 1 - 3)	Developing Geometric Reasoning (Week 4 - 6)	Sets and Probability (Week 1-3)	Prime Numbers and Proofs (Week 4-6)
What will students be learning during this unit?	Students will be expected to understand what a sequence, recognise difference and finding missing values.	Students will be expected to find the input and output, by using the inverse functions, of an algebraic function machine. Students will be able to substitute into two-step expressions and generate sequences given an algebraic rule.	Students will be expected to recognise, order and compare positive and negative integers up to one billion. Students should understand the place value of and order decimals. Students should be able to round both decimals and integers to a	Students will be representing fractions, decimals and percentages on diagrams and number lines. Students will be able to convert fluently between simple fractions, decimals and percentages. Higher prior attaining students will be exploring fractions,	Students will be expected to know the properties of addition and subtraction, understand mental methods to help add and subtract and use formal methods. Students will be expected to be able to work with negative numbers and understand and calculate with fractions.	Students will develop their understanding of the properties of multiplication and division. Formal methods will be used to solve problems using integers and decimals. This will be applied to solving problems involving fractions, percentages,	Students will be able to recognise different types of angles. They will also be able to measure and draw angles, including reflex. Students will also be familiar with the properties of triangles and quadrilaterals.	Students will be able to use angle facts to find missing angles in straight lines, around a point and in triangles. Students will also be able to find missing angles in regular polygons and parallel lines.	Students will be expected to put numbers from a data set in a venn diagram. Students will be expected to find the intersect and union from a venn diagram. Students will be expected to understand that probability is a scale from 0 to 1 and to be able to	Students will be expected to recognise and use factors, multiples, prime numbers, square numbers and triangular numbers. Students will then be expected to use venn diagrams to find the highest common factor (HCF) and lowest common

			relevant degree of accuracy. Students should investigate with powers of 10, with higher prior attaining students being introduced to standard form.	decimals and percentages above 1.	Students will be learning how to apply these skills to help with geometry, statistics and financial problems.	measures, geometry, powers, roots and algebra.			express situations as a probability.	multiple (LCM) of numbers.
When will students be assessed ?	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 1 and a post test at the end of week 4.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 4 and a post test at the end of week 8.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 1 and a post test at the end of week 3.	Students will be given CABS after each component of Learning Students will have a pre test at the beginning of week 4 and a post test at the end of week 6.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 1 and a post test at the end of week 3.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 4 and a post test at the end of week 6.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 1 and a post test at the end of week 3.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 4 and a post test at the end of week 6.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 1 and a post test at the end of week 3.	Students will be given CABS after each component of learning. Students will have a pre test at the beginning of week 4 and a post test at the end of week 6.
How will students be assessed ?	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.	CABS (Classwork Assessment Booklet) + pre and post tests.
Key Vocabulary	Sequences, Linear, Non-Linear, Term-to-term, Fibonacci.	Function machines, inverse functions, substitution, expressions	Integer, negative, place value, decimals, powers.	Fractions, Decimals, Percentages, Number Lines,	Negative, place value, numerator, denominator , decimals.	multiple, factor, integer, decimal	Line, Line Segment, Geometric Figure, Notation, Polygon	Sum, Angle, Degrees, Line Segment, Notation	Venn Diagrams, Intersect, Union, Set, Complement , Impossible,	Factors, Multiples, Square Numbers, Prime Numbers,

				Equivalence, Converting.					Likely, Certain, Unlikely	Cube Numbers, Triangular Numbers, Venn Diagram, Highest Common Factor, Lowest Common Multiple
Homework opportunities to broaden or deepen student knowledge	Mathswatch: Generating Sequences, Finding the nth term, Finding missing terms of sequences.	Mathswatch: Function Machines, Substitution, Generating sequences.	Mathswatch: Place Value, Ordering Integers, Negative Numbers, Rounding, Decimals, Powers of 10	Mathswatch: FDP conversion, Simplifying Fractions, Equivalent Fractions	Mathswatch: Adding and subtracting, adding and subtracting decimals, adding and subtracting fractions, directed numbers	Mathswatch: multiplication and division of integers, fractions, decimals, percentages, problem solving	Mathswatch: Measuring and Drawing Angles, Recognising different triangles, Identifying different angles	Mathswatch: Angles on a straight line, Angles in a triangle, Angles in a Quadrilateral, Angles in Parallel Lines	Mathswatch: Putting Numbers in a venn diagram, Interpreting Venn Diagrams, Probability Scales	Mathswatch: Finding Factors and Multiples of Numbers, Identifying Prime Numbers, Finding HCF and LCM of numbers
Links to the National Curriculum	Generate terms of a sequence from either a term-to-term or a position-to-term rule. Recognise arithmetic sequences and find the nth term. Recognise geometric sequences and appreciate other	Use and interpret algebraic notation. Substitute numerical values into formulae and expressions. Recognise arithmetic sequences and find the nth term.	Understand and use place value for decimals, measures and integers of any size Order positive and negative integers, decimals and fractions; use the number line as a model for ordering of the real	Define percentage as 'number of parts per hundred', interpret percentages and percentage changes as a fraction or a decimal, interpret these multiplicatively, express one quantity as a	Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative Recognise and use	Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative interpret when the	Derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures [for example, equal lengths and angles] using appropriate language and technologies draw and measure line segments	Apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles understand and use the relationship between parallel lines and alternate and correspondin	Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and	Use the concepts and vocabulary of prime numbers, factors (or divisors), multiples, common factors, common multiples, highest common factor, lowest common multiple,

	sequences that arise.		<p>numbers; Use the symbols =, ≠, <, >, ≤, ≥ Round numbers and measures to an appropriate degree of accuracy [for example, to a number of decimal places or significant figures]. Interpret and compare numbers in standard form $A \times 10^n$ where n is a positive or negative integer or zero</p>	<p>percentage of another, compare two quantities using percentages, and work with percentages greater than 100%. Interpret fractions and percentages as operators</p>	relationships between operations including inverse operations.	structure of a numerical problem requires multiplicative reasoning develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems	and angles in geometric figures, including interpreting scale drawings describe, sketch and draw using conventional terms and notations: points, lines, parallel lines, perpendicular lines, right angles, regular polygons, and other polygons that are reflectively and rotationally symmetric	<p>Angles Mathematics Derive and use the sum of angles in a triangle and use it to deduce the angle sum in any polygon, and to derive properties of regular polygons</p>	<p>the 0-1 probability scale understand that the probabilities of all possible outcomes sum to 1 enumerate sets and unions/intersections of sets systematically, using tables, grids and Venn diagrams generate theoretical sample spaces for single and combined events with equally likely, mutually exclusive outcomes and use these to calculate theoretical probabilities.</p>	<p>prime factorisation, including using product notation and the unique factorisation property. use integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5 and distinguish between exact representations of roots and their decimal approximations</p>
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