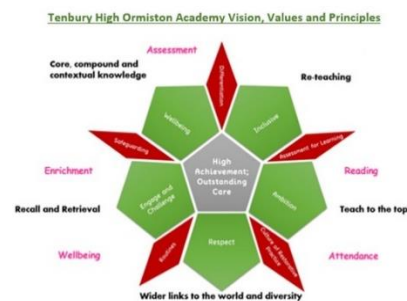
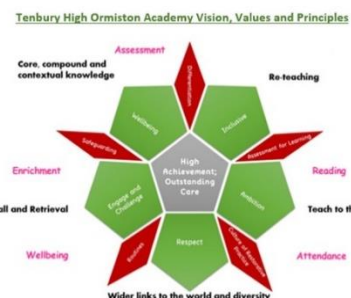




Curriculum Overview for Mathematics Year 9

Half Term 3: Probability Declarative Knowledge: - Know and use the vocabulary of probability - Understand the use of the 0-1 scale to measure probability - Know that the sum of probabilities for exclusive outcomes is 1 - Recognise the language and notation of sets and elements Procedural Knowledge: - Systematically list all the outcomes for an experiment, including the use of tables and sample space diagrams - Work out theoretical probabilities for events with equally likely outcomes - Apply the fact that the sum of probabilities for all outcomes is 1 - Calculate the probability of two (or more) outcomes happening (the and rule) - Calculate the probability of one outcome or another outcome happening (the or rule) - Identify independent and dependent events - Identify mutually exclusive events - Describe regions with a worded description - Shade regions from a worded description - Describe regions using set notation - Shade regions from set notation Conditional Knowledge: - Complete and understand tree diagrams - Represent the relationship between sets using Venn diagrams - Calculate basic probability from Venn diagrams - Calculate probability of A given B and vice versa from Venn diagrams		Modelling reading of questions by the class teacher – reading like a Mathematician and BUG Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons Impossible, unlikely, even chance, likely, certain, outcome, event, focus outcome, possible outcomes, Venn diagram, frequency, universal set, union, intersection, complement, sum, dependent, independent, theoretical, experimental There will be a formal end of half-term exam incorporating the 2 units studied during the half-term and will recall work from Half-Term 1 We will re-teach during an Exam Review lesson after the assessment. Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school)
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• Write and solve equations from Venn diagrams • Use and apply tree diagrams for problems		
Half Term 4: Direct and Inverse Proportion Declarative Knowledge: • Know the difference between direct and inverse proportion • Know the features of graphs that represent a direct or inverse proportion situation • Distinguish between situations involving direct and inverse proportion • Know the features of expressions, or formulae, that represent a direct or inverse proportion situation • Understand that “y is inversely proportional to x” is equivalent to “y is proportional to $\frac{1}{x}$” Procedural Knowledge: • Calculate original value using reverse percentages. • Calculate simple interest amounts. • Represent and calculate with direct proportion numerically • Represent and calculate indirect proportion numerically Conditional Knowledge: • Solve simple problems involving inverse proportion • Solve simple problems involving rates of pay • Solve more complex ratio problems involving mixing or concentrations • Solve more complex problems involving unit pricing • Solve problems combining understanding of fractions and ratio • Represent and calculate with direct proportion graphically • Represent and calculate indirect proportion graphically		Modelling reading of questions by the class teacher – reading like a Mathematician and BUG Two key words at the start of each lesson defined Expectation of Mathematical vocabulary used in lessons
		Direct proportion Inverse proportion Multiplier Linear Congruent, Congruence Similar, Similarity Compound unit Density, Population density Pressure
		There will be a formal end of half-term exam incorporating the 2 units studied during the half-term and will recall work from Half-Term 1 We will re-teach during an Exam Review lesson after the assessment.
		Dr Frost Maths – practising skills using DrFrost.org (a unique username and password will be provided by the school)



• Represent and calculate with direct proportion algebraically • Represent and calculate indirect proportion algebraically • Combine ratios and solve problems		
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