KS4 MATHS Yr10 (2025-26)

Northumberland's P.R.U.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
	Autumn 1 – 'Equality & Diversity'								**Autumn 2 – 'Living in the Wider World'**						
	Subject Area Topic								**Subject Area Topic**						
	1.Solving Equations involving brackets — Simplify and manipulate algebraic expressions by multiplying a single term over a bracket. Solve linear equations in one unknown algebraically (including those with the unknown on both sides of the equation) Derive an equation and , solve the equation, and interpret the solution	2.Simplifying harder expressions — Simplify and manipulate algebraic expressions, including the laws of indices. Simplify and manipulate algebraic expressions by expanding products of two binomial	3. Using Complex Formulae — Recognise and use relationships between operations, including inverse operations. Understand and use standard mathematical formulae; rearrange formulae to change the subject. Substitute numerical values into formulae, including scientific formulae Translate simple situations or procedures into algebraic expressions or formulae	4. Identities — Understand and use the concepts and vocabulary of expressions, equations, formulae and identities. Know the difference between an equation and an identity; argue mathematically to show algebraic expressions are equivalent and use algebra to support and construct arguments.	5. Congruent triangles and proof / Proof using similar and congruent triangles — Use the basic congruence criteria for triangles (SSS, SAS, ASA, RHS) Apply angle facts, triangle congruence, and properties of quadrilaterals to conjecture and derive results about angles and sides including the fact that the base angles of an isosceles triangle are equal, and use known results to obtain simple proofs.	6. Solving simultaneous equations using elimination, substitution and graphically — Solve two simultaneous equations in two variables (linear/linear) algebraically. Find approximate solutions to two simultaneous equations using a graph. Derive two simultaneous equations, solve the equations and interpret the solution	7. REVISION / TEACHER ASSESSMENT	8. GL ASSESSMENT	1. Number – Fraction Arithmetic — Find equivalent fractions Cancelling fractions Converting between mixed and improper Fractions of amounts Multiply and divide fractions (including cases where cross cancelling is necessary) Add and subtract fractions Solve worded problems	2. Probability 1- Basic probability — Probability scale Probability of an event occurring Interpret, create and find probabilities from Venn diagrams Venn diagram notation Statistical independence and mutually exclusive events Know the formal notation for conditional probability and find these from Venn diagrams Interpret, create and	3. Statistics- Statistical Diagrams — Draw and interpret scatter graphs Draw and use a line of best fit Understand the terms extrapolation and interpolation Understand and describe linear correlation (link to spearman's rank correlation coefficient) Identify types of data	4. *Statistics Measures of location* — Averages from discrete data Averages from grouped and ungrouped tables Compare medians, means and standard deviations of data sets (do not need to calculate standard deviation)	5. *Statistics Measures of location* — Interpreting bar charts, pictograms and stem and leaf Moving averages	6. REVISION / ASSESSMENT	7. MISCONCEPTIONS

							find probabilities from sample space diagrams Interpret, create and find probabilities from two way tables					
Notes/Links/Interleaving		**Additional Higher Content**					**Notes/Links/Interleaving**		**Additional Higher Content**			

Spring 1 – 'The Circle of Life'						Spring 2 – 'Conflict'					
Subject Area Topic						**Subject Area Topic**					
1. Probability Know that pairs of branches sum to 1 Construct tree diagrams with replacement P (A n B) = p(A) x p(B) for independent events (AND rule) P(A) or P(b) = p(A) + P(B) (OR rule)	2. Statistics- statistical measures Calculating quartiles and interquartile range Know that when find quartiles from a list you add 1 When finding quartiles from a diagram you don't add 1 Draw and interpret box plots Understand that interquartile range measures consistency and gives the middles 50% of values Draw and interpret cumulative frequency diagrams Find percentiles	3. Statistics- Data Handling cycle Know the data handling cycle Stratified sampling Convenience sampling Quota sampling Random sampling Systematic sampling Writing and criticising questionnaires Know the issues when collecting data and what to do to overcome them	4. Algebra Plotting quadratic curves with a table of values Know what a cubic and reciprocal graph look like Calculate gradient of a line from a graph Find equation of a line from a graph Know y=mx+c and that parallel lines have the same gradient	5 REVISION / TEACHER ASSESSMENT	6. GL ASSESSMENT	1.representing and interpreting data Construct equal width Histograms Know the difference between a histogram and a bar chart Interpret Choropleth graphs Interpret Population pyramids Be able to describe data as listed in tier 2/3 vocabulary Interpret skewness from a histogram	2. Simplifying and using ratio Write a ratio as a fraction Understand x:y = 2:3 therefore x = 2/3 y (common AQA exam question) Simplify ratio Divide into a given ratio Find missing parts in a ratio	3. Arcs and Sectors Find area and circumference of a circle Find radius when given area of circumference Find length of an arc Find the area of a sector	4 Index Numbers retail price index consumer price index gross domestic product	5. REVISION / ASSESSMENT	6. MISCONCEPTIONS
Notes/Links/Interleaving		**Additional Higher Content**				**Notes/Links/Interleaving**		**Additional Higher Content**			

Summer 1 – 'Health & Leisure'						Summer 2 – 'Crime & Punishment'						
Subject Area Topic						**Subject Area Topic**						
1. Number- Percentages Write percentages as decimals Percentage of an amount Write a quantity as a percentage of another Percentage increase/decrease Repeated percentage change Reverse percentages	2. Algebra- Inequalities Represent inequalities on a number line Solve linear inequalities Find integer values	3. Number – Standard form Convert large numbers into standard form Convert numbers less than 1 into standard form Add/subtract numbers in standard form Multiply/divide numbers in standard form	4. Proportion Use tables to find missing values for direct and inverse proportion Solve worded problems involving things that are directly or inversely proportion (number of workers etc…) Know the graphs of direct and inverse proportion Geometry- Vectors and translations Translate an object on a grid Translate an object by a column vector Describe a translation using column vectors Describe a given vector using column vectors Multiply column vectors by a scalar Add/subtract column vectors	5. REVISION / TEACHER ASSESSMENT	6. GL ASSESSMENT	1. Measures – Compound units Revise converting between metric units Convert between miles/km when conversion is given	2. Measures – Compound units Calculate speed/time/distance Calculate density/mass/volume	3. Key skill needed to access content in year 11 Factorise expressions by taking out a number Factorise by taking out a letter Factorise by taking out the HCF	4.Key skill needed to access content in year 11 Factorise quadratics where the coefficient of x squared is 1 Solve quadratics when factorised to identify roots	5 PAPER 1 - REVISION / ASSESSMENT	6 PAPER 2 - REVISION / ASSESSMENT	7. MISCONCEPTIONS

| Notes/Links/Interleaving | | Additional Higher Content | | | | | | Notes/Links/Interleaving | | | Additional Higher Content | | | |