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| Subject: Mathematics Year 8 Curriculum Map 2024-2025 | | | |
| Terms | **Topics covered** and **core knowledge and skills** | Links to careers | Links to the Knowledge organiser and other additional resources |
| Half term 1 | Sequences:  Understand linear sequences as patterns withing number grid columns  Be able to use and form position-to-term rules for linear sequences  Understand the features of linear and non-linear sequences  Be able to reason with a variety of sequences and representations  Forming and Solving Equations:  Understand equality in algebraic relationships  Be able to solve simple linear equations  Understand algebraic relationships embedded within various contexts  Be able to form and solve linear equations with unknowns on both sides  Forming and Solving Inequalities:  Understand different representations of inequalities  Be able to test and solve linear inequalities  Understand inequalities as representations of numerical relationships from a range of contexts  Be able describe solve inequalities including with unknowns on both sides | Sequences:  <https://www.youtube.com/watch?v=7Vf6BJwdy_0>  Forming and Solving Equations:  <https://www.youtube.com/watch?v=BzKMckyLYzk>  Forming and Solving Inequalities:  <https://www.youtube.com/watch?v=5sOw5og5sgc>  Linear Graphs:  <https://www.youtube.com/watch?v=JcEHR6O5E6Q>  Accuracy and Estimation:  https://www.youtube.com/watch?v=meOjLJF9F7U | <https://classroom.thenational.academy/subjects-by-key-stage/key-stage-3/subjects/maths>  <https://www.bbc.co.uk/bitesize/subjects/zqhs34j>  <https://vle.mathswatch.co.uk/vle/>  <https://family.eedi.com/login>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/U01-Sequences-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/U02-Forming-and-solving-equations-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/U03-Inequalities-KO.pdf> |
| Half term 2 | Linear Graphs:  Understand coordinates and how related sets of coordinates form a line  Be able to represent inequalities with one variable on the Cartesian plane  Understand a linear relationship can be recognised from a constant rate of change in the coordinates  Be able to identify the gradient of a line from its graph and from a set of coordinates  Understand a linear relationship can be described using algebra in the form y = mx + c  Be able to identify the equation of a line and draw a line from its equation  Experience moving between three representations of a linear relationship: coordinates, graphs and equations  Accuracy and Estimation:  Understand rounding is a method of approximation  Be able round to decimal places and ‘to the nearest’ Understand how to identify significant figures  Be able round to a given number of significant figures  Be able to estimate calculations based on significant figures | Linear Graphs:  <https://www.youtube.com/watch?v=JcEHR6O5E6Q>  Accuracy and Estimation:  https://www.youtube.com/watch?v=meOjLJF9F7U | <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/U04-Linear-Graphs-KO.pdf>  <https://maritime.rivoagency.com/admin/wp-content/uploads/sites/20/2022/10/U05-Accuracy-Estimation-KO.pdf> |
| Half term 3 | Ratio Review  Understand the relationship between ratio and other proportional descriptors  Be able to use models and equivalence to solve ratio problems  Experience models and contexts relating to ratio  Real Life Graphs and Rate of Change  Understand graphical representation of (changing) rate  Be able to interpret and express graphical linear and piecewise relationships  Experience describing, comparing and visualising changing rate  Direct and Inverse Proportion  Understand multiplicative relationships  Be able use scale factor and constant of proportionality independently to find missing values in directly proportional relationships  Experience different representations of the constant of proportionality, including gradient  Be able to find missing values from directly and inversely proportional relationships, and state the constant of proportionality in each case  Be able to use algebraic notation to describe directly and inversely proportional relationships | Ratio Review:  <https://www.youtube.com/watch?v=BU9mKIvfxYU>  Real Life Graphs and Rate of Change  <https://www.youtube.com/watch?v=JcEHR6O5E6Q>  Direct and Inverse Proportion  <https://www.youtube.com/watch?v=Mz4nMRtTDCw> |  |
| Half term 4 | Univariate Data  Understand different types of data  Be able to interpret and represent data in different ways  Experience collecting and analysing data in multiple representations  Understand the mean is a way of sharing out equally  Be able to use the mean to solve problems  Experience using different representations of data in mean problems  Understand mean, median, mode and range  Be able to find averages from different representations of data  Experience interpreting averages  Bivariate Data  Understand that bivariate data has each data entry has 2 connected values  Be able to represent bivariate data with a scatter diagram, and to read data from a scatter diagram  Be able to identify trends in bivariate data and use mathematical language to describe trends.  Understand that bivariate data has each data entry has 2 connected values  Be able to represent bivariate data with a scatter diagram, and to read data from a scatter diagram  Be able to identify trends in bivariate data and use mathematical language to describe trends. | Univariate Data:  <https://www.youtube.com/watch?v=SBPtIAv5CRM>  <https://www.youtube.com/watch?v=SALCargi1_0>  Bivariate Data:  <https://www.youtube.com/watch?v=SBPtIAv5CRM> |  |