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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 columnsBe able to use and form position-to-term rules for linear sequencesUnderstand the features of linear and non-linear sequencesBe able to reason with a variety of sequences and representationsForming and Solving Equations:Understand equality in algebraic relationshipsBe able to solve simple linear equationsUnderstand algebraic relationships embedded within various contexts Be able to form and solve linear equations with unknowns on both sidesForming and Solving Inequalities:Understand different representations of inequalitiesBe able to test and solve linear inequalitiesUnderstand inequalities as representations of numerical relationships from a range of contextsBe 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 lineBe able to represent inequalities with one variable on the Cartesian planeUnderstand a linear relationship can be recognised from a constant rate of change in the coordinatesBe able to identify the gradient of a line from its graph and from a set of coordinatesUnderstand a linear relationship can be described using algebra in the form y = mx + cBe able to identify the equation of a line and draw a line from its equationExperience moving between three representations of a linear relationship: coordinates, graphs and equationsAccuracy and Estimation:Understand rounding is a method of approximationBe able round to decimal places and ‘to the nearest’ Understand how to identify significant figuresBe able round to a given number of significant figuresBe 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 ReviewUnderstand the relationship between ratio and other proportional descriptorsBe able to use models and equivalence to solve ratio problemsExperience models and contexts relating to ratioReal Life Graphs and Rate of ChangeUnderstand graphical representation of (changing) rateBe able to interpret and express graphical linear and piecewise relationshipsExperience describing, comparing and visualising changing rateDirect and Inverse ProportionUnderstand multiplicative relationshipsBe able use scale factor and constant of proportionality independently to find missing values in directly proportional relationshipsExperience different representations of the constant of proportionality, including gradientBe able to find missing values from directly and inversely proportional relationships, and state the constant of proportionality in each caseBe 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 DataUnderstand different types of data Be able to interpret and represent data in different waysExperience collecting and analysing data in multiple representationsUnderstand the mean is a way of sharing out equallyBe able to use the mean to solve problemsExperience using different representations of data in mean problemsUnderstand mean, median, mode and rangeBe able to find averages from different representations of dataExperience interpreting averagesBivariate DataUnderstand that bivariate data has each data entry has 2 connected valuesBe able to represent bivariate data with a scatter diagram, and to read data from a scatter diagramBe 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 valuesBe able to represent bivariate data with a scatter diagram, and to read data from a scatter diagramBe 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> |  |