Instructions

To continue your maths learning, whilst you are isolating, we have put together a set of lesson which cover all the work being done in class in November and December. The lessons are all from the Oak National Academy's website and include: an introductory quiz; a video to watch explaining the topic; a practice task or tasks; and a quiz at the end to check your understanding. Just check for a message from your teacher telling you which lesson you are scheduled to do and click the links to be taken directly to them.

Area	Topic	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
ANGLES AND TRIGONOMETRY	Unit: 5.1 Angle properties of triangles and quadrilaterals, p.122	Full turns & straight lines	Missing angles in triangles	Missing angles in quadrilaterals	Angles in special quadrilaterals	
	Unit: 5.2 Interior angles of a polygon, p.126	Find exterior angles in polygons	Sum of interior angles	Find sides from interior angle sum	Missing angles when polygons are joined	
	Unit: 5.3 Exterior angles of a polygon, p.128					
	Unit: 5.4 Pythagoras' theorem 1, p.131	Know Pythagoras theorem	Find the length of the hypotenuse	Find the length of a short side	Applying the theorem	
	Unit: 5.5 Pythagoras' theorem 2, p.134	Pythagorean triples	Find the height of triangles	Distance between 2 points		
	Unit: 5.6 Trigonometry 1, p.136	Use tangent, sine and cosine	Use tangent to find a length	Use sine and cosine to find a length	Applying trigonometry	Use inverse functions to find an angle
	Unit: 5.7 Trigonometry 2, p.139	Know the ratios for 0°, 30°,45°,60° and 90°	Use knowledge of ratios to find a missing length	Use trig with bearings	Pythagoras or trigonometry	
ALGEBRA	Unit: 2.1 Algebraic indices, p.31	Multiplication law	Division law	Power law	Combining index laws	
	Unit: 2.2 Expanding and factorising, p.33	Expand a single bracket involving powers	Expand 2 brackets and simplify	Factorise into single brackets		
	Unit: 2.3 Equations, p.35	Forming & solving linear equations I	Forming & solving linear equations II	Equating linear expressions	Solving further linear equations	
	Unit: 2.4 Formulae, p.37	Substitution - Positive numbers	Substitution - Negative numbers	Changing the subject	Changing the subject with squares and square roots	
	Unit: 2.5 Linear sequences, p.40	Write nth term	Find the nth term	Triangular & fibonacci sequences		
	Unit: 2.6 Non-linear sequences, p.42	Simple quadratic and cubic sequences	nth term of a quadratic sequence			
	Unit: 2.7 More expanding and factorising, p.46	Expand and simplify double brackets I	Expand and simplify double brackets II	Factorising quadratics I	Factorising quadratics II	Difference of two squares
FURTHER STATISTICS	Unit: 14.1 Sampling, p.440	Designing questionnaires	Sampling methods	Stratified sampling		
INTERPRETING AND REPRESENTING DATA	Unit: 3.1 Statistical diagrams 1, p.63					
	Unit: 3.2 Time series, p.67	Plot & interpret time series graphs				
	Unit: 3.3 Scatter graphs, p.70	Identify outliers on a scatter graph				
	Unit: 3.4 Line of best fit, p.72	Use a line of best fit on a scatter graph				
	Unit: 3.5 Averages and range, p.75	Averages from a list of numbers	Mean from a frequency table	Mean from a grouped frequency table		
	Unit: 3.6 Statistical diagrams 2, p.78	Draw & interpret pie charts	Stem and leaf diagrams	Draw & interpret a frequency tree		
FURTHER STATISTICS	Unit: 14.2 Cumulative frequency, p.443	Plot a cumulative frequency diagram	Find quartiles from a CF diagram	Find quartiles from a list of data		
	Unit: 14.3 Box plots, p.446	Plot a box plot and compare data				
	Unit: 14.4 Drawing histograms, p.449	Plot a histogram				
	Unit: 14.5 Interpreting histograms, p.450	Find frequency from a histogram	Median from a histogram	Probabilities from a histogram		
	Unit: 14.6 Comparing and describing populations, p.453	Comparing data	Plot a box plot and compare data			