Mathematics Curriculum Plan Overview

Year 8

Term	Topic	Learning	How can parents' best support
Autumn 1	**Data Handling Positive Numbers Function Machine**	Display data using line graphs Non-calculator methods with 4 operations Using function machines to generate sequences	Talk about graphs and charts seen in media
Assessment:	<u>Self assessment and topic tests</u>		
Autumn 2	**Negative numbers Coordinate in 4 quadrant Recognise and use fractions Properties of 2D/3D shapes**	Apply knowledge of negative numbers to context of graphs and coordinate in 4 quadrants. Recognise common 2D and 3D shapes and begin to describe them using faces, edges vertices	Whilst out and about or in the house discuss the shape of regular objects
Assessment:	<u>Self assessment and topic tests</u>		
Spring 1	**Types of number Using estimation Decimals Area and perimeter**	Language associated with different types of number-factor, multiple and prime. Order, add and subtract decimals. Find area and perimeter of rectangles and triangles.	Search internet for ways that prime numbers are used in coding and other areas outside maths
Assessment:	<u>Self assessment and topic tests</u>		
Spring 2	**transformations Ratio operations with fractions probability**	Begin to understand different ways to transform shapes namely translation and reflection.Use ratios to describe patterns and begin to apply the concept to problems with recipes. Apply four operations with fractions. Be able to find simple probabilities of event occuring.	Look at symmetry and reflection patterns in art. Talk about recipes and how to change them for different numbers of people. Research interesting probability problems like the Monty Hall problem.
Assessment:	<u>Self assessment and topic tests</u>		
Summer 1	**Algebra Geometric shapes Angles I**	Equations and expressions - solving 1 and 2 step equations. Forming expressions from problems in real life Using isometric paper to draw 2D representations of 3D shape. Draw plans and elevations of buildings in different views. Use compasses and protractors to accurately draw triangles and parallelograms.	Recap names of 2D and 3D shapes in real life situations and around the home. Look at any plans you have a t home for buildings or your house or flat. Look at the plans available on estate agents websites and discuss how these relate to the buildings. Look at the work of Escher and how is art relates to 2D/3D shapes and geometry.
Assessment:	<u>Self assessment and topic tests</u>		
Summer 2	**Averages Angles II Finding fractions of amounts Money**	calculate all 3 averages and range of a set of data and begin to use them to compare data. Finding unit fractions of amounts using times tables or mental division methods. Calculate using money involving decimals.	Look through newspapers and on the internet to see how averages are used/misused in the media. Discuss fractions when cooking or sharing food. Calculate change in shops.
		<u>**End of year assessment**</u>	