



Maths

Year 8 Long Term Overview

Ferndown Middle School

Year Group	8	Subject	Maths	Taught in	Autumn 1
Title	Proportional Reasoning- ratio and scale				
Summary	Understand and use ratio representations and problems				
Key Skills	<ul style="list-style-type: none">- Understand the meaning and representation of ratio- Understand and use ratio notation- Solve problems involving ratio of the form 1:n or n:1- Solve proportional problems involving the ratio m:n- Divide a value into a given ratio- Express ratios in their simplest integer form- Express ratios in the form of 1:n- Compare ratios and related fractions- Understand pie as the ratio between diameter and circumference- Understand gradient of a line as a ratio				
Prior Learning	<ul style="list-style-type: none">- Fractions- Simplifying- LCM (lowest common mutiple)- Substitution- Four operations				

Year Group	8	Subject	Maths	Taught in	Autumn 1
Title	Proportional reasoning- multiplicative change				
Summary	Explore the direct relationship between numbers				
Key Skills	<ul style="list-style-type: none">- Solve problems involving direct proportions- Explore conversion graphs- Convert between currencies- Explore direct proportion graphs- Explore the relationship between similar shapes- Understand scale factors as multiplicative representations- Draw and interpret scale diagrams- Interpret maps using scale factors and ratios				
Prior Learning	<ul style="list-style-type: none">- Ratio- Simplifying- Fractions LCM increase and decrease by fraction/percentage				



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Year Group	8	Subject	Maths	Taught in	Autumn 1
Title	Proportional reasoning- Multiplying and dividing fractions				
Summary	Divide and multiply by fractions				
Key Skills	<ul style="list-style-type: none"> - Represent multiplication of fractions - Multiply a fraction by an integer - Find the product of a pair of unit fractions - Find the product of a pair of any fractions - Divide an integer by nay fraction - Divide a fraction by a unit fraction - Understand and use the reciprocal - Divide any pair of fractions 				
Prior Learning	<ul style="list-style-type: none"> - Understanding of fractions, addition and subtraction - LCM - Equivalence - Four operations 				

Year Group	8	Subject	Maths	Taught in	Autumn 2
Title	Representations- working in the Cartesian plane				
Summary	Draw and interpret linear graphs				
Key Skills	<ul style="list-style-type: none"> - Work with co-ordinates in all four quadrants - Identify and draw lines that are parallel to the axes - Recognise and use the line $y=x$ - Recognise and use lines of the form $y=Kx$ - Link $y=kx$ to direct proportion problems - Explore the gradient of the line $y = kx$ - Recognise and use lines of te form $y=x+a$ - Explore graphs with a negative gradient - Link graphs to linear sequences - Plot graphs of the form $y=mx+c$ - Explore non -linear graphs - Find the midpoint of a line segments 				
Prior Learning	<ul style="list-style-type: none"> - Interpret and draw graphs - Substitution - sequences 				



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Year Group	8	Subject	Maths	Taught in	Autumn 2
Title	Representations- representing data				
Summary	Understand, interpret and draw different types of graphs to represent data				
Key Skills	<ul style="list-style-type: none">- Draw and interpret scatter graphs- Understand and describe linear correlation- Draw and use line of best fit- Identify non- linear relationships- Identify different types of data- Read and interpret ungrouped frequency tables- Read and interpret grouped frequency tables- Represent grouped discrete data- Represent continuous data grouped into equal classes- Represent data in a 2-way tables				
Prior Learning	Use and interpret graphs and tables, frequency tables				

Year Group	8	Subject	Maths	Taught in	Autumn 2
Title	Representations- Tables				
Summary	Using different representations to find probability of an event.				
Key Skills	<ul style="list-style-type: none">- Construct sample spaces for one or more event- Find probabilities from a sample space- Find probabilities from a 2-way tables- Find probabilities from Venn diagrams- Use the product rule for finding the total number of possible outcomes				
Prior Learning	<ul style="list-style-type: none">- Basic probability- Venn diagrams- Interpret different representations of data				