



Year 11 Maths Learning Journey

Autumn Term 3 - Using graphs

Core knowledge	Reference
<u>Reflect shapes in given lines (R)</u> “What’s is the same and different about equations of horizontal/vertical lines compared to diagonal lines?”	Worksheet
<u>Construct and interpret conversion graphs (R)</u> “Does it matter which axis represents which quantity when using a conversion graph?”	Worksheet
<u>Construct and interpret straight line graphs</u> “What is the value when $x=0$?”	Worksheet
<u>Interpret distance/time graphs</u> “What is the connection between the gradient of a distance/time graph and the speed of travel?”	Worksheet
<u>Construct distance/time graphs</u> “If a car travels at 33mph how far will it travel in 20 minutes?”	Worksheet
<u>Construct and interpret speed/time graphs</u> “What is the difference between speed and acceleration?”	Worksheet
<u>Construct and interpret piece-wise graphs</u> “When does the graph ‘jump’? Is the boundary point included or excluded?”	Worksheet
<u>Recognise and interpret graphs that illustrate direct and inverse proportion</u> “How do you find the gradient of a tangent to a curve?”	Worksheet
<u>Find approximate solutions to equations using graphs</u> “How can we check if the approximate solutions are close to the actual solution?”	Worksheet
<u>Estimate the area under a curve (H)</u> “How do you find the area of a trapezium?”	Worksheet

LC Title	Completed	Dirt
Non-Linear Graphs		

Key Vocabulary:

Acceleration: Acceleration is the rate of change of velocity of an object

Approximate: Anything that is similar, but not exactly equal, to something else

Constant: A value or number that never changes in expression; it's constantly the same

Convert: To change a value or expression from one form to another

Interpret: Converting the symbols of a formula or a drawn graph into meaningful information

Piece-Wise: A function which is defined by multiple sub-functions

Proportion: An equation in which two ratios are set equal to one another

Reflection: A type of transformation that flips a shape in a mirror line