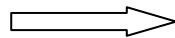


Scheme of Work

Maths & Geography		Tier: 6-8	4 Weeks
Context in which Topics can be started	Mathematical Topics Covered (with level)	Learning Talents Covered (with level)	Useful Resources
<p>Comparing the UK to other countries</p> <ul style="list-style-type: none"> What do we do when we have too much data to use? How can we choose just some without introducing bias? What is a census? Explain that the next census will take place next year. How many people are there in the world? How many are there in the UK? Is the UK population increasing? Compare income/heights/GDP/debt/account balance (anything numerical) distributions of various countries. Gini index to compare poverty levels in different countries 	<ul style="list-style-type: none"> Find the median from histogram or any other information from a histogram (level 7) Find the mode, median, range as well as the greatest and least values from stem and leaf diagrams (level 7) Explain an isolated point on a scatter graph (level 6) Use a line of best fit, or otherwise, to predict values of one variable given values of the other variable (level 6) Appreciate that correlation is a measure of the strength of the association between two variables and that zero correlation implies 'no linear relationship' (level 6) Interpret: (level 8) <ul style="list-style-type: none"> box plots cumulative frequency diagrams histograms 	<p>Sustained Response</p> <p>Level 6:</p> <ol style="list-style-type: none"> I use my expanding subject knowledge and a variety of skills to develop my ideas. I take into account purpose and audience and use this knowledge to communicate appropriately. I can produce plans that show different ways of working and develop detailed criteria to assess my success in learning. I can notice and use a range of evidence and appreciate links between different sources. <p>Level 7:</p> <ol style="list-style-type: none"> I am increasingly independent and creative in developing my ideas. 	<ul style="list-style-type: none"> Some Data Sets  What is GDP? - BBC World population clock Sporcle – population 2050 MK population data lists MK population breakdown Sporcle – debt Sporcle – account balances Sporcle biggest economies Sporcle smallest economies Definition of Gini index Gini coefficient for the UK Defence Dynamics lesson plan and resources

<p>Loci & Constructions</p> <ul style="list-style-type: none"> How do you locate people when you have lots of information about the location but not exact details? The MoD has prepared a lesson plan and resources on this topic, showing how the RAF Mountain Rescue team use Loci to locate and rescue people – Defence Dynamics 	<ul style="list-style-type: none"> <i>Construct; (level 7)</i> <ul style="list-style-type: none"> <i>perpendicular bisector of a given line</i> <i>perpendicular from a point to a line</i> <i>perpendicular from a point on a line</i> <i>bisector of a given angle</i> <i>Use axes and coordinates to specify points in all four quadrants in 2D and 3D (level 8)</i> <i>Find coordinates of points identified by geometrical information in 3-D (level 8)</i> 	<ol style="list-style-type: none"> I communicate in a confident and appropriate way, and am able to include technical language when necessary. I understand the importance of different conventions for recording and communicating information. I can select from an increasing range of appropriate sources to develop ideas, arguments and findings. <p>Level 8:</p> <ol style="list-style-type: none"> I exploit the potential of subject specific knowledge and skills to develop ideas and meanings and present these in confident and sustained ways. I am able to notice, select, organise and deploy relevant information consistently to produce full, appropriate and coherently structured responses reaching sustained conclusions. I am increasingly confident in synthesising information from a range of views. My writing shows a selection of specific features or expressions designed to engage the reader. 	<ul style="list-style-type: none"> T Drive: Defence Dynamics Loci
<p>The Earth and its area</p> <ul style="list-style-type: none"> Surface Area of Earth is 510,072,000 km² 510,065,600 km² of which 148,939,100 km² (29.2 %) is land and 361,126,400 km² (70.8 %) is water. Convert these measurements in cm and mm and write in standard index form. The Earth's land surface can be divided: 20% covered by snow, 20% mountains, 20% 	<ul style="list-style-type: none"> <i>Use Standard Form expressed in conventional notation (level 7)</i> <i>Standard Index Form (level 7-8)</i> <ul style="list-style-type: none"> <i>Be able to write very large and very small numbers presented in a context in standard form</i> <i>Convert between ordinary and standard form representations</i> <i>Calculate with standard form</i> <i>Round to any given significant figure (level 7)</i> 	<ol style="list-style-type: none"> I exploit the potential of subject specific knowledge and skills to develop ideas and meanings and present these in confident and sustained ways. I am able to notice, select, organise and deploy relevant information consistently to produce full, appropriate and coherently structured responses reaching sustained conclusions. I am increasingly confident in synthesising information from a range of views. My writing shows a selection of specific features or expressions designed to engage the reader. 	<ul style="list-style-type: none"> T Drive: ppt-Standard form_significant figures Interactive pie charts Surface area of Earth

<p>dry land, 30% good land that can be farmed, 10% land that doesn't have topsoil.</p> <p>Calculate the amount of land covered by snow, mountains, dry land and top soil and round these measurements to one significant figure.</p>			
<p>MyMaths Related Homeworks:</p> <ul style="list-style-type: none"> • Sampling (level 8) • Cumulative Frequency (level 8) • Box and Whisker Plots (level 8) • Scatter graphs (level 6) • Moving Averages (level 8) • Constructing shapes (level 6) • Drawing Loci (level 7) • Standard form large (level 8) • Standard form calc (level 8) • Significant figures (level 7) 		<p>Assessment Ideas:</p> <p>Maths Geography 6-8</p>	<p>Cover work:</p> <ul style="list-style-type: none"> • Functional skills book: Populations Task Page 123

Additional Resources should be added to the folder if possible