

Where will you View the Olympic Torch Relay Teachers' Notes

This activity is designed to help learners:

- think analytically about a statistical problem using the Problem Solving Approach (PSA);
- consider relationships and correlation between variables;
- plot scatter plots;
- draw lines of best fit;
- estimate the equation of the line of best fit;
- make predictions using the line of best fit;
- report and discuss results;
- draw conclusions;

Introduction PPT

This resource can take place on its own or there is the PPT presentation 'Getting to the Point Introductory Lesson.ppt' that provides an introduction to this lesson or series of lessons. Each slide has explanatory notes. Teachers can delete slides/content depending on the level of the lesson. Content of this PPT in brief:

Slides	Content	
1 - 4	Fact and figures about the Olympic Games and Torch Relay.	
5-7	Ideas to investigate and explanation of Problem Solving Approach.	
8-11	-11 States the question/example to be investigated.	
	Data is provided. Getting to the Point in cornwall.xls	
12 - 16	Construct and interpret box plots.	
17 - 18	Calculate percentage change.	
19 - 20	Plot and interpret scatter plots.	
21	Draw a line of best fit and consider outliers.	
22	Use the line of best fit to predict values.	
23	Equation of the line of best fit.	
24	Estimate the gradient and intercept for the equation of the line of	
	best fit.	
25	Use the equation of the line of best fit to predict values.	
26	Interpret the gradient and intercept of line of best fit.	
27	Report findings accurately.	
28 - 30	Discussion of findings and further investigation.	

Before the lesson:

- This resource is designed around the online Getting to the Point Tool.
- To instantly retrieve your class's data you must have registered on the *SportAtSchool* website, <u>www.sportatschool.org.uk</u>, at least one working day before you need your data. For this you will need your LEA and school code.

(If you do not have these contact <u>admin@censusatschool.org.uk</u>.)

• See 'Getting to the Point Technical Guide.doc'.

Plan: Learners need to collect their own data for the distance from their home to a village, town or city they where they would like to view the Torch Relay.

This resource is from the **SportAtSchool** project at <u>WWW.Sportatschool.org.uk</u>



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Collect: Use the Getting to the Point Tool.

The online tool will instantly give learners the crow flight distance, road distance and time taken for the journey between two locations. They will then be asked to answer a few questions and to submit their data.

Instantly download your class's data by selecting Get Data/Request Relay Data then Login, enter your details, Request Relay Data and complete the form/submit. (Note: `Getting to the Point - Sample UK

= Get Data	User Menu
DataTool _	= Log in/out
Random Data Selector	Site Administrator
Results	= Registration
Request Your Schools Data	Request Your Schools Data
Request Relay Data	= Request Relay Data

Distances.xls' is a sample of 43 responses from the online Getting to the Point Tool just in case you cannot access your data immediately.)

Instructions how to use the Getting to the Point Tool are included in the learners' worksheet. Spaces have been left to add the school's LEA and school code. The data will be sent in csv format and will open in Excel. It is advised to save this as xls file.

The work book 'Scatter Plot and Box Plot Template in Excel.xls' is designed to:

- plot box plots for crow flight and road distances;
- plot a scatter plot of road distance vs crow flight distance;
- plot a scatter plot of drive time vs road distance;
- display a table of statistics.

Open the work book 'Scatter Plot and Box Plot Template in Excel.xls'.

Open the work book containing your class's data. Select Sheet 1.

Copy and paste this into 'Scatter Plot and Box Plot Template in Excel.xls', Sheet 1, Cell A1.



Click on appropriate sheet at the bottom of the spread sheet to see the plots.

Statistics & Boxplot Scattter Crow vs Road Sheet 1 Scatter Road vs Time

Scatter plots show correlation and whether there is a relationship between two variables. Answers to this section will depend on the class's data.

Discuss: See 'Getting to the Point PSA Options.doc' for further investigations.

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