



Getting to the Point in 2012

Teachers' Notes

The activities in this resource are designed to help learners:

- relate individual statistical techniques to a wider problem;
- 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;
- plot box plots;
- interpret box plots;
- report and discuss results;
- draw conclusions;
- calculate percentage change.

Introductory Lesson

The PPT presentation 'Getting to the Point Introductory Lesson.ppt' 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	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 from graph.
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.

There are opportunities to pause during the PPT to ask learners to plot graphs either on paper or in Excel. Data is provided in Getting to the Point in Cornwall.xls



Getting to the Point in 2012 Teachers' Notes

Where will you view the Olympic Torch Relay? (Scatter plots)

Learners are asked to investigate: Is there a relationship between the crow flight distance and the road distance for the journey from your home to view the Olympic Torch Relay?

This resource has:

- a learners' worksheet, instructions how to use the online tool;
- teachers' notes;
- a template for plotting box plots and scatter graphs in Excel;

This lesson needs to take place in a computer room. Teachers need to download the data immediately after the learners have completed the online tool. Instruction for this are in the teaching notes for this resource.

Getting to the Point in your Area (Box plots)

Learners are asked to investigate:

How their class's Torch Relay distances data relate to the Cornwall distances data?

This resource has:

- a learners' worksheet, instructions on how to use the online tool;
- teachers' notes;
- a template for plotting box plots and scatter plots in Excel;
- a sample of data to be used if the Online Tool cannot be accessed.

This lesson needs to take place in a computer room. Teachers need to download the data immediately after the learners had completed the online tool. Instruction for this are in the teaching notes for this resource.

Getting to the Point in Scotland (Scatter and box plots)

This resource asks learners to investigate whether the road distances compared to crow flight distances in Scotland follow the same relationships as those in Cornwall.

This resource has;

- a learners' worksheet;
- teachers' notes;
- data;
- a template for plotting box plots and scatter plots in Excel.

More ideas for investigations are in:

Getting to the Point Problem Solving Approach Options.doc