Year 8 Data Handling Project

Name: **Form:**

Introduction:
   a) Save this document into your local user area.
   b) ✐ When you see this symbol type your answer onto the page.

   c) Remember to save your work regularly.

   d) Print out your work when you have finished.

Specifying the Problem and Planning

We wish to investigate whether there is a relationship between the height of a person and the length of their right foot.

What do you think this statement means? Can you predict what the answer might be?
✐

In order to get a realistic result you are going to answer this question using some data from actual pupils, collected by *CensusAtSchool*. Next to this Word document on the site is an Excel file of the data. Download this onto your local user area. Save the Excel file under a new file name.

Open the file and look at the data you have available, how do you think you can use this to answer the original question?
✐

Recording and Representing the Data

Since this is real data there may be errors in it. This is called **dirty data.** For example a person may have entered their height as 1.58cm. You must make a decision as to whether to correct the dirty data, or delete it.

Look at the data of heights and foot length. Is there any dirty data?
✐

Comment on how you have dealt with any dirty data that you have found.
✐

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You now need to find the mean average height and foot length. Click in an empty cell under the 'Heights' column. Select the **Formulas** tab. You will need to use the **Average** function. Your formula should look something like this: =AVERAGE(A2:A151) where A2 is the cell containing your first piece of data and A151 your last. Repeat this to find the average foot length.

✎   Mean Height =
        Mean Foot Length =

You now need to create a scatter graph.
Highlight both the height and foot length.
Click on the **Insert** tab. Select the scatter diagram icon.
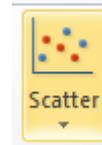
Select the first scatter in the drop down menu.

Label your axes correctly and give your graph a title. You will find options to do this in the **Layout** tab.

You may wish to format the axes so that data is more easily seen. If you right click on the axis you want to change and select **Format Axis**, this will allow you to change either the scale or where you wish the plot to start.

Right click on a data point.

Click on **Add Trendline.**

You are looking for a **linear** relationship/**OK**
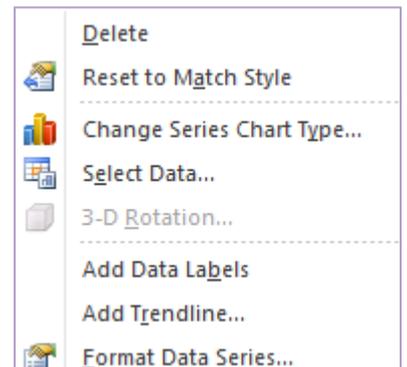
Interpreting and Discussing

Use your chart to help you answer the original question: 'Is there a relationship between height and foot length?' Explain your answer, with reasons, below.
✎
What do we mean by the word '**correlation**'? Can this help you in describing your work?
✎
Write down what you could do next to find more statistics or evidence to support your answer? How could you use these ideas to further analyse the data?
✎