

Name: _____

(4.4) Conducting a Survey to Collect Two Variable Data**Assignment:** Collect and analyze data about your own research topic.**Group:** 2-3 people**1. Choosing a topic**

Choose a topic that relates two variables. Both variables must be quantitative (measurable). Here are some examples:

- The number of minutes per day students spend talking to friends on the phone and the number of minutes per day they spend on homework.
- The number of hours per week people spend using a computer and how physically fit they are on a scale of 1 to 10.
- A driver's age and how many kilometres he or she drives in a typical week.
- The number of minutes people spend listening to music per day and how happy they feel on a scale of 1 to 10.

Write your research question in this format:

Is there a correlation between _____ and _____?
[KU /1]

2. Selecting a sample

To help select a sample, answer these questions.

- *What is the population for your investigation?* [KU /1]
- *What is the size of the population?* [KU /1]
- *What should the size of your sample be? Justify your choice.* [TI /2]
- *What sampling technique will you use to select your sample? Describe how you will apply it to your population.* [App /3]
- *How can you ensure your sample will be representative of the population? Explain.* [TI /2]

3. Designing your questionnaire

Write your survey questions. Make sure they are unbiased. [Com /5]

Have your questionnaire approved by your teacher before continuing.

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As you begin writing, ask yourself these questions:

- Will you conduct your survey by interviewing respondents and recording their answers, or by handing out forms for respondents to complete privately? [KU /1]

- Do you want to include background information about age, gender, or grade on your survey? [KU /1]

- Based on your answers to these questions, decide how you will conduct your survey (written or interview). Explain why you chose this method. [TI /2]

4. Collecting your data

Collect your data using the sampling technique you described in step 2.

5. Organizing your data

Organize your data in a table using Fathom. [App /2]

6. Drawing a line of best fit

- Create a scatter plot. [App /2]
- Construct a line of best fit. [App /1]
- Determine the equation of the line of best fit. [App /1]
- Does there appear to be a correlation? Justify your answer. [Com /2]

7. Analyzing your scatter plot and drawing a conclusion

- Write a conclusion that summarizes your results and answers your research question. [Com /2]

8. Extending your investigation

- How would you change your investigation, knowing what you know now? Explain thoroughly! [TI /3]

Knowledge/Understanding	/5	
Thinking/Inquiry	/9	
Application	/9	/32
Communication	/9	