

Scientist Videos: Designing Your Own Study

Name: _____

My scientist: _____

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Developing a Testable Question

- What is the scientist curious about?
- What is the scientist's research question?

Your Study

- What are you interested in or curious about?
- What experiences have you had with that topic or problem?
- Given your topic or problem, what else do you need to learn about or research?

How to Develop a Testable Question

- Identify your curiosity.
- Use your experience to identify problems.
- Ask specific questions about those problems.
- Read and gather information about your questions.

My Research Question:

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Planning to Test Your Question

- What variables does the scientist want to measure?
- What steps does the scientist take to set up the study?

Your Study

- What variables impact your research question? Which variables will you measure?
- How will you measure the variable(s)? (What tools will you use? Where will you conduct your study?)
- What data will you record?

Planning to Test Your Question

- Read about your topic from trustworthy sources.
- Learn how others study your topic.
- Identify and learn more about important variables.
- Develop a plan for collecting and analyzing your data.

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Analyzing and Understanding Your Data

- What observations did the scientist make?
- How did the scientist display their data?

Your Study

- How will you record your observations during the study?
- Who is your audience? In other words, who will you be sharing your study results with?
- How can you present your data so that it will be easy for your audience to understand?

How to Analyze and Understand Your Data

- Use established methods and tools.
- Capture data as images and other formats.
- Create visuals and figures of your data.
- Look for patterns or differences in your data.

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Explaining It All

- What did the scientist learn from the study?
- What are the next steps for the scientist now that the study is complete?

Your Study

- How might your results be important?
- What might you or others do as a result of what you learn?
- What new questions do you think you might have about your topic after completing this study?

Explaining It All

- Interpret your data objectively.
- Compare your results to other studies.
- Consider the limitations of your study.
- Use pictures and visuals to help explain your results.

What is the best or most helpful advice the scientist shared?