

STEM Fair Project Student Outline

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Question or Problem

Think of a question you would like to answer. This should be a measurable questions – one that cannot be answered “yes” or “no.”

You can also identify a problem where you can find a solution. This could be an invention.

*Student packets and presentations may look different for inventions, as some pieces are difficult to graph. However students should be testing their invention and collecting data on that.

Background Knowledge

Research information regarding your topic. Remember to give credit to the sources for their information by including the name, title, and author of the source.

Variables

What will I change? What solution do I have?

What will I measure or observe?

Create a testable question:

If I change _____ then what happens to _____?

Predictions

Hypothesis

Create an If...Then...Because... Statement using variables and research.

Materials

This should be a very detailed list of materials including amounts, brand names, etc...

Procedure

These are step-by-step instructions. All procedures should begin with “Gather materials.”

Also, remember to conduct 5 trials. Students may want to say “Repeat steps 2-5” for 5 trials.

Data Collection

Data collection could include pictures, notes, observations, tables, measurements and more.

Data collection could take up multiple slides and **should include a graph.**

Come back to your testable question and fill in results:

When I changed _____, what happened to_____?

Conclusion

Answer your testable question and determine if your hypothesis was correct.

Use the questions on page 14 in your packet as a guide and build on those.

Abstract

This is a summary of your project. In a paragraph or two, include information regarding your question, hypothesis, procedure, data and conclusion.