

Statement of Problem or Purpose

From the GSDSEF Packet (page 17)

Here is the sample provided by the GSDSEF. I like their format and would also like to add a question at the end of it to identify your project and its variables. Please format your "Statement of Problem or Purpose" like the following:

First, write a single sentence statement about the reason you are choosing your project.

Second, write a sentence that identifies the purpose of your project.

Third, skip a line and write the question you plan on investigating. Be sure to identify both the manipulated (MV) and responding variables (RV) in the question.



The question that you select for your science fair project is the cornerstone of your work. The research you have done and the experiment you will be conducting all revolve around finding an answer to the question you are posing. A scientific question can be worded in a variety of ways but must include both the manipulated and responding variable in the question.

Your experiment should measure (RV) changes to the important factor you will change on purpose (MV). The RV should explain what you are measuring and identify a measurable quantity such as a count, percentage, length, width, mass, weight, volume, quality, voltage, velocity, energy, time, etc. Some measurements are simply the presence or absence of something.

Example:

Candles can offer a great source of light and at one point you may need a candle to provide light for an extended period of time. For this reason I would like to investigate which type of candle can burn for the longest period of time.

If I change the type of wax a candle is made from, how will the length of time the candle burns be affected?

Statement of Problem or Purpose

This is where you state what "intrigued" you about your topic, why you are so "passionate" about it. State the problem for which you want to find an answer.

Example:

"Half of all the teenagers between the ages of 13 and 18 in our country use a skateboard on a daily basis! The purpose of this project is to see if there is a way to make them safer."

OR

"Many societies use sun dried adobe bricks made of clay or dirt for building houses because it is a cheap and available material. The purpose of this project is to see if there is a way to make them strong and long lasting."

Hypothesis

From the GSDSEF Packet (page 18)

Hypothesis

NOW, based on your review of the literature about your topic, the research paper you have written and the problem you have identified, you are ready to ask a question about your topic and to make an “educated guess” or “prediction” as to what the answer/outcome will be.

This is called your hypothesis and it goes here!

Examples:

“Based on my research on skateboard wheels I believe that Brand X wheels will enable a skateboard to stop faster than Brands A, B, C, D, E, because they have the widest tread”.

OR

“Based on my research on adobe building bricks, I believe that adding various binders, such as straw, hay, wood shavings, chicken wire, crushed rock or cement will strengthen them in measurable ways and this information will help when choosing the best binder.”

This is where you make your “educated prediction” that reflects your newly discovered background knowledge about your topic (Review of Literature Research Paper).

Your hypothesis should be stated in the “**IF, THEN, BECAUSE**” format and really explain **WHY** you think what you think will happen. Your research should be the basis of your “**because**” statement.

The example above is basically what I am looking for but I would like you to organize your hypothesis using the “**IF, THEN, BECAUSE**” format. Here is an example that follows the previous candle example on the front of this paper.

Example:

If I change the type of wax that the candle is made from, then the type of candle wax that will burn for the longest period of time will be the Bee’s Wax candle because Bee’s Wax creates the least amount of drip when burning, allowing for the most wax to be available to fuel the flame.

My Variables:
MV: _____

RV: _____

Controlled Variables: _____

If: _____

Then: _____

Because: _____

