

Problem Statement (Question)

The **Problem Statement** is a testable question. It cannot be answered yes or no, nor does it contain the word “best” or a form of the word “best”. The answer to the Problem Statement has measurable results which can be graphed. If the answer to the question is known without experimentation, because it is quite obvious, a new Problem Statement (question) is needed.

Some questions to think about when preparing the **Problem Statement**:

- Is it about animals? Yes? Special permission is needed to work with animals.
- Are the materials needed easily attainable? No? You need a new problem or a mentor to help.
- Is the answer to the Problem Statement a “yes or no”? Yes? Rephrase the question.
- Do you already know the answer to the Problem Statement? Yes? Choose a new problem.
- Is the word “best” or a form of the word “best” in the Problem Statement? Yes? Rephrase the question.

Examples of **Problem Statements**:

Does the height of an incline affect the speed of an object?

Does the diameter of a disc affect its speed down an incline?

Does the height of a bean plant determine how many beans the plant will produce?

How does the number of breaths affect the distance traveled by a rocket balloon?

Once a **Problem Statement** (testable question) has been thoroughly researched, the experimenter uses this knowledge and perhaps even prior knowledge to predict what will happen in the experiment. This is called the **Hypothesis**.

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