

Don't Do This !

Many first time science fair participants get confused about the distinction between a demonstration and a science fair project.

While demonstrations and models can help you learn many important concepts, a science fair project requires that a student do an experiment following the scientific method. Here are some examples of questions that do not require an experiment. These example questions can be answered by reading a book or making a model. Nothing was changed. Nothing was measured.

1. Can I grow bread mold? This can be shown (demonstrated) by a simple demonstration.
2. Do plants need light to grow? This question can be answered by a simple "yes" or "no" and a demonstration.
3. How does a battery work? This question can be answered by a model or demonstration.

Do not choose these kinds of questions. Here are examples of how you can turn these demonstrations into experiments. Remember, the judges do not want to see a demonstration.

YES ! Do This !

1. What is the effect of different temperatures on growing bread mold?

Manipulated Variable: Temperature

Controls: Light, moisture, kind of bread, location of sample

Measurements: Amount of mold

2. Under what kind of light do plants grow best (grow lights, fluorescent light, or sunlight)?

Manipulated Variable: Kind of light

Controls: Kind of plant, location, moisture, kind of soil, size of pot

Measurements: Plant Height

3. How does temperature affect the life of a battery

Manipulated Variable: Temperature

Controls: Kind and size of battery, type of flashlight, time battery will be kept at a certain temperature

Measurements: Length of

time the battery will operate the same flashlight bulb