

What to Include in Your Science Experiment

A control unless you are doing product performance comparison

One variable – Quality you are going to change

Three test groups each having one difference from the control.

Run a minimum of 10 trials on each test group and the control group

Write a hypothesis tell what which of your groups will have the best end result and which will have the worst.

All materials used must be mentioned in the procedure. All qualities that are measurable must be measured including number of stirs per minute, temperature of the room where the experiment is conducted, etc.

All measurements must be made in the System of International measure (metric system). NO CUPS, TEASPOONS, TABLESPOONS, OUNCES, POUNDS... Borrow equipment from the lab to be able to measure in metric grams, liters or meters. If you use a solid, like laundry powder, bring it or into school along with the measuring tool you usually use at home. You can measure the amount listed on the product label, then weigh it on a balance to get its measurement in grams.

Mention all safety precautions that must be taken to keep yourself safe while performing the experiment.

Photos of the initial set-up and you doing key parts of the experiment must be taken and turned in with the lab report. **ALL PROJECTS MUST INCLUDE THESE PHOTOS.** Put all your materials on a dark, non-glare (dull) surface (esp. if you are using glass and clear plastic tools or metals). **DO NOT** take individual photos of each piece of equipment. Identify the control, brands used and test groups in the photos. I suggest you make labels by using the computer set to a large font size. Place the labels in front of the material they identify.

Any math calculations, other than averages and totals, must be shown in three steps: formula, filled in formula and answer. These calculations are to be done on the lab paper in a section called Calculations. It should follow the Observation section of the lab report.

All data must be shown!!! The measurement or description of each TRIAL of each group must be included. After all raw data is shown, a chart showing averages should be included.

Convert all times to seconds.

If any company or business allowed you to use their facility, they should be mentioned in the report and a thank you note should be written to the person or people who helped you.

REMEMBER: IF YOU WANT TO PARTICIPATE IN PJAS YOU MUST MEET ALL DEADLINES. PHOTOS MUST BE INCLUDED WITH YOUR REPORT OF YOU MAY NOT PARTICIPATE IN PJAS.