

Name _____

Date _____

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Solving Problems with the Scientific Method

There is nothing mysterious about the scientific method. It is an organized approach to solving problems or answering questions. The scientific method can be applied to any question that is not a matter of opinion or personal belief.

Check this list when proofreading your lab report to make sure that you do not forget parts. Your Rubric is another tool to help assist you in being successful.

1. **Heading** - follow school format
2. **Title of lab** - The first number indicates the unit the second number indicates the lab number in the unit. ex. Lab 3.1: _____ Title
3. **Problem** - this is what you want to find out - **your question**. The manipulated and responding variable are first mentioned here
4. **Hypothesis** - this is what you think the answer is to the problem - an **educated guess or prediction**. State your hypothesis and give an explanation of why you expect these result. State your hypothesis in such a way that you can test it.
5. **Identify the Variables** - a variable is something that can vary or change in a situation. There are three (3) kinds of variables.
 - Independent*
1) **Manipulated variable** - a factor or condition that the scientist purposely changes - also referred to as the independent variable (x axis on a graph)
 - Dependent*
2) **Responding variable** - a factor or condition that may or may not change as a result of changing the manipulated variable - also referred to as the dependent variable (y axis on a graph)
 - 3) **Controlled variable(s)** - a factor or condition that stays the same or remains constant
6. **Materials** - a list of all the materials that you need to complete the experiment
7. **Procedure** - numbered step by step directions of how the lab was done
8. **Observations** - (qualitative and/or quantitative - in the form of a data table)
 - a) **Title** - The title should begin with "**Table**", then a number, then a brief description of what is in the table.
ex. **Table 1:** _____

