

Everything you need to know about the

# BRMS Science Project

The official story:

Following the New Jersey State Core Curriculum Standards, all science projects will follow the **scientific method of inquiry**. This means that all science projects **MUST** develop a *research question* to *test* an *independent variable*. You must develop a *hypothesis* that leads to a *procedure* for testing. Your procedure must produce *measurable* results that can be expressed in *numeric form*. These numbers must be represented on a *chart/table* AND in a *graph*. You must identify a *control* and have a complete list of *constants*. You must *analyze* your results and *draw conclusions*. The project must have a *well-organized display board* and an *oral class presentation*. The science project is more than a model or representation, it is a chance to utilize and integrate important scientific, mathematical, and presentation skills.

## The Bottom Line:

Research Question: What is the effect of \_\_\_\_\_ on \_\_\_\_\_?  
What is the Effect of the Independent Variable on the Dependent Variable?

Independent Variable = what YOU change/are testing

Dependent Variable = what you measure in NUMBERS!!!

Remember – often it's the change in something – not the final amt.  
Be specific – you don't measure growth – you measure height or number of leaves or mass

Hypothesis: I think ..... if .....then.....because.....  
Not deep research – common sense + scientific ideas

Materials: Be SPECIFIC - LIST EXACTLY what and HOW MUCH

Control: what you'll compare your results to to see what happened

Constants: what you'll keep the same to make it a fair test

Procedure: Tell everything that needs to be done and HOW so that someone somewhere else could repeat EXACTLY what you did

Must be numbered + in list form

Don't forget – often you're testing for the change in something so you need to find the start and finish values

You need repeated trials or lots of trials instead of direct repeats.

All work must be done in the **METRIC SYSTEM** of units!!!!!!

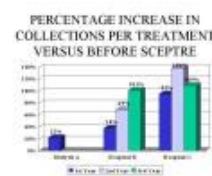
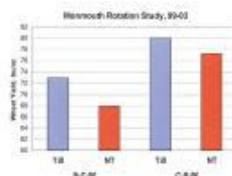
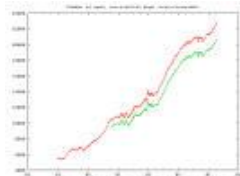
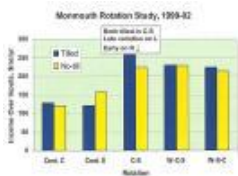
Data Table: ALL of your data must be shown on a table – ex:

Ind variable	Trial 1	Trial 2	Trial 3	Trial 4	Average
Control					

OR

Ind Variable	Before	After	Change
Control			

Graph: visually represent your findings (may be every reading or just averages) to help analyze them. Use the correct type of graph – ex. line graph = change over time



Your Data Table + Graph must be able to stand alone – to be fully titled and labeled – with Metric **units** – so that the reader understands what you did and found.

Conclusion: Tell what you found – and compare to your hypothesis. Do not add WHY you found it – WHAT did you find.

REFLECTION: Here's where you talk about why you think things happened – and what you might do differently next time. Should be longer than your conclusion.

More information at: [keane.chester.site.eboard.com](http://keane.chester.site.eboard.com)