

## What is the Scientific Method?

The Scientific Method is used by researchers to support or disprove a theory. It can be used to answer True-False questions only.

The Scientific Method involves the following steps:

1. **Observation**- You observe something in the material world, using your senses or machines which are basically extensions of those senses.
2. **Question**- You ask a question about what you observe.
3. **Hypothesis**- You predict what you think the answer to your question might be
4. **Method** - You figure out a way to test whether hypothesis is correct. The outcome must be measurable. (quantifiable)
5. **Result**- You do the experiment using the method you came up with and record the results. You repeat the experiment to confirm your results.
6. **Conclusion**- You state whether your prediction was confirmed or not and try to explain your results.

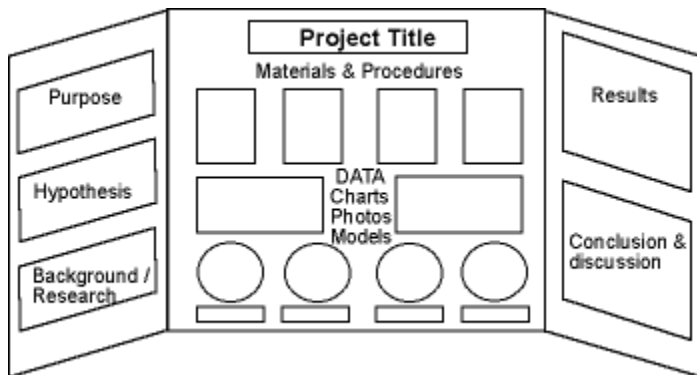
A conclusion will often lead to another question, which can lead to another experiment, which can lead to another conclusion, and on and on. Science is like doing a giant puzzle, with the handicap that you are missing an unknown number of pieces. Each new scientific fact is a piece of the puzzle. Each new piece can change the appearance of entire sections of the picture or fit where one did not expect it to. When scientists have an answer to a question they have asked, they share their results with other scientists in papers, magazine articles, lectures, posters or displays at conventions. This way, new puzzle pieces can be checked out, and the fit tested. You will present your results at the science fair in the form of a display.

Adapted from [http://sciencefairproject.virtualave.net/scientific\\_method.htm](http://sciencefairproject.virtualave.net/scientific_method.htm)

## Presentation Format for Grades 3-6 Science Experiments

Y o u r d i s p l a y b o a r d n e e d s  
t o i n c l u d e :

- Title
- Question / purpose
- Hypothesis
- Review of literature
- Materials list
- Procedure
- Data chart(s)& graph(s)
- Discussion of results
- Conclusion



From: [http://www.sciencebuddies.org/mentoring/project\\_display\\_board.shtml](http://www.sciencebuddies.org/mentoring/project_display_board.shtml)