



Uwchlan Hills Science Fair 2006

Project Planning 1-2-3

done

1. Wonder

What do you want to investigate? Take a look at the list of categories - which one interests you most? What have you always wondered about? Ask questions - why? how? Can you figure out a solution for a problem that faces the world today? Go to the library and look through science fair project idea books, science magazines. Look online. Listen to commercials - are their claims true? Fill in the blank: How does _____ affect _____? Talk to your friends, your teachers, your parents.

2. Research

Now that you have your topic, it's time to find out more about it. It's time to start writing in your lab book. Date each entry, write down what you find out - and where you found the information. Ask your librarian to help you find books and magazines. Google your topic and see what other people have written. Talk to experts.

3. Hypothesize

Look back at your research. Use what you have learned to create a question - decide exactly what you want to find out. Make sure your question is specific and measurable. Now make a prediction, a hypothesis - what do you think will happen? Write it down in your lab book.

4. Design

How can you answer your question? What materials will you need? Is it something you can test at home or do you need to find laboratory space? How will you put your materials together to test your prediction? Your design is like a recipe - list the ingredients, your materials, then write down the steps you'll take. Write your experiment plan in your lab book.

5. Experiment

Run your experiment. Follow your plan. If you can't follow your plan, be sure to write in your lab book what happened to make you revise your plan. Watch what happens and write down what you see - these are your observations. Take measurements - length, weight, temperature, pH, volume - these are your data. Take pictures to document the process.

6. Analyze

Organize your observations and data. How do they fit together? What do they mean? Do you need to draw a graph to illustrate how much change was observed? How does what you found out fit with the research you did? How does it fit with your predictions? Write what you think in your lab book.

7. Conclude

You're almost done. Connect your results to your hypothesis. Was your prediction right? If your results don't support your prediction, why not? Did something go wrong in your experiment? If you did it over again, would you change anything?



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8. Write

It's time to write your abstract. It'll be simple if you've been keeping a lab book. Follow the instructions for abstract writing. Be complete, but be brief.

9. Create

You've done the science - now it's time to create your display. Make a tri-fold poster that presents what you did. Use the pictures you took of the experiment in action. Draw pictures to illustrate the concepts you investigated. Include graphs of your data. Your poster can teach what you learned to the people who go to the science fair.

10. Present

Ta-da! You made it to the science fair. You followed the scientific method: you made a prediction, you tested the prediction, you explained how the results supported your prediction - or challenged it. Organize your thoughts so you can tell people what you did and how you did it, and what it all means. Do you have any ideas about the next experiment you'd like to do? Congratulations, scientist - stay curious!



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Lab book

Date

Action

