

# Key Terms and Items in the Scientific Process

This is a sample that can be used as a guide for your project.

## 1. Project Title

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## 2. Question

Keep your question simple. Do some background research to understand your topic.

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## 3. Hypotheses

A hypothesis is an educated guess. What do you *think* will happen in your experiment? An experiment is testing cause and effect.

If \_\_\_\_\_.

then \_\_\_\_\_.

## 4. Variables

Variables are the things that change in the experiment. An independent variable (e.g. amount of mater) is the cause you are testing and the dependent variable (e.g. height of plant) is the effect created.

List your variables.

Independent variable \_\_\_\_\_ Dependable variable \_\_\_\_\_

Controlled variables are things that remain the same in each experiment. What are the controls in your experiment?

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## 5. Materials

List all things you used in your experiment in a numbered list.

1.

2.

*Etc...*

## 6. Steps – Procedure

List the steps explaining how you did your project. Use diagrams and photos to help describe them.

Again, use numbers.

1.

2.

*Etc...*

7. **Results**

What happened? Take very careful notes during your experiment. Record everything so you can make a chart or graph to analyze the results. Photographs are helpful too.

8. **Conclusion**

In conclusion you will describe your entire project. The following questions will help you write your concluding paragraph(s).

1. What is the answer to your question? (Compare what happened with what you thought would happen).

*In my experiment* \_\_\_\_\_.

2. Was your hypotheses supported in your experiment? It's okay to not support your hypothesis. What did you learn instead?

*My hypothesis (was or was not) supported by my experiment.*

*I thought* \_\_\_\_\_ *would happen and* \_\_\_\_\_.

3. Discuss what happened in your experiment. Include the facts. You can use one of the sentences below or your own words. Describe what happened in several sentences.

*I started off my experiment testing* \_\_\_\_\_.

*When I* \_\_\_\_\_ *(what happened?)* \_\_\_\_\_.

*Each time I* \_\_\_\_\_ *then* \_\_\_\_\_.

*I repeated my experiment* \_\_\_\_\_ *times and got the results* \_\_\_\_\_.

4. Did you have any problems or surprises?

*Some of the problems I had were* \_\_\_\_\_.

*I didn't expect* \_\_\_\_\_.

5. What could you have done to make the experiment work better or different? Give an example of one thing that can be changed.

*Next time I do this experiment I could change* \_\_\_\_\_ *to make*  
\_\_\_\_\_ *happen.*

6. In conclusion...

Why do you think this happened? What did you learn about your topic?

*The reason* \_\_\_\_\_ *(happened) is because,* \_\_\_\_\_.