SCIENTIFIC METHOD

Step 1. Define the Problem

- Make a list of the things that interest you.

1
2
3
4

- Highlight those items that you could somehow measure each day.
- Choose one for your project (make sure there is a purpose to your experiment
- You will set up a control group and an experimental group where you will change only one variable (you will change one thing in this group).
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My project will be about:

The problem I will attempt to solve is (what is the purpose):

***Fill out lab report.**

Step 2. Research

- Look up information about your topic and the variable. (Ex. Plants & Fertilizer)

- Write down information on the Notes form and write all bibliography information on this form
- REMEMBER-3 DIFFERENT SOURCES (Use books, articles, internet, etc.)
- **Step 3. Hypothesis-Your experiment should prove whether or not your hypothesis is true.**

BEFORE you try your experiment, write down what you expect to happen. **Be specific.**
HEIGHT, COLOR, CONDITION, SIZE, TIME,ETC. should be included in your guesses.

I expect

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DON'T FORGET, make a **data table** of the numbers that you are predicting **AND** give **REASONS** for your **GUESSES**.

Step 4. Test and Experiment

- **Measure in metrics (usually the other side of the ruler)**
- This is where you will need a ***number*** and an ***observation*** every day. **Begin a daily diary**. This means measure your experiment and write down the

numbers. If there is no change or there is nothing to measure, you still **mus**t write a ***number*** even if it is "0". Also, write your ***observations*** (what you see) in the observation section.

- **Ask a teacher if you do not understand.**

Step 5. Check Hypothesis-Record your results in full (Make data table, charts/graphs, and diagrams)

- Compare what you thought was going to happen (Hypothesis # 3) to what actually happened (actual measurements#4).
- If these are **not the same**, you will need to **rewrite the hypothesis to make it accurate.**
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Step 6. Conclusion

- Organize and complete your project
- Explain, ***in writing on a separate sheet of paper:***
  1. What you learned from your experiment,
  2. The importance of your results
  3. Write comments about your project and explain how you could have improved your project.

***PARENT or GUARDIAN*: PLEASE READ THESE TWO PAGES WITH YOUR CHILD AND SIGN BELOW. IF YOU DO NOT UNDERSTAND PLEASE DO NOT HESITATE TO CALL.**

***Parent signature:_____**

***Student signature:_____**