SCIENTIFIC METHOD “CHEAT SHEET”

1. **Problem** *(What do you wonder about?)*
   - State the question(s) the experiment is trying to solve.

2. **Background Research** *(What do you already know?)*
   - Gather information about the problem before the experiment. This may also be your common sense about the topic.

3. **Hypothesis** *(What do you predict will happen?)*
   - Predict what will happen in the experiment.
   - Identify your different types of variables.
   
   “If I ________________, then I predict ________________ will happen”

   **Notes/Thoughts before proceeding**
   - Variables? Possible setbacks? Alternative methods (if failed)?

   - **INDEPENDENT** variable (the only thing you change):
   - **DEPENDENT** variable (what you are measuring or looking for):
   - **CONTROL** (or **CONSTANT**) variables (things you keep the same, other than the independent):

4. **Experiment** *(What supplies do you need?)...*(What steps will you take?)*
   - Materials—List supplies and equipment used to conduct experiment.
   - Procedure—Describe the step-by-step process on how the experiment was performed.
   - Organize an appropriate data table and make sure you do an odd number of trials.

5. **Results** *(What happened in your experiment?)*
   - Record and graph quantitative data (numbers).
   - Report qualitative data in a detailed way (observations)

6. **Conclusion** *(What did you learn about your prediction?)...*(What new questions do you have?)*
   - Summarize results.
   - State if hypothesis was supported or not.
   - Suggest improvements to the experiment.