

5th Grade Scientist _____

Choosing and Researching My Project

Investigation Question:

Reason we chose this question:

Answer the following to validate whether your question will work for this assignment: (If you answered with any “NO’s”, rethink your question until you choose ALL “YES” responses to the questions below.)

- | | | | |
|---|-----|-----|----|
| <input type="radio"/> Is there a specific answer? | YES | NO | |
| <input type="radio"/> Do I know how to find the answer? | YES | NO | |
| <input type="radio"/> Do I have enough time? | YES | NO | |
| <input type="radio"/> Can I get the materials we need? | YES | NO | |
| <input type="radio"/> Is it safe? | YES | NO | |
| <input type="radio"/> Is it ethical? (Good purpose) | | YES | NO |
| <input type="radio"/> Is my question related to <i>States of Matter</i> ? | YES | NO | |
| <input type="radio"/> Is it an original idea? | | YES | NO |
| <input type="radio"/> Am I truly interested in this question? | YES | NO | |

My Prediction: (What I PREDICT will happen and WHY I think this will happen)

List the *controlled variables* for the investigation:



List the *experimental or manipulated variable* for the investigation:



My Plan. Be sure to include detailed scientific and mathematical procedures that would allow another person to easily repeat your experiment.

- Step 1: _____

- Step 2: _____

- Step 3: _____

- Step 4: _____

- Step 5: _____

- Step 6: _____

- Step 7: _____

- Step 8: _____

- Step 9: _____

- Step 10: _____



Have another scientist review your procedure before you continue your investigation.

- Ready to Go! Excellent detail. We can understand and follow these steps.
- Almost Ready! Add more detail to....

Another 5th grade scientist's signature _____



Have a teacher review your procedure before you continue your investigation.

Teacher's or Mentor's signature: _____

- Ready to Go! Excellent detail. I can understand and follow these steps.
- You're making progress! Consider...

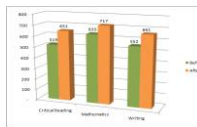


Materials Needed:

Submit a list of requested materials that you need to borrow from the teacher. **BE SPECIFIC** (include measurement tools, quantities, size, color, etc... when requesting materials for your investigation). (Ex. 4 T. sugar; Three 11” x 18” sheets of orange construction paper....).

NOTE: You will be responsible for providing unavailable materials. If you are not able to provide the other materials due to cost and/or availability you should reconsider your question and investigation.

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____



Gather Quantitative Data

- Collect and record measurable data on the following lined pages.
- Create graphs or tables as needed to display your data in an easy-to-read format.
- Use metric measurements whenever possible.
- Consider the following questions:
 - *What will you count or measure in your experiment?*
 - *How will you collect and present your data and scientific observations? (Ex. chart, journal, graph, etc...)*
 - *What type of graph would work best to display your data? (bar, line, pie?)*



Gather Qualitative Data

- Take photos, draw pictures, and /or write detailed descriptions of your results.



It's time to Conduct Your Investigation

Understand Your Data



Write Your Conclusion



- Come to a conclusion or a reasonable explanation based on your data. Refer back to your hypothesis. Be sure to include your Opinion, Evidence, and Scientific Reasoning.
- Write OR type your responses using complete sentences.
- Consider: *What did you learn? Was your hypothesis correct? Why or why not?*

Scientific Opinion or Claim Based Upon Evidence:

Evidence:

Scientific Reasoning to Support Your Claim:
