

Travis Heights Elementary Science Fair

Experiment Criteria

Title: Catchy and related to the experiment; oftentimes, this is created at the end of the process.

Problem Statement: What question is the experiment going to answer? This must be a testable question with measurable results.

Definitions: Explain the meaning of any special words that will be used in the experiment. What words relate to the scientific content of your topic? (I.e. A float/sink experiment would be about the scientific concept of buoyancy, which could also relate to density)

Background Information: What information was gathered about the topic from books, the internet and/or experts in the field? Again, focus on the scientific content.

Hypothesis: State a prediction of the results of the experiment. Base this prediction on a rationale. “I think.... because.....”

Materials: A list of all items needed to perform the experiment.

Procedure: A list (often numbered) of steps used to conduct the experiment. This list should be detailed enough that the experiment could be duplicated.

Results: What happened? Provide a graph, chart or table to share the results of the experiment.

Conclusion: What is the answer to the problem statement? Interpret the results. What do they mean? What other questions are there now about the topic? Was your hypothesis correct? (Note: Most scientists’ hypothesis aren’t correct, and they often learn more from these experiments)

References: List all books (title and author), websites (URL addresses, **NOT** search engines, such as Google, Yahoo, etc.), articles (magazine and article name) and people who provided any information for your experiment, especially definitions and background information.

Acknowledgements: List all of the people who helped complete this project. All photos must acknowledge the photographer, even if that is the student.

***Variable:** Judges will also be looking for there to be **only one** independent variable. This is what you are testing. Everything else should be exactly the same in your experiment trials, except this variable.

****Bonus:** Real scientists conduct multiple trials and record detailed observations in journals.

Difference between an Experiment and an Exhibit: Experiments follow the scientific method, ask a testable question, introduce a variable, and test the question with measurable results. Exhibits are detailed explanations of how/why something works using pictures, diagrams and/or models.

Play by the Rules:

Projects should be submitted on a trifold board with photographs/drawings and graphs/tables of the process. Journals with carefully recorded observations are highly encouraged.

Projects may not involve any of the following:

- Firearms, explosives or discharge air pressure canisters.

- Growing of bacteria or mold of ANY TYPE!
- Cause pain or suffering, sickness or death of any animal – no matter how small.
- Any activity or substance that presents a danger to the student or the environment.

Items **NOT** allowed on display in the fair (but may be okay in classroom; check with your child's homeroom teacher):

- Organisms; living, dead or preserved (plant or animal)
- Human/animal parts or body fluids
- Liquids – including water
- Sharp items
- Food items (human or animal)
- Glass or glass objects
- Dirt, soil, gravel, rocks, sand, etc.
- Photographs or pictures of animals or people in surgical techniques or dissections.
- Open cell batteries

Questions? Ask your child's homeroom teacher or email me at tonya.penney@austinisd.org

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