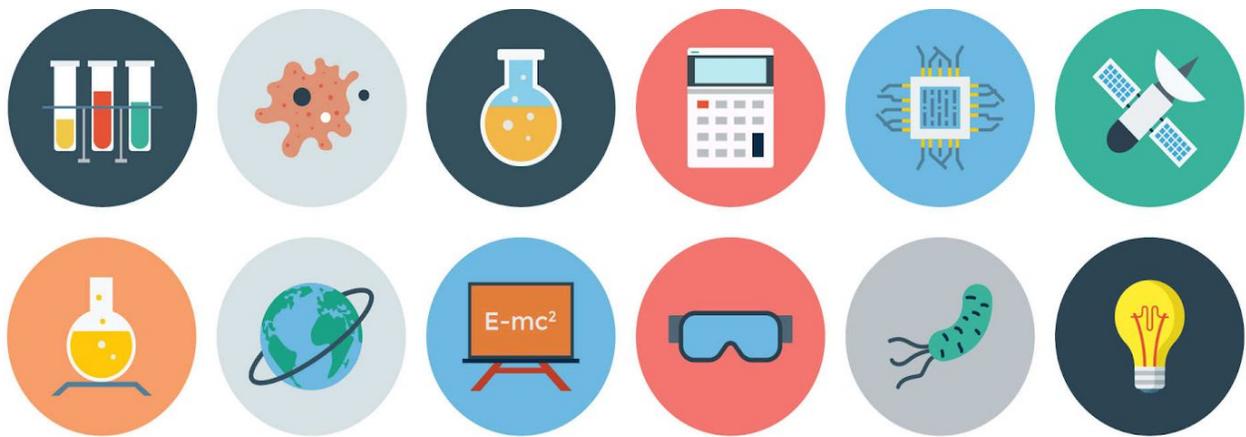


Brazoria County Science Fair



Observations and Investigations
Helpful Hints

PreK - 3rd Grade

Observations & Investigations

Students in PreK - 3rd grade can submit an entry for an observation or investigation.

Observations/Investigations vs. Experiments

The first key to engaging students in doing real science is to understand the difference between a science demonstration and a hands-on science experiment. Demonstrations are usually performed by the teacher and are typically used to illustrate a science concept.

Science experiments, on the other hand, give participants the opportunity to pose their own “what if...?” questions, which inevitably lead to controlling a variable - changing some aspect of the procedure or the materials used to perform the experiment. Students in PreK - 2nd grade can submit an experiment entry if they will be testing multiple variables.

If the students project does not change variables and is only performing a test one way, then their project would be in the category Observation/Investigations.

Here are some differences to help understand the difference between an observation/investigation verses an experiment

Observation/Investigation	Experiment
Will a paper towel absorb water?	Which paper towel absorbs water the best?
Can plants grow in sand?	In which soil do plants grow

	best?
What happens when Mentos are dropped in soda?	Which type of soda creates the highest geyser when you add Mentos?
Does sunscreen protect your skin?	Which sunscreen protects your skin the best?

Criteria for judging Observations & Investigations

Observations and Investigations can still follow the scientific method, minus the variables.

Display

- Appears age appropriate
- Demonstrates age appropriate skills

Required Components

- Pictures drawn or photos taken
- Measuring tools displayed
- List of questions
- List of answers
- Communication about what was learned

Problem/Purpose of Project

- Stated and age-appropriate

Measuring Tools

- Used in pictures/project showing creativity
- Used appropriately

Questions

- Show originality and thought
- Aligns with problem and project

Answers

- Shows thought and degree of accuracy
- Creative thinking observed

Communication of What Was Learned

- On target as to what should have been learned
- Appropriate for problem/project

Safety

- Safety precautions were listed
- Evidence that safety was a part of the project