Science and Engineering Fair

Turner Elementary

What is the Science and Engineering Fair?

Students form a problem or question and follow the Scientific Method to find their answer. They display all of their findings in a presentation.

How do I find a good question to test?

Steve Spangler

What's Next? Research and Hypothesis

- You now have to research your topic so that you can form your hypothesis. A hypothesis is an educated guess to your question BEFORE you perform your experiment.

- An "If, then" statement:

- "If I (do this) then (this is what will happen)"

- **REMEMBER**, write down all of the sources you used to research so that you can put them in your bibliography (a list of sources used during research.)

Mrs. Justin will help with this.

Now for the plan! Materials and Procedures

- Now that we have researched, we can design our experiment. Remember, when we plan it, we make a DETAILED list of **materials and procedures**, just like a recipe. ANYONE one should be able to duplicate your experiment from reading your plan.

Identify Variables

- **Independent**: What are you changing or manipulating in the experiment?

- **Dependent**: What are you measuring?

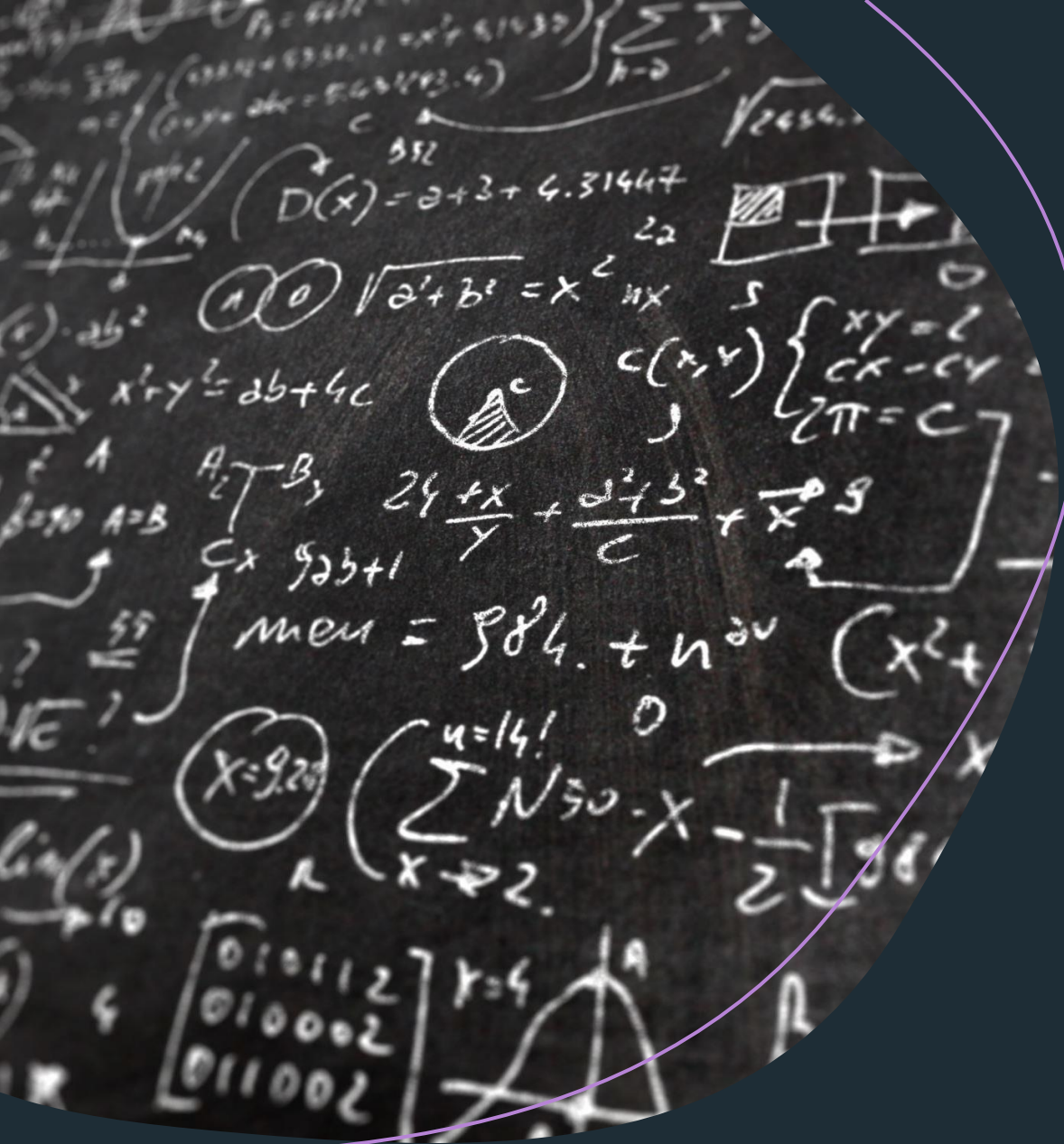- **Controlled**: What stays the same? (can be more than one)

EX: Do different soils have an effect on the growth of radishes?

Independent Dependent Controlled

Now for the exciting part!
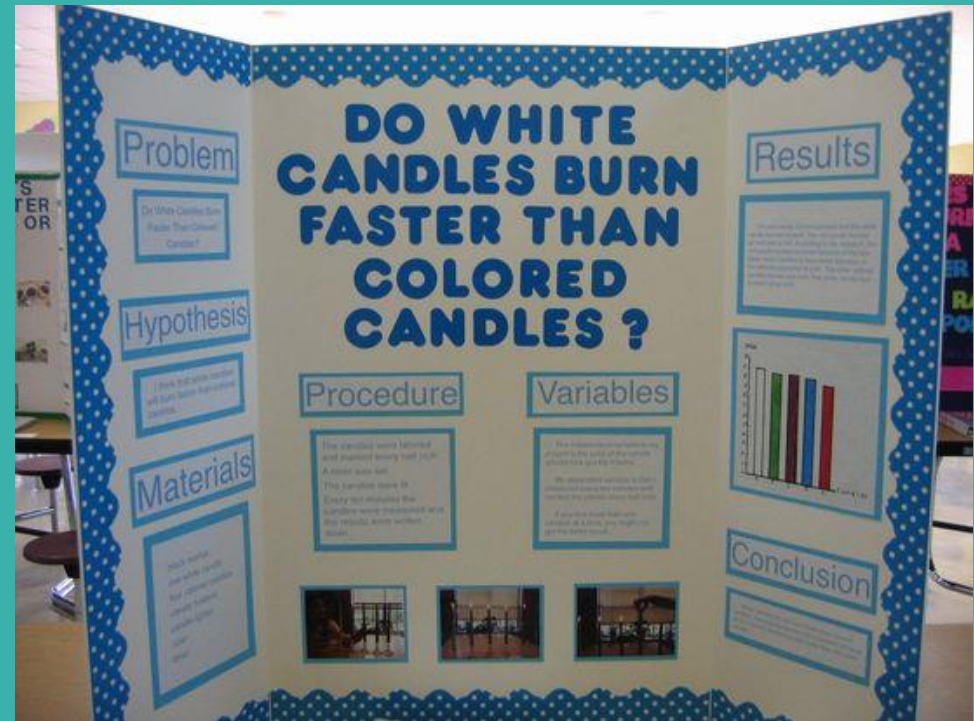# Perform Experiment and collect data

- You want to remember to collect data daily if it is an experiment that takes time such as plant growth

- If not create a chart to collect your data

- REMEMBER: You must have at least 3 trials for each variable you are testing!

Almost done!! WOOHOO… Results and Conclusion

- **Results** will consist of a paragraph that has all of your measurements and final outcome. High/ low, most/ least, averages etc.

- **Conclusion** is two paragraphs that sum up the entire project. Some suggestions would be: "My hypothesis was or was not supported because_____" "I learned_____" I can relate this to real world because_____" If I could do this again I would _____"

Now the fun part The Board for presentation

Great Ideas

Any
Questions?