

# Science Inquiry Project 2013



Student Name: \_\_\_\_\_

## How to Choose a Science Project?

The first unit of study at DCMS is the scientific method. A science fair project gives the student the opportunity to participate in the scientific process and gain a better understanding of the scientific method. As a part of the assessment of this unit every student is required to complete a science project. Students who do well will be eligible to move on to the DCMS science fair and possibly a regional science fair which gives them a great opportunity to share their hard work and expertise with others.

**Where do you start?** Narrowing a topic down is sometimes challenging. The Internet is an excellent source of ideas and information. Choose a topic that interest you and decide how you can do an experiment that deals with this topic. Questioning is an important part of scientific creativity. Ask questions that you are truly interested in finding an answer to, not just one to get the project done. This will guide you to a much better experience with your project and result in enhanced learning.

**Reminder:** A science project IS NOT a book report, a demonstration or simply building a model! You may not experiment on a volcano. Building a model of one or reporting on one is not a science fair project either.

### Ideas that may spark an interest in a topic

The following is a list of questions/problems that may help you determine a topic for your science project. You are not limited to only these ideas. You may develop an idea on your own as well.

#### Physical Science

- How does the color of an object affect how hot it will get?
- How does the type of chocolate affect the melting rate?
- What is the effect of color on the rate of evaporation of a liquid?
- How does the amount of salt in a container of water affect the height an egg floats?
- How does the weight of a pendulum affect the swing?

#### Consumer Science

- Which rubber bands stretch the farthest?
- What product is most effective at getting the cling out of clothes?
- Which battery lasts the longest?
- Which soap makes the most bubbles?
- Which paper towel is the strongest?
- How does the absorption rate of various paper towels differ?
- Which brand of trash bags are the strongest?
- Which brand of popcorn pops fastest?
- Which type of diaper is most absorbent?

#### Earth Science

- Under what conditions does water evaporate the fastest?

#### Life Science

- What affect does the consumption of caffeine have on the motor skills of a person?

#### Behavioral Science

- How does music influence learning and memory?
- Does hearing or seeing a sequence improve a student's memory of a sequence of letters and numbers?
- How is reaction time in teenagers affected by sounds?
- Does hearing or seeing the instruction for a task affect the accuracy of a student's performance on carrying out the task?

## Science Inquiry Project Timeline

Below you will find the highlights of the science inquiry project. There are checkpoints throughout the investigation that the student will need to have work completed for. Please be mindful of these dates because it is expected that all work is turned in on or before the due date.

**September 9<sup>th</sup>** – Distribution of project materials

**September 16<sup>th</sup>** – Due date for Determination of Topic and Testable Question. Submit information in Google forms (The link can be found on my website under Inquiry - Homework Assignment #2).

**September 23<sup>rd</sup>** – Due date for topic research, identification of variables and hypothesis statement. Students will submit information in Google forms (The link can be found on my website under Inquiry - Homework Assignment #3).

**September 30<sup>th</sup>** – Due date for Experimental Design Document. Students will fill in a template of a word document with required information and submit via email attachment (template can be found on my website under Inquiry Homework Assignment #4).

**October 1<sup>st</sup>** – Experiment! At this time students will complete the experiment that has been proposed and discussed. Following the completion of the experiment a display board will need to be completed and will be used for presentations in class (The rubric and display board guide are on my website under Inquiry – Homework Assignment #5).

**October 11<sup>th</sup>** – Science project is DUE! Bring your presentation board to school.

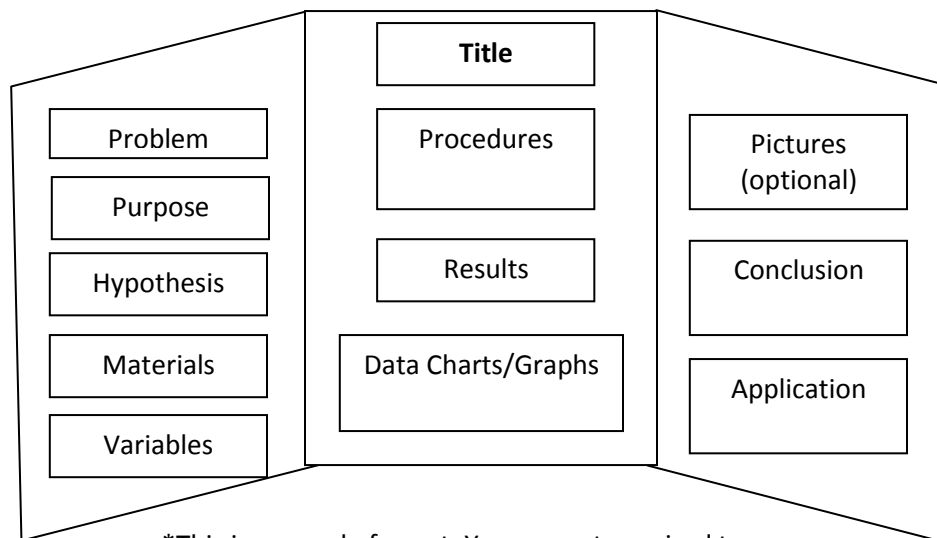
*These dates are subject to change. If a change in a due date is made students will be informed.*

## Presentation Display

Each student will be asked to present their experiment in class. Each presentation is to be accompanied by a visual display. Students may choose to use a poster board, tri-fold display board or a digital format for their presentation. For students that are chosen to move on to the science fair he/she will be required to have a display board no larger than 36"x48".

The display should show all of the hard work that has been put into this project. The students are encouraged to be creative with their display but not to lose focus on the scientific method and the experimental procedure. Please make sure that the display is neat and is organized in the correct scientific method order.

Display boards can be purchased at many local stores including the Dollar Tree, Wal-Mart and Hobby Lobby.



\*This is a sample format. You are not required to use this style but must include all the information above.

Display Check List: all information must be included and in the correct order of the scientific method.

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"><li>○ Title</li><li>○ Problem</li><li>○ Purpose</li><li>○ Hypothesis</li><li>○ Materials</li></ul> | <ul style="list-style-type: none"><li>○ Dependent Variable</li><li>○ Independent Variable</li><li>○ Control Variable</li><li>○ Procedure</li><li>○ Results</li></ul> | <ul style="list-style-type: none"><li>○ Data Charts/Graphs</li><li>○ Conclusion</li><li>○ Application</li><li>○ Data notebook (optional)</li><li>○ Pictures/drawings (optional)</li></ul> |
|--|--|---|

