

# Science Fair News

Volume 1, Issue 2

January 29, 2007

## 5 weeks until the Science Fair!

Dear Parents,

This is the second issue of our science newsletter. If you didn't get a copy of the first newsletter, please visit our bulletin board outside the office to pick up a copy! You will also find copies of worksheets that students can use to keep their projects organized! In last week's newsletter we gave an overview of the things students should do or be doing if they have not chosen a topic or problem to investigate. We also listed ideas that might help students choose a project and included a short description of the types of projects that students could enter. This is the week that students should begin laying the groundwork to complete the project on time.

Finding a project for the science fair might seem like an overwhelming task, but consider that there are really just three basic kinds of science fair projects: an investigation, or experiment, construction of a kit or model, and demonstrating a scientific principle. This week we will be discussing two main types of science fair projects, which typically take the longest amount of time to complete, the experiment and the demonstration. Remember, projects need to be finished on time!

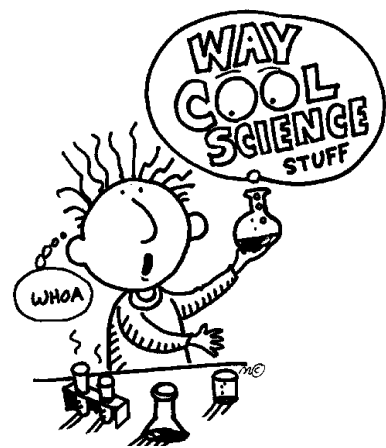
### Tip of the Week

Although the Internet is a handy tool to use, both the school and public libraries have entire sections of books dedicated to science and science fair projects. Check them out!

Remember! The best science fair projects are original and creative!

Thanks, and we hope to see you at the fair!

The Science Fair Committee



### Inside this issue:

Dear Parents	1
Tip of the Week	1
Week 2: Research & Revise	1
The Experiment	2
The Demonstration	2
The Scientific Method	2

### Next issue:

Week 3: Outline and Investigate  
Project: Kit or Model  
Science Notebook (Log) & Note-taking

### Dates to Remember

Denali Science Fair  
March 5-9

State Science Fair  
March 9-11

### Correction

Last week's newsletter said that information about model building would be included as part of this issue. Unfortunately, we have decided to include that information in next week's issue.

### What you should do this week:

#### Research and Revise

Change your topic or problem if necessary

Decide how to set up your investigation or experiment including the procedure and necessary materials

From your initial research, write your hypothesis

Continue your research using the best resources you have found

Interview experts or people knowledgeable on your topic for more information

Denali Science Fair Committee

Sonya Davis  
davis\_sonya@asdk12.org

Melissa Mathis  
mathis\_Melissa@asdk12.org

## Project: Demonstration

Build a model to demonstrate how something works

Demonstrations could explain *how anything works*, from simple machines, light bulbs, the eye, the heart and how gears in a car work (demonstrations could also incorporate a model).

Demonstrations can also explain *why something happens* the way it does. Examples include: *how clouds form, how electricity is conducted, what makes rain and hail, why does the moon have phases, how does food decay, or why is thunder heard after the lightning.*

Depending upon what you are trying to demonstrate, your project might follow the scientific method. For example, if you want to find out if large lung capacity is an advantage during exercise, your project might look like this:

**Hypothesis:** Explain what you think your project will demonstrate. For example: Students with the largest lung capacities can do the most exercise.

### Procedure:

**Research:** Search for information about lungs, their purpose, how they work, and their importance to exercise.

**Experiment:** Test your hypothesis. Use students of similar size and strength, measure their lung capacity, and test their heart rates after the same amount of exercise.

**Results:** List the main points of what you've learned. What did your research and experiments prove?

**Conclusion:** What does all your data add up to? Was your hypothesis correct? What is the value of your project?

### Turn a Demonstration Into An Experiment

You can also turn any demonstration into an experiment. A demonstration is simply showing how something works. For example, you may know that if you put enough salt in water you can float an egg. Make the salt your variable and then experiment with different amounts of salt. Decide on a measurement to add—perhaps  $\frac{1}{2}$  of a teaspoon. Start with plain water as your control, and add  $\frac{1}{2}$  teaspoon and test with an egg. Keep doing this until the egg floats. Remember to take notes on what you did and what happened. You could also try the same procedure with types of salt (popcorn, pickling, etc.) Now you have two variables. Keep the amounts the same and the variable is the type of salt.

## The Scientific Method

If you are conducting an experiment you must use the scientific method! The scientific method is simply a format that you follow as you run the experiment. It must include a question, a hypothesis, an experiment, and a conclusion. There is a worksheet with more information about this process on the science bulletin board located outside the office. Pick up a copy!

## Calendar: Keeping Your Project on Track

This is a schedule of the steps you should follow to complete your project on time. Our science newsletters will also present each step in depth over the next coming weeks. Remember, if you fall behind, or have started late, don't worry, just keep working to meet the deadline!

**(Week 2)** Jan. 29 – Feb. 4

Research and Revise

**(Week 3)** Feb. 5 – 11

Outline and Investigate

**(Week 4)** Feb. 12 – 18

Record and Report

**(Week 5)** Feb. 19 – 25

Define and Refine

**(Week 6)** Feb. 26 – March 4

Finish up!

**March 5**

Pre-Registration

**March 6-7**

Registration, Project Drop-off

\*Wednesday March 7<sup>th</sup> is the absolute last day for projects to be registered for judging! Projects brought in after this date may be put on display, but will not be judged or scored.

### Bibliography

Science Fair Studio, *Janice VanCleave's Science Fair Handbook*, <http://school.discovery.com/sciencefaircentral/scifairstudio/handbook/projecttypes.html#demonstration>, 2006, January 28, 2007.