Science Fair

2018

Participant Packet

Welcome to the 12th Annual South Science Fair!

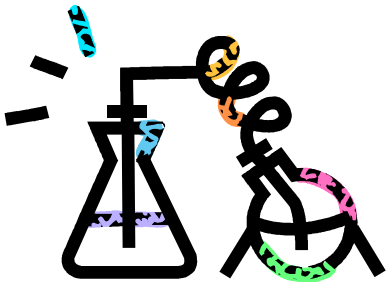
Friday, March 16, 2017

Please review this information packet.

If you have any questions, feel free to contact the Science Fair Committee at pvsouthscifair@gmail.com.

We hope that you will gain a greater understanding of the scientific method, and develop a positive attitude toward science along the way!

Contents



Topic

If you want to change to a new topic, feel free to change it. Just be sure it is an *experiment or investigation* that *answers a question*.

Miss Derstine has Science Fair resource books in the library at school. There are also some interesting web sites listed below. Just be sure that your project is an investigation, not a model.

An investigation seeks to answer a question, uses the scientific method to reach a conclusion, and requires research and planning to carry out. A model does not use the scientific method to answer a question or reach a conclusion (examples: a volcano or solar system). A research project can answer a question, but it doesn't do so through experimentation (examples: a report on penguin habitats or the rain forest).

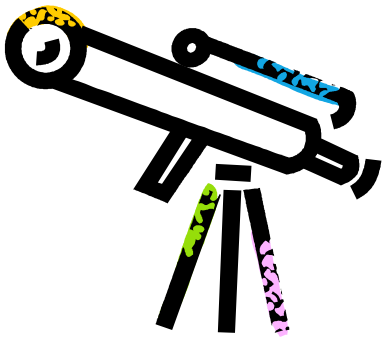
Some Science Fair Web Sites:

Science Fair Central: http://school.discoveryeducation.com/sciencefaircentral/

Internet Public Library: http://www.ipl.org/div/projectguide/

Science Buddies: http://www.sciencebuddies.org/science-fair-projects/project_ideas.shtml

Education.com: http://www.education.com/science-fair/

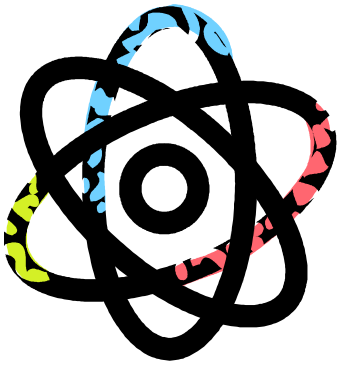


Scientific Method

Once your topic is selected, you will need to follow the steps of the Scientific Method. All steps should be visible on your presentation board or in your electronic presentation, but how you choose to display them is up to you. A sample layout is provided on Page 5. Remember, the judges need to clearly understand your project.

Purpose
Hypothesis
Materials
Procedure
Results/Data/Observations
Discussion & Summary
Acknowledgements & References

Keep in mind your hypothesis isn't always right! Sometimes what we find in an experiment is the opposite of what we expect. That's fine! You should present your exact findings to the judges. This isn't a competition or to prove someone right or wrong. This is all about having fun and helping you learn from experiments.



If your experiment had surprising results, this does not mean your experiment didn't work. It just means that you learned something different than you expected.

Do not quit if your answer is different than you expected. Just share your findings with the judges.

Display

For K, 1st and 2nd grade students, a tri-fold board will be provided for your project so that the presentations are standardized.

The schedule for board distribution will be announced. If you need it earlier, please contact the Science Fair committee.

For 3rd, 4th and 5th grade students, you will be required to present using one of the following electronic presentation choices:
iPad:

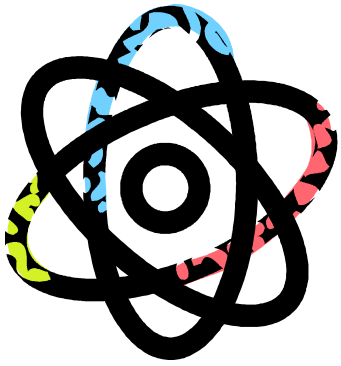
- Explain Everything app (you can sign up for a free 30 day trial)
- iMovie

Chromebook:

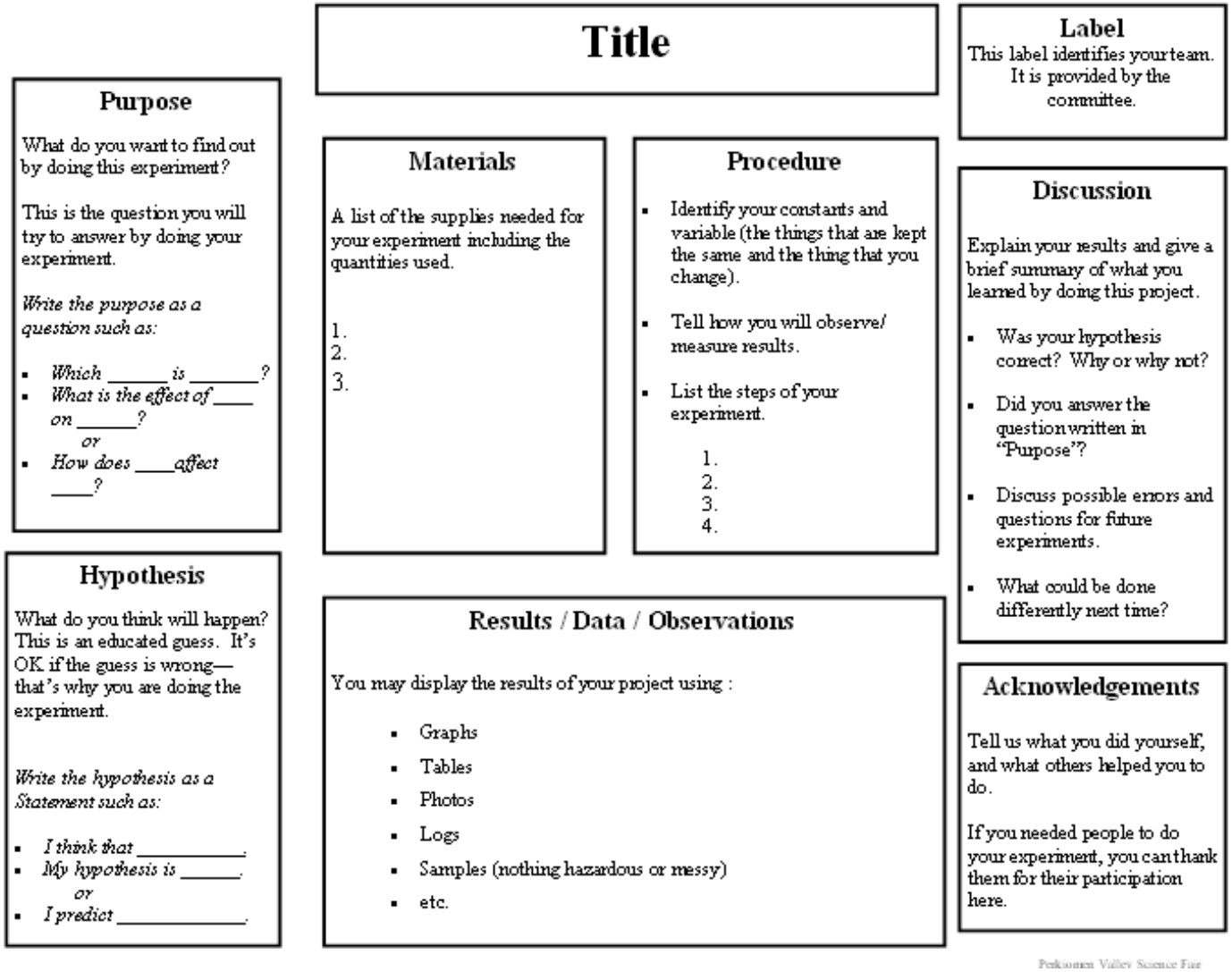
- Prezi (you can create a free basic account at prezi.com)
- Google Slide Presentation
- Create a Google Site for your project

On the day of the Science Fair, students will be provided with a South iPad or Chromebook for their presentations.

All projects should be presented as outlined on the following page. You may also display samples from your experiment in front of your board, iPad or Chromebook. **Be sure to review Page 6. There is a list of prohibited items that will NOT be permitted for display.**



Display


Title
Label
This label identifies your team. It is provided by the committee.
Purpose
What do you want to find out by doing this experiment?
This is the question you will try to answer by doing your experiment.
Write the purpose as a question such as:
Which _____ is _____?
What is the effect of ____ on _____?
or
How does ____affect ____?
Materials
A list of the supplies needed for your experiment including the quantities used.
1.
2.
3.
Procedure
Identify your constants and variable (the things that are kept the same and the thing that you change).
Tell how you will observe/ measure results.
List the steps of your experiment.
1.
2.
3.
4.
Discussion
Explain your results and give a brief summary of what you learned by doing this project.
Was your hypothesis correct? Why or why not?
Did you answer the question written in "Purpose"?
Discuss possible errors and questions for future experiments.
What could be done differently next time?
Hypothesis
What do you think will happen? This is an educated guess. It's OK if the guess is wrong—that's why you are doing the experiment.
Write the hypothesis as a Statement such as:
I think that _____.
My hypothesis is _____.
or
I predict _____.
Results / Data / Observations
You may display the results of your project using :
Graphs
Tables
Photos
Logs
Samples (nothing hazardous or messy)
etc.
Acknowledgements
Tell us what you did yourself, and what others helped you to do.
If you needed people to do your experiment, you can thank them for their participation here.
Perkiomen Valley Science Fair

Prohibited Items

The following items are prohibited *for display* at the South Elementary Science Fair. However, your experiment may use these items. Pictures of these items are welcome, but you cannot bring them to school the day or evening of the fair:

- Glass Containers
- Open liquids (acceptable if in sealed plastic containers)
- Live animals
- Microbial cultures to include mold or fungi, whether living or dead
- Animal or human parts
- Chemicals and/or their empty containers, including caustics, acids, household chemicals, and cleaning fluids
- Flames, open or concealed
- Batteries with open-top cells
- Combustible materials
- Aerosol cans or household solvents
- Poisons, drugs, or any controlled substances
- Any device, equipment, or liquid that could be hazardous to the public
- Sharp items such as knives, needles, or syringes
- Items that can be construed as weapons or weapon look-alikes
- Gases
- Peanuts or peanut butter
- Latex products

Note: If you are unsure whether any display item may be prohibited please contact the Science Fair Committee.

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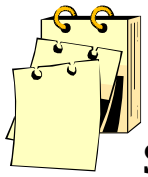

Sample Timeline

This timeline is intended to show students how they may organize themselves when planning for a science fair project. You may choose to take more time or less in any phase.

Deciding on a project Mid-February
What question are you trying to answer?

Design the Experiment By February 23
Decide how you are going to answer the question. What experiment will you do? What controls will you use? What are your variables?

Conduct the Experiment Week of February 26
Do what you planned when you designed the experiment.

Display Board / Choice of Electronic Presentation Method Week of March 5
Display boards are provided to K, 1st & 2nd grade students.
Groups get one board, picked up by the oldest in the group. If a board is needed earlier, please contact the Science Fair Committee – pvsouthscifair@gmail.com

Teacher Confirmation Week of March 5
Participants will be confirmed with their teachers. This is the last opportunity for any additions or deletions to groups or participation. *Parents must contact the Science Fair Committee for a student to be added.*

Building the Presentation February 28 – March 9
Summarize your project on a well-designed display board or by means of the electronic presentation method of your choice. Decide on examples or props to display that are permitted (see prohibited items list).

Practice Questions March 9 – 15
The judges might ask you questions. Practice questions and answers with a friend or relative. See the sample questions on the next page.

The last day to make any changes is March 9th.
This is when the program is finalized.

Judging

Science fair projects will be judged in three main areas:

Scientific Thought
Did the student correctly employ the scientific method by formulating a clear hypothesis, accurately collecting data, and correctly interpreting results to form a logical conclusion?

Scientific Discovery
Did the student approach the project with enthusiasm, creativity, and a quest for knowledge? Did the project spark an interest in further scientific discovery?

Scientific Presentation
Can the student summarize their project both verbally to the judges and physically with a well-designed display?

Students receive recognition for the area in which they excel.

Oral Presentation

The judges may ask you some questions. It is important to speak clearly. Have fun telling them what you did, what happened, and what you learned. Using your display board can make your presentation easier.

This isn't a test. Remember all of the hard work has been done. Relax and have fun! Now is your chance to share the results of your hard work with others.

Here is a list of questions that judges may ask you:

- What question did you want to answer in your experiment?
- What did you think was going to happen before you started your experiment?
- What procedures did you follow to answer your question?
- What results did you obtain?
- What conclusions did you draw?
- Were there any new questions that came up as you worked on your project?
- What would you do differently if you were to do the project again?

Note to Parents: Students will present their projects to the judges during the school day without parents present. The Open House will be Friday evening, February 16th from 6-8pm. A responsible adult should accompany students at the Open House. They are not to be dropped off.