

McPolin Elementary Science Fair

General Information and Invitation

Tuesday, March 2, 2010

Parents:

Your child is invited to take part in an exciting school event – McPolin’s fifth annual science fair on March 2nd. Science fairs offer children experiences in exploring beyond the classroom to understand more about their world as well as foster an appreciation for science.

We would like to invite you to work along with your child as he or she selects, investigates and reports on an appropriate area of science. With your interest and encouragement, your child can develop the skills and attitude he or she needs to make the project a valuable experience. Guide your child, but let the final project reflect your child’s individual effort and design.

A successful science fair project does not have to be expensive, time consuming or complicated. However, it does require some planning and careful thought. Projects become frustrating to students and parents when they are left to the last minute and are overly complex. You can’t rush good science!

To help you and your scientist in-training prepare, we have included guidelines and resources. These guidelines will offer some helpful hints on how to create an effective project.

What is a Science Fair Project?

A science fair project is a presentation of an experiment, a demonstration, a collection of scientific items, or an invention. It shows the efforts of a student's investigation and provides a way for the student to "show-off" what they have learned. Whatever the project, find something your child is interested in and understands. They will need to be able to explain their science project to our judges, so it should be an age appropriate topic and problem. K-4 grade students have a broad choice in what to do for their projects. Registration form for all McPolin students follows.

5th grade students must submit an experiment following the scientific method, which will be explained on another page. 5th graders will compete to participate in the Salt Lake Valley Science and Engineering Fair, and will follow the rules for that fair. McPolin will be sending seven winning projects to the SLVSEF this year, and those winners will receive more information regarding online registration for the Salt Lake Fair after the McPolin Fair. McPolin registration forms are THE SAME for all McPolin students, regardless of grade level. For more information on the Salt Lake Fair, check out <http://slvsef.org/>.

Where Do We Start?

Selecting your topic can be the most difficult part. Libraries have books on science fairs and of course, the web is an easy place to start. Choose your favorite search engine and search for science fair ideas. The best and most comprehensive site we have found is www.sciencebuddies.org. This site guides a student to projects of greatest interest based on a series of questions.

Is Participation Mandatory?

Participation is **VOLUNTARY** for students in grades K-4. Groups up to three students permitted. Participation is **MANDATORY** for students in GRADE 5. Groups up to three students permitted.

(over)

How Do We Do This?

1. Regardless of the project, record what you do in a journal (for the younger kids, an adult can help with this, we don't want this to be an onerous writing assignment). You can refer back to this when preparing your final display. It will also be a part of your final display.
2. Follow the guidelines provided in this packet to complete your project.
3. Prepare a display to present your project at science fair. All science fair projects should be presented on a display unit or backdrop – these are available at most office supply stores. Please make sure your name and grade are included on your project, preferably on the front.
4. Be prepared to discuss your project with a judge and be able to answer these questions:
 - ✓ What scientific information was learned from your project?
 - ✓ What did you do at each step in the scientific method (experiments only)?
 - ✓ What did you learn from your project?
 - ✓ What new questions do you have?
 - ✓ What would you change if you did the experiment again?
5. **Registration forms are due by Friday, February 12. Please make sure forms are legible and complete!**
6. **Science Fair projects are brought to the Music room on MARCH 2 from 7:30 – 8:00am.**
7. **The Science Fair is open to all on March 2 from 5:30-7:00. Students are asked to stay with their projects. All projects go home that evening. All students asked to attend.**
8. **K-4 projects are judged between 5:30 and 7pm by parent volunteers. 5th grade projects are judged during the school day by PCHS science students.**
9. If you have any questions please contact Katie Phillips or Stacey Hamill 649-2789.

Judging

There will be no prizes awarded in the science fair, but each participant will be acknowledged. Parent Volunteers act as judges for K-4 students. Science Fair projects for K-4 students are not competitive. 5th Grade student projects will be judged by PC High School science students. The top 7 finalists will proceed to the district fair in SLC on March 26.

All entries should include the display unit, exhibit materials and journal or written report. Display units should:

1. be sturdy and self-standing, self-standing boards are available at Staples.
2. be no larger than 36" wide/high x 30" deep (5th graders follow the SLV requirements)
3. have a title
4. include any written data such as: purpose or problem, hypothesis (experiments only), materials, procedure, results and conclusion.
5. include any visual aids such as photos, charts, graphs, drawings, diagrams, brochures, etc.
6. be neat, edited and easy to follow.
7. Include NAME, TEACHER, and GRADE on backside of display board

The judges will be looking for:

1. Scientific thought (followed scientific method)
2. Creative ability (unique and original project idea for age)
3. Understanding (understands topic and project)
4. Clarity (nature of problem clearly communicated)
5. Display (visually appealing, emphasis given to important ideas, neatness, spelling)
6. Technical skill (majority of work done by student)

Guidelines For Completing Your Project

Using the Scientific Method

(record each step and all information in your journal)

Keep in mind that these are guidelines only. The steps followed are dependent on the project your child has chosen. There is no one way to do a science fair project. However, if your child has chosen a problem which will be answered by conducting an experiment, then all the steps should be followed.

Purpose, Problem, or Question: What problem does the project intend to solve? The problem or question should be clearly written and easy to understand.

Research or Background Information: Research your topic. Be sure to write down all the information in your journal.

Hypothesis:(experiments only) A hypothesis is a prediction as to what will happen as a result of an experiment and should answer the question posed in the problem. It is your educated guess and it doesn't matter if you are right or wrong, it is what you thought before you performed your experiment.

Experiment or Procedure: These are the steps you took to find the answer to your problem or question. It should include the step by step process you followed, as well as, what you used to complete your project (materials). For experiments be sure to include quantities, weight or any other important information.

For those choosing to do an experiment, show the steps you used to perform your experiment. If possible, experiments should be repeated 3 times in the same environment. Be sure to record variables that will change and those that will not (control variables). Write down any data or observations from your experiment in your journal such as; weight before and after, descriptions, changes, etc.

Analysis or results: What does the information or data you have gathered (either from doing research on your topic, or doing your experiment) mean? You may want to use charts or graphs to display the data from your experiment to make it easier to understand.

Conclusion: The conclusion should answer your original question. Based on the results section, what can you conclude?

If you chose an experiment as a project, some things to think about when writing your conclusion:

1. Was my hypothesis correct? Why or why not?
2. Was there something that happened or didn't happen in your experiment that changed the results?
3. What steps were important?
4. How do the outcomes compare to the hypothesis?
5. What observations during the experiment were expected or unexpected?
6. What does the data mean?
7. What are some other questions you have after doing this experiment?
8. Is there anything that could be changed to make it a better experiment next time?
9. Is there some other experiment you would like to do based on the results of this experiment.

Science Fair at a Glance—Post on your refrigerator!

When: March 2, 2010 from 5:30-7:00pm

Where: McPolin Multi-purpose Room

Who May come: Students, Families and friends are invited to view projects at this time.

Who Participates: K-4 Students' participation is voluntary in the non-competitive fair.

5th grade students are required to participate and will compete for a chance to compete in the Salt Lake Valley District Fair on March 26.

DATES & TIMES

- ✓ FEBRUARY 12, 2010: Registrations due. PLEASE HONOR THIS DATE as the science fair requires a lot of organization. Please make sure the forms are complete and legible—it is very time consuming to track down incomplete forms to the right student.
- ✓ 7:30 – 8:00 am on March 2: Bring projects to the music room. Make sure that the student name, teacher, and grade are written clearly on backside of display board.
- ✓ All projects go home on the evening of March 2.
- ✓ Students are asked stay with their project until they have spoken with a judge (K-4) Students should arrive by 5:30. This is the fun part! Kids get to share their work!
- ✓ 5th Grade students are asked to come and participate in the fair even though their projects have been judged earlier that day. 5th Graders should arrive by 5:30. It means a lot to the visitors to meet the kids and a great time for students to celebrate their work.

Volunteers make this event a success! Please contact Stacey Hamill if you are willing to help at staceyhamill@mac.com It is a lot of fun to get involved and to help keep the fair going! No experience necessary!

Parent Volunteers:

- March 2 at 7:20 am—volunteers needed to check in projects into the music room. 2 Volunteers needed.
- About 6 volunteers needed from about 8:30-10:30 for organizational needs and then the same group is asked to return at about noon to set up projects in the cafeteria. Usually completed by 1:30.
- We are always in need of someone to supervise the projects afterschool until 5.
- Judges need to arrive at 5pm for review of judging procedures and then begin judging at 5:30.
- A couple volunteers are needed to help clean up—including wiping down tables, putting them away, etc.