Science Fair 2012

PARK CITY DAY SCHOOL

Dear Parents:

Park City Day School will hold a Science Fair in the Multi-Purpose Room on **Monday, February 13**. 5th-9th grade students are required to participate in the Fair as part of their science grade. The students in grades 5-9 will be required to follow the steps of the **scientific method** of an experiment for their project. Lower School students in 1st-4thgrades will receive extra credit in their science classes for their participation. We hope you will encourage and support your child in this exciting event.

Attached you will find a brief outline guiding students in choosing a project. We recommend that students do the bulk of the work themselves, but also recognize that they will need your help and encouragement along the way. As long as your student picks a topic that he or she is genuinely interested in, the project will be fun, exciting and more likely to be completed by them in a timely manner rather than by you the night before it is due! Students in each grade may chose to work independently or with a partner. Siblings in 1-4th grades may also work together.

All projects should be brought to school prior to the beginning of school on February 13th for setup. That evening (6:30-7:30pm), we are pleased to have families and friends come and see all the wonderful projects on display at the school. This will not be a judged event.

Please fill out the attached **registration form** indicating your child's project plan as part of this great learning experience. **Registration forms are due by February 6th**. It is alright if you do not know the exact project your child will do by that time, but a general idea of what they are doing and in which category would be helpful.

We hope you will encourage your child's participation in this special event to further their awareness and excitement about the world of science all around us. They will feel a sense of pride in having completed their project, and have a chance to show off their hard work to the other students in the school and to you! If you have any questions or would like to volunteer to help out with this event, please contact us at school. We look forward to seeing your child's project!

Thank you,

Joanne Staral
1-2nd Science

Peggy Fadling
3-6th Science

Jim Zimmermann
7-9th Science

Project & Fair Guidelines

PROJECT GUIDELINES

It is important that the project be **age-appropriate**. Students will have an easier time explaining and understanding the project if it is something in which they are interested, rather than a project chosen by parents. There are many books that can help out at the library or bookstore and the Internet is full of ideas. Visit the following websites:

chemistry projects
exploratorium
all-science-fair-projects
science made simple
discovery education
science buddies
free science fair projects
national geographic
energy projects

1. Projects for Lower School students, grades 1-4, should fit into one of the five categories: invention, experiment, model/demonstration, research, or collection (see the **back side** of this sheet for additional explanation of the categories). This should be a new project for Lower School students not one previously done for a class (science or homeroom). Your display (which may be a display board, a model, your invention, etc.) should be able to stand by itself (nothing can be hung from walls or ceilings, etc.). It should show all steps of the project and be neat and easy to follow. Due to space limitations at the Fair, displays need to be limited in size so that it could fit on your desktop at school.
2. Prepare and practice at home a short, 2-5 minute oral presentation about your project. During the Fair you will tell your classmates and parents about your project in an informal setting.
3. No open flames, caustic chemicals, combustibles, animals, etc. If the home experiment involves a pet, leave your pet at home during the Fair. The oral presentation should be encouraged to be about the experiment/results rather than the pet.
4. We would like to ask to not include the following projects because they have been presented in previous years: volcanoes, potato launchers, hovercrafts, and mentos. It is important to encourage new or different projects to learn from.
5. Electricity is available, but you must let organizers know beforehand, not the morning you are setting up.

PROJECT SET-UP **Monday, February 13: 7:45 - 8:15 AM**

Bring your project to the Multi-Purpose room **before** school starts on the morning of the Science Fair. Each grade will be assigned a table so you'll know exactly where to put your project. Parents are encouraged to assist students in setting up their projects during this time. *Please do not bring in your project until the morning of the Fair, as we have no place to store them.*

VIEWING FOR PARENTS AND FRIENDS **Monday, February 13: 6:30 - 7:30 PM**

This is when family and friends get a chance to see students' projects. Students should plan to stand near their projects from 6:30 to 7:00 pm so that people can ask questions about their projects. The rest of the time is their own to see what everybody else has done!

Projects need to be taken home at the end of the evening, because the Multi-Purpose room must be completely cleared out during this time. When you leave for the evening your project goes with you!

Explanation of Science Fair Categories for Lower School Students (Gr. 1-4)

CATEGORY 1: INVENTION

An invention requires that a student develop a unique way to accomplish a task. Inventions may be practical; they may be something totally new; they may start with something already made and then improved upon; or they may accomplish a simple task through a complicated procedure.

Examples: *Build an air car. Invent a new computer game. Build a feeder that makes it easier to feed a hamster. Invent an easier way to peel potatoes.*

CATEGORY 2: EXPERIMENT

Experimentation is a process used to test the validity of a hypothesis. Students should try to follow the basic scientific model for experimentation:

1. **Question** – What do I want to find out? Write it down.
2. **Hypothesis** – What do I think will happen? (Guess the answer.)
3. **Equipment** – List of materials used.
4. **Procedure** – What will I do to find out the answer? Write a materials and equipment list. Write a step-by-step process you will follow. Measure, observe, record, and then replicate the experiment again under the same circumstances as before.
5. **Observations** – Descriptive observations using your 5 senses. What did you see, hear, feel, taste, smell during your experiment?
6. **Results** – What actually happened? What steps were most important? What does the data mean? Can the information be graphed? Include photos, drawings, tables or charts.
7. **Conclusion** – What did I learn? Did the results confirm or conflict with the hypothesis? Are there any suggestions or new questions to investigate? In what ways was this project important?

Examples*: What will happen to water in a plastic bottle when it is punctured with a pushpin?*
What will happen to a ping-pong ball set on top of a hair dryer when the dryer is turned on?
What will happen to an inflated balloon when it is placed in a refrigerator for a while?

CATEGORY 3: MODEL/DEMONSTRATION

By constructing a model, students can explain or demonstrated scientific principles or show how something works. This category may also incorporate the scientific method described above under the Experiment Category. *We discourage the use of store-bought models for the Science Fair.*

Examples: *Make a model of a telegraph set. Create a model lung. Make a lunar eclipse model. Build a volcano.*

CATEGORY 4: RESEARCH

This type of project primarily involves library or Internet research. Gather as much information about a topic as possible and organize it into a presentation. To choose a topic, check out the library for books full of ideas. Magazines are also great resources.

Examples: *Cheetahs, Flight, Insects, Habitats*

CATEGORY 5: COLLECTION

A collection is a group of similar objects that are displayed in an organized manner. Collections should be accompanied by written material explaining your collection.

Examples: *Show off your rock collection. Display your collection of seashells. Make a collection of dinosaurs. Display a collection of animal tracks.*

PARK CITY
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Science Fair - Lower School Registration Form (Gr. 1-4)

***Due: February 6th**

Student Name: Date:

Parent Name: Phone:

Homeroom Teacher's Name: Grade:

Project Category (Circle One):

Invention Experiment Model/Demonstration Research Collection

Project Title:

Project Description:

____ **Yes, I can volunteer** with morning set up on Feb. 13th (7:45-8:15 AM).

____ **Yes, I can volunteer** with evening clean up on Feb. 13th (7:30-8:00 PM).