

Lake Forest Park PTA Science Fair



Thursday, March 26, 2015
6:30 – 8:30 PM
Multi-purpose Room

Students, start your projects!

Are you interested in Science? Curious about how things work? Now it's your turn to be the Scientist!

Who: All LFP students grades K-6 are encouraged to take part in the Science Fair!

Due: A tri-fold display board that shows how your experiment was conducted and your results. A successful science fair project does not have to be expensive or time consuming. However, it does require some planning. ***Boards can be turned in as early as Tuesday, March 24th but no later than 3 pm on Thursday, March 26th.***

Guidelines: Your invention or experiment must use the Scientific Method (see next page). We encourage you to use scientific vocabulary. Students: be prepared to explain your project to judges who will come by and ask you questions about your exciting work! Most of all have fun learning how to ask questions in a scientific manner!!

Do you need an idea? See the following pages for ideas and questions to get you started. Also, check out our school library or your neighborhood public library for science fair how-to books.

Free Display boards: The Lake Forest Park PTA has purchased cardboard tri-fold display boards for students to use.

Questions? Contact Nikolai Dembrow (ndembrow@gmail.com) or Zin Khaing (zinkhaingster@gmail.com).

YES! I'm doing a Science Fair project.

Student Name: _____ Partner Name (optional): _____

Grade: _____ Teacher: _____

Parent Signature: _____ Date: _____

PLEASE RETURN FORM TO YOUR TEACHER BY **MARCH 12th, 2015**

Once you've returned this form, you can pick up your free display board in the front office.

Lake Forest Park PTA Science Fair Packet

General Rules:

Most of the work on the science fair project will be done at home, outside of school time.

Students: get approval for your project from your parents, and for 5th grade students, you also want to get approval from your teacher.

Parents: remember this is the student's science project! They will need to be able to present their work. The idea is for students to have a meaningful learning experience. Please help them choose a project that fits their age-level and abilities.

Project Ideas:

Here are some easy to do projects (just to get you thinking):

- 1) Does adding salt to water change the time it takes to boil?
- 2) Does fruit really ripen faster in a paper bag? Why?
- 3) What kinds of bags degrade underground fastest: paper, plastic, or compost?

A great site to research projects is "Science Buddies": http://www.sciencebuddies.org/science-fair-projects/project_question.shtml

Judging:

This year we will not be awarding placement ribbons, however volunteers will be coming around during the Science Fair to ask the student scientists to share details regarding their project. Let's impress them! Be sure to be ready to discuss your project to a real scientist. Recognition of participation will be awarded to all students.

SAFETY NOTE:

*The following are **NOT ALLOWED** to be **displayed** at the Science Fair (just show photographs instead):* open flames, flammable chemicals, live animals, preserved animals or their body parts, microbial cultures or fungi, food, needles or other sharp or dangerous objects, drugs, radioactive, toxic, poisonous, corrosive or reactive materials, or open top batteries. You need adult supervision to work with any of these materials!

Scientific Method:

The following list is a brief description of the Scientific Method. If you are a 5th grader, your teacher will teach you the scientific method steps and they are required to be used as part of your science project and display.

Step 1: Ask a Question: Choose a topic or a problem. This should be stated in the form of a question. For example: "Do all objects fall to the ground at the same speed?"

Step 2: Hypothesis: Make a prediction about your question. For example: "All objects fall to the ground at the same speed".

Step 3: Materials: Provide a list of Materials that you used.

Step 4: Procedures: Make a list of what you did.

A) Make logical steps to perform the investigation

B) Keep at least one variable the same (controlled)

C) Only one variable should be changed (manipulated)

D) Keep track of when and how variables are measured or recorded.

E) Repeat the experiment and keep track of how many times you repeat it (if necessary).

Step 5: Data: Organize the data that you are measuring (chart and graph).

Step 6: Conclusion: Explained what happened in your experiments. What were your results? Did the results match your prediction?

Science Fair Vocabulary:

<http://www.edfoundationirc.org/uploads/docs/blocks/44/science-fair-vocabulary.pdf>

1. Conclusion – your opinion about what happened during the experiment; inferences belong in the conclusion; the last step of the scientific method.

2. Controls – things that remain the SAME during the experiment.

3. Data – observations and measurements taken from your experiment – they should be listed in a chart or graph so you can see the results from the data.

4. Dependent variable – also called the responding variable – the change that happens in your experiment because of or as the result of the independent variable being changed.

5. Display – backboard, often three-paneled, on which is attached the title of the experiment, parts of the written report, graphs and charts, pictures, etc. to tell the story of your entire experiment.

6. Hypothesis – an EDUCATED, testable response to the question you have posted as your problem – this is used to guide your entire experiment

7. Independent variable – also called the manipulated variable – the ONE THING you change in your experiment to see what affect it has.

8. Logbook – a notebook (usually a three-ring binder) that you can use to organize your experiment – in contains everything from your experiment; daily notes, doodles, brainstorming, questions, problems, procedures, EVERYTHING.

9. Materials – a list of ALL the supplies you use for your experiment

10. Observations – things you see and witness during your experiment

11. Procedure – a list of the steps you go through to perform your experiment from start to finish – very specifically laid out so someone can redo your experiment.

12. Question – what you want to know about your topic that forms the basis for your hypothesis.

13. Research – any information you gather from different sources (books, the Internet, magazine, articles, interviews of specialists, etc.) which helps you know more about your science project topic.

14. Results – a simple, factual summary of what happened in the experiment.

Display Boards:

For the Student Science Fair, you will need to prepare one display board to show your work to others. Lake Forest Park PTA will give you a free, three-panel cardboard display board to use. Ask your teacher!

How to Make Your Display:

- ❖ Choose a catchy, attention-grabbing title that summarizes your project.
- ❖ The title should be large and easily read from across the room.
- ❖ Organize your information like a newspaper so that your audience can quickly follow your experiment by reading from top to bottom, left to right. Include each Scientific Process step of your project: Questions and/or Purpose, Hypothesis, Variables, Research, etc.
- ❖ The text on your board may be neatly handwritten in pen or printed from a computer and should be large enough to easily read.
- ❖ You can use colored paper behind the white paper to offset the text and make your board brighter and more interesting to look at. Tip: Instead of regular paper, use cover stock or card stock. These heavier papers will wrinkle less when you attach them to your display board, especially if you use a glue stick.
- ❖ Use visuals – photos, drawings, graphs, charts, etc. all make your display more interesting.
- ❖ Don't put text on top of photos or images as that can be very difficult to read.
- ❖ Put your names, grade and classroom teacher on your board.
- ❖ At Science Fair, you may use the space in front of your display board to show objects like equipment or a model, or your project notebook (*see safety rules, above).

