

**SUNSET ELEMENTARY**

**2019 SCIENCE FAIR AND FAMILY ENGINEERING NIGHT**

We are excited you have decided to participate in this year’s Science Fair and Family Engineering Night! In this packet, you will find everything you need to get started with a science fair project– important information, guidelines, ideas, useful websites and helpful books. This packet will help you get your entry ready to bring to school on your due date.

**IMPORTANT INFORMATION**

**DATE:**  **Wednesday, May 22nd from 6:00pm to 7:30 pm (All grades)**

**PROJECTS:**  There are no specific theme requirements - you can enter a project on any science-related topic that interests you. Students can do a project individually, with a partner, or in a group. All projects should be brought to school between 4:00-5:30pm on the afternoon of the fair and be taken home at the end of the night.

**EVENTS:** Similar to last year there will be multiple STEM based family projects available as a part of the evening. These projects are meant to beexperienced as a family and students will need to have an adult with them throughout the night.

**AWARDS:**  Projects are not judged, but each participant receives a special scientist certificate and a ribbon.

**FOOD:**  If you miss dinner or get hungry during the fair – no problem. There will be pizza and drinks for sale. All proceeds will help support the Science Fair and other PTA activities.

**UPDATES:** Will come Sunsetsciencefair@outlook.com. Check your “junk” mail to make sure it does not get filtered out.

**QUESTIONS?**  Contact Heather Bissmeyer at heather.bissmeyer@outlook.com or Lauren Steele at laurenwsteele@gmail.com

**SCIENCE FAIR GUIDELINES FOR ALL GRADES**

Your Science Fair project should be about something that interests you or something that you would like to learn about. It can be simple or complex, plain or colorful. The important thing is that you enjoy the project, have fun working on it, and learn something new.

When planning your Science Fair project, we trust that you will use good judgment. You should not harm any live animals or use hazardous chemicals, explosives or illegal drugs. It’s always a good idea to talk to your parents or teacher about your project and make sure they approve.

**GUIDELINES FOR DISPLAY BOARDS**

**DON’T FORGET YOUR NAME!!!**

A display board that explains the experiment must accompany each project. The display board should be well planned and neatly written or typed. Specifics include:

**MATERIAL:**  Pre-made display boards can save a lot of time and can be purchased at various local stores, including Michael’s and Office Depot. If you are going to make your own display board, use sturdy cardboard or foam core.

**SIZE:** The display board must be no larger than 36” X 48”. It can be smaller.

**ELEMENTS:**  The display board should include your topic, questions, pictures, examples, drawings, results, observations, conclusions and information. Your name, grade and teacher should also be at the top left panel.

**EXAMPLE:**



**GUIDELINES FOR GRADES K-2**

Scientists in grades K-2 can follow a more simplified approach to the scientific method if they wish. Projects for these grade levels can be developed along the five-step method shown below rather than the more rigorous scientific method used for grade levels 3, 4, and 5.

1. **What is the topic/title of my science project?**

1. **What do I want to learn? What information do I want to find out about? Or what does my project demonstrate? (question or problem**)

1. **What did I use? (material, tools, equipment, supplies)**

1. **What did I do? Describe your process or experiment. Or, how did you build your project? (experiment or process)**

1. **What did I learn? What happened? Why did it happen? If you made a model, how or why does it work? (conclusions and results)**

**GUIDELINES FOR GRADES 3-5**

Many teachers require students to participate in the Science Fair. If that is the case with your teacher, please use the guidelines they provide for your project. If your teacher doesn’t give specific guidelines for your project, then we recommend using the scientific method when doing your experiment.

A science experiment is an attempt to answer a question or learn something new. The scientific method makes it easier to organize an experiment and record the results. Scientists, engineers, and doctors use this method when making important discoveries. Here are the steps:

1. **State the topic. (What is the title of my science project?)**

1. **State the question or problem. (What do you want to find out?)**

1. **State the hypothesis. (What you think the answer to your question is)**

1. **Conduct tests, experiments and research. (Learn about your topic and answer your questions. This can be done by experimentation, testing, simulations or reading about your subject.)**
2. **State the materials, tools, equipment and supplies used. (What did you use to do your experiment?)**

1. **State the procedure. (What process or steps did you use?)**

1. **State your observations and results. (What did you see? Record what happened in your experiment.)**

1. **State your conclusions. (Record what you learned from your experiment. Compare the results with your hypothesis.)**

**EXAMPLE SCIENCE FAIR TOPICS**

**Energy Sources**

* Where do we get the electrical energy for our houses?
* How does solar energy work?
* What materials conduct electricity and which ones do not?

**Simple Machines**

* Explain or demonstrate how a wheel and axle, a lever, an inclined plane, or a pulley helps us.
* What makes a plane fly?

**Biological Communities**

* Explain a food chain or life cycle.
* Explain what controls animal populations.
* Explain a pond community, marine community or a forest community.

**Conservation**

* What happens to our water after it goes down the drain?
* How can we conserve electricity?
* How can we conserve gasoline?
* How can we conserve water?

**Pollution**

* What is smog?
* What things pollute the air, land and water?
* How does pollution affect our food supply?
* How can we help reduce pollution?

**Solar System**

* What is our solar system?
* What makes day and night?
* Why does the moon appear to change shape?
* Make a sundial and explain how it works
* What is a star made of?

**Insects, Fish, Frogs, Birds**

* Describe the life cycle of a butterfly or a frog.
* How do birds differ from other animals?

**Body Structure and Function**

* What different kinds of bones and joints do we have?
* How does our heart work?
* How do we breathe?
* Why do we get sick and how does our body get better?

**Human Senses**

* Describe our senses. Create sensory boxes with touch and smell.
* How do we see? Hear? Taste?
* What makes our ears pop when we go up or down?

**Nutrition**

* What kinds of food do our bodies need?
* What parts of plants do we eat?
* How is ice cream made?
* How is food preserved?

**Personal Health and Safety**

* How can we keep healthy?
* What are the main procedures for first aid?
* How is water purified?
* How can smoking, drugs and alcohol be bad for our bodies?

**USEFUL WEBSITES AND BOOKS**

Here are a few websites you might try for more ideas. You can also enter “science fair” in your browser for more sites.

ScienceBuddies.org

ScienceProject.com

All-science-fair-projects.com

Scifair.org

Homeworkspot.com/sciencefair

You can also check out the library or bookstore for good books about science fair projects. Ms. Kline has some in the Sunset Library as well. A few of these are:

* 101 Great Science Fair Experiments by Neil Ardley
* A+ Science Fair Experiments by Janice VanCleave
* The Science Encyclopedia by DK Books
* So You Have to Do a Science Fair Project by Joyce Henderson and Heather Tomasello

**HAVE FUN WITH YOUR PROJECT AND WE’LL SEE YOU AT THE FAIR!**