

# SPRING BROOK ELEMENTARY PTA

Presents

## SCIENCE FAIR 2018-2019

If you make bubbles from cold water, will they be any bigger?

If you sing to your plant, will it grow any faster?

If you fill more air in a soccer ball, can you kick it any higher?

**Find out! Do an experiment!**

All Spring Brook students and their parents are invited to participate in our STEM science fair on Wednesday Oct 24<sup>th</sup>, 2018. In preparation for the STEM fair, each student or group of students from grades K - 5 can develop a project with the help of their parents to present at the fair. Projects involving any hazardous/flammable materials are not allowed. The primary goal of this fun event is to develop a positive attitude towards Science, Technology, Engineering and Math, (STEM).

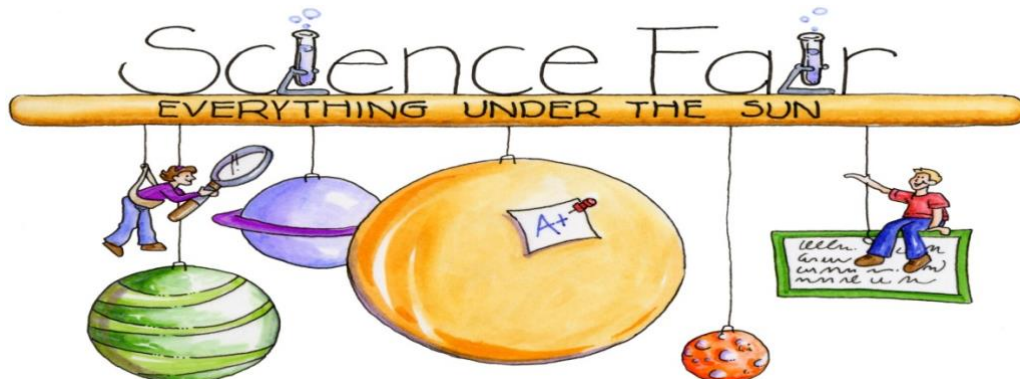
Students must pre-register to participate. This event is limited to the first 100 projects.

**Gymnasium/Multi-Purpose Room**

**Spring Brook Elementary**

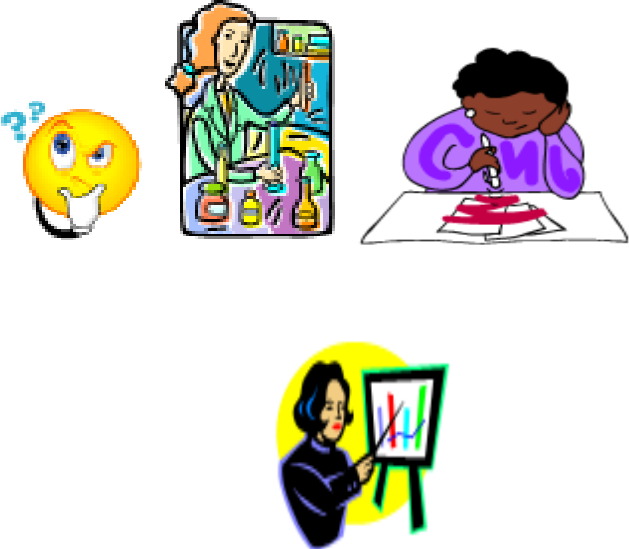
**Wednesday, October 24<sup>th</sup>, 2018**

**From 5:30 PM to 8:00 PM**



## Spring Brook Elementary STEM Fair Project Guidelines

Where do I start? STEM fair provides opportunities for kids to creatively explore an area that interests them—to do science themselves!

<p>Thinking of your STEM fair project can be fun and challenging. First think of an area that interests you or that you are curious about. Think of a problem you would like to solve in that area - form a hypothesis - run your experiment - collect data - form a conclusion.</p>	
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Depending on grade level, we encourage slightly different types of projects. A Display Project is great for K up to 2nd graders. A display project would explain or show an area of science. Students in higher grades are encouraged to ask and hopefully answer questions in their work. Here are examples of how to change a display project into one that asks (and hopefully answers) a question:

Beginner Level	Advanced Level
<ul style="list-style-type: none"> <li>❖ The Five Senses</li> <li>❖ Planets of our Solar System</li> <li>❖ Dinosaurs of the Jurassic</li> <li>❖ Model of the Digestive System</li> <li>❖ Vinegar and Baking Soda Volcano</li> </ul>	<ul style="list-style-type: none"> <li>❖ Which of the five senses is used most?</li> <li>❖ How high is Venus in the night sky?</li> <li>❖ Why did dinosaurs get so big in the Jurassic Period but then smaller during the Cretaceous?</li> <li>❖ How long does it take for food to go through the digestive system?</li> <li>❖ What is the limiting reactant in the vinegar and baking soda volcano?</li> </ul>

Now some of those questions are a bit tough, but hopefully you can see the difference between a display project and one that explores a question. It is perfectly fine and even encouraged for ALL Spring Brook students (K-5) to ask a question for their STEM fair project!

Need ideas? Here are some references to help you.

Project Ideas	Websites
<ul style="list-style-type: none"><li>❖ Do different brands of popcorn leave different amounts of un-popped kernels?</li><li>❖ What percentage of an orange is water?</li><li>❖ How to make a potato battery</li><li>❖ Does temperature affect the rate at which seeds sprout?</li><li>❖ What makes a parachute work?</li></ul>	<ul style="list-style-type: none"><li>❖ <a href="http://www.ipl.org/div/kidspace/projectguide">http://www.ipl.org/div/kidspace/projectguide</a></li><li>❖ <a href="http://www.lewiscenter.org/users/mhuffine/subprojects/Department/ss.php">http://www.lewiscenter.org/users/mhuffine/subprojects/Department/ss.php</a></li><li>❖ <a href="http://school.discovery.com/sciencefaircentral/scifairstudio/handbook/display.html">http://school.discovery.com/sciencefaircentral/scifairstudio/handbook/display.html</a></li><li>❖ <a href="http://sciencebuddies.com">http://sciencebuddies.com</a></li><li>❖ <a href="http://super-science-fair-projects.com/elementary-science-fair-projects.html">http://super-science-fair-projects.com/elementary-science-fair-projects.html</a></li><li>❖ <a href="http://www.all-science-fair-projects.com">http://www.all-science-fair-projects.com</a></li></ul>

**Books:**

Visit the Spring Brook website and click on "Online LMC Catalog" to view Spring Brook's science offerings.

Be sure to stop by the LMC Science Fair Display to view a sample tri-fold and science books

Visit your local public library and look for books on elementary science projects by Janice Van Cleave and others.

**Safety Guidelines**

Before starting your STEM project, take some time to think about possible safety issues associated with your project. Projects should be the work of individual students and be monitored by a parent. In addition, many experiments have safety risks which must be identified and addressed by parents before the experiment.

## Please follow these safety guidelines in picking your project:

- ❖ Parents must carefully monitor any experiments that are performed as part of a project.
- ❖ Parents are responsible for insuring that proper safeguards are in place for any hazardous chemicals, electrical or mechanical equipment, open flames, cultures, or other hazards that may exist. **NO FIRE OR HAZARDOUS MATERIALS ARE ALLOWED AT THE SCIENCE FAIR.**
- ❖ Parents must supervise their students at all times during the fair.

### Exhibit Guidelines

At the STEM fair, you will be allocated space at a table on which to place your exhibit. To make the STEM fair a safe and fun experience for the families that will be attending the fair, please follow these guidelines in creating an exhibit to bring to the fair:

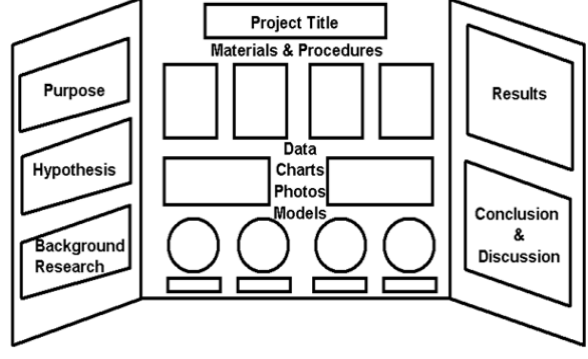
- ❖ Include your project title, name, and class on a tri-fold display board. (See examples on next page.)
- ❖ Your display must fit within the allocated space of 36 inches wide and 15 inches deep.
- ❖ The display must be self-supporting.
- ❖ In addition to the display board, other materials such as papers and dioramas may be included.
- ❖ Demos performed at the fair need to be set up in a way that is safe and non-damaging.
- ❖ Items brought to the fair must fall within school safety guidelines.

### Presentation

Students should be prepared to briefly discuss their project with visitors and answer questions about it. Formal presentations are encouraged but not expected. For students in 4th and 5th grades, the judges will be offering additional feedback on their projects with a view toward helping the students prepare for the competitive middle school STEM fairs. Here are some things the judges may ask you:

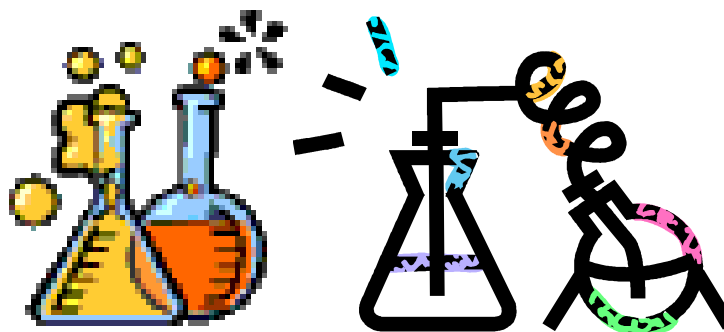
- ❖ What is the title of your project?
- ❖ Tell me about your project.
- ❖ What did you think would happen?
- ❖ Did you repeat the experiment?
- ❖ What was your control?
- ❖ What is your conclusion?



Sample STEM Fair Display Boards	Scientific Process Checklist
	<ul style="list-style-type: none"> <li>✓ Problem</li> <li>✓ Research</li> <li>✓ Hypothesis</li> <li>✓ Method (experiment plan)</li> <li>✓ Data</li> <li>✓ Results</li> <li>✓ Conclusion</li> <li>✓ STEM Display Backboard</li> <li>✓ STEM Research Journal (optional)</li> <li>✓ Interview by Judges</li> </ul>

The Spring Brook STEM Fair will be **NON-COMPETITIVE**. Each participating student will receive an award certificate and a prize.

**Come one, come all, let us have fun the scientific way!**



**For any questions please call or email the following contact:**

Swati Mehta: [swatipha@yahoo.com](mailto:swatipha@yahoo.com) or (847) 826-6014

Students must pre-register to participate. This event is limited to the first 100 projects.

**Schedule:** Wednesday, October 24th, 2018

- ✓ 5:30pm Check- In/Setup by Participants
  - ✓ 6:00 pm Public Welcome
  - ✓ **Judges will review projects during the following times:**
    - **6:00-6:30 K-1 GRADES**
    - **6:15-6:45 2-3 GRADES**
    - **6:15-7:00 4-5 GRADES**
  - ✓ 8:00 pm Fair Ends, Exhibits removed
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- All student participants must arrive and set up their exhibits before the fair is open to the public.
  - All student participants must be present at their exhibit during the times specified above.
  - Students can review up to three projects and submit it back at the registration desk during the science fair to earn a prize. (Review sheet will be available at the registration desk.)
  - All students must remain at the fair until its completion @ 8pm.
  - Parents of participating students must supervise their students at all times during the fair.

**REGISTRATION SHEET:**

To register, PLEASE DETACH THIS PAGE, FILL OUT THE DETAILS AND RETURN (THIS PAGE ONLY) TO YOUR TEACHER BY: Friday Oct 12<sup>th</sup>, 2018. Students must pre-register to participate. Participants may team up with up to 2 students for their project(Max.3 in one group). Students in one group need to submit only **ONE** registration form mentioning all participant's names. This event is limited to the first 100 projects. **PLEASE PRINT IN ALL DETAILS CLEARLY (FULL NAME & EMAIL) AND PLEASE DON'T USE CURSIVE WRITING. INCOMPLETE FORMS WILL NOT BE CONSIDERED.** Is this a group project (2/3 students in the same grade)?

\_\_\_\_\_ Yes \_\_\_\_\_ No

GRADE \_\_\_\_\_

STUDENT'S NAME \_\_\_\_\_

STUDENT'S NAME \_\_\_\_\_

STUDENT'S NAME \_\_\_\_\_

TEACHER \_\_\_\_\_

TEACHER \_\_\_\_\_

TEACHER \_\_\_\_\_

EMAIL \_\_\_\_\_

NAME OF EXPERIMENT/PROJECT \_\_\_\_\_

WILL YOUR EXPERIMENT SIT ON A TABLE OR WILL YOU NEED FLOOR SPACE?  
PLEASE EXPLAIN. \_\_\_\_\_

BRINGING WATER/LIQUID TO THE SCIENCE FAIR \_\_\_\_\_ YES \_\_\_\_\_ NO

MATERIALS \_\_\_\_\_

ELECTRICAL OUTLET \_\_\_\_\_ YES \_\_\_\_\_ NO

Comments: \_\_\_\_\_

\_\_\_\_\_