

MAY 1, 2019



## THE RSPS STEM FAIR COMPETITION IS ACCEPTING ENTRIES

STEM Fair Projects must fall into one of the STEM categories of Science, Technology, Engineering, or Mathematics and must be carried out using the scientific method or the engineering design process.

Students in Grade 1-8 may submit STEM Fair projects. Students may work in groups of up to four students in the following grade levels: Grades 1-2, Grades 3-5, and Grades 6-8. Kindergarten students will participate in a STEM fair project during the regular school day.

All STEM Fair Projects are subject to approval by a teacher from the student's grade level.

While research is an integral part of the process, student science projects must have an experimental component. Students following the Engineering Design Process must produce a physical, functional product that is tested.

Sciencebuddies.org is a good site for STEM fair resources. Judges will use Sciencebuddies.org rubrics when assessing entries. Scientific Method and Engineering Design Process worksheets/entry forms and rubrics are available in homeroom.

We are promoting creativity, inquiry and communication skills. Students may display work any way they want as long as they include all applicable elements from the rubric and can present displays on the day of the fair. On the day of the fair students will be asked questions about their project.

### STEP 1 Topic Selection

Topic selection of your STEM fair project topic is your responsibility, not that of your teacher. However, before you can move forward, your topic must be approved by your teacher. Before consulting with your teacher, you should try to have a few project ideas

in mind so that you can have a productive conversation when you do talk to her/him. When you approach your teacher with an idea, the more you can tell them about your proposed project the more likely they are to approve the project. A good way to win them over is to hand them an proposal worksheet.

The following worksheets will help you have an intelligent conversation with your teacher about the proposed project. They want to know that you have a plan. The best projects come from your own observations of what happens around you. You are constantly wondering “why?”, “does?” and “how?” about the things you witness every day. A stellar STEM fair project usually awaits your investigation of those thoughts and simply by beginning the project.

## STEP 2 Purpose Proposal, Worksheets, and Registration Form

The purpose of the project addresses “the big picture” and begins with one or two sentences that introduce the general topic around which the project is based. If you have a personal interest in the topic, and you should, the purpose is where you would put this information. It should discuss an observation, issue, or concern surrounding your topic and should explain how your project will contribute to better understanding and/or how it can be applied to the observation, issue, or concern. This information could come directly from your prior knowledge or may be researched. Your proposal should be attached to the worksheet/registration form which must be approved, signed by your teacher and submitted to Mrs. Grue by April 1st 2019.

To write a good purpose, take the following steps:

1. Introduce the topic.
2. State the observation, issue, and/or concern surrounding the topic.
3. Tell how your project will contribute to better understanding or will be applied to the observation, issue, or concern.

**COMPLETED STEM FAIR APPLICATION WORKSHEET IS DUE TO MRS. GRUE BY APRIL 1ST 2019.**

**STEM FAIR Scientific Method Worksheet:**

Hypothesis: If \_\_\_\_\_, then \_\_\_\_\_,

Because \_\_\_\_\_

Independent Variable: \_\_\_\_\_

Dependent Variable: \_\_\_\_\_

Control Group: \_\_\_\_\_

Experimental Group: \_\_\_\_\_

**STEM FAIR Engineering Design Process Worksheet:**

Use the space provided to show your work. If you need more room, you may attach additional pieces of paper.

1. What is the problem?
2. What are the requirements?
3. What are the constraints?
4. Brainstorm ideas. Write a short description of each of the ideas you came up.

Student Name: \_\_\_\_\_ Grade: \_\_\_\_\_

Student Name: \_\_\_\_\_ Grade: \_\_\_\_\_

Student Name: \_\_\_\_\_ Grade: \_\_\_\_\_

Student Name: \_\_\_\_\_ Grade: \_\_\_\_\_

**Parent Signature:** \_\_\_\_\_

Teacher Signature: \_\_\_\_\_ Date \_\_\_\_\_