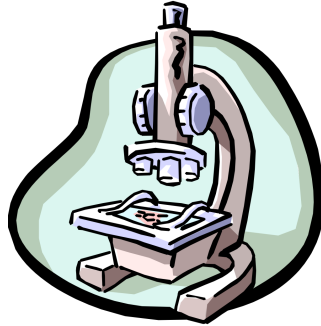


# **Spratley Gifted Center**

## **7/8<sup>th</sup> Grade Gifted Science Fair**

### **Information Packet**



**This packet contains the following sheets:**

- Parent and student letter (must be signed)**
- Science fair project reminders**
- Science Fair project Proposal (requires signatures)**
- Science project rubric**
- Guidelines for choosing a Science fair project**
- Science project websites**

**Important Due Dates:**

**Parent Letter & Proposal**  
**Final Project**

**Sept. 6/7 (1st day of class)**  
**Dec. 14/15**

**Please read this information carefully with your child. Sign and return the bottom portion of the letter with the completed science fair proposal on the first day of school.**

**Keep this packet along with any other research materials/notes in your science fair folder.**

RE: Science Fair Projects  
Dear Students and Parents,

Summer 2016

All middle school students of the Spratley Gifted Center are required to complete a science fair project this year. This is a long-term assignment and is to be done entirely out of class on the student's own time. Students may work alone or in pairs but not in groups greater than two.

The emphasis for this project is on the scientific method and all projects must have results that can be **measured**, counted and recorded and include one or two photographs of the experiment. Demonstrations and reports (e. g. solar systems, volcanoes) are not acceptable. Check your child's procedures to be sure there are no safety hazards. Live animals may not be brought to school for the fair (bring photos instead). Students experimenting with plants should start their project early.

Due to the details of the project and large number of students this year; it is possible final grades for the project may be posted during the third nine weeks. This assignment will be entered under the "project category" portion of a student's grade.

Teachers will select a number of outstanding projects to be recommended for the Tidewater Science fair. These students will have a unique opportunity to participate in the Tidewater Science Fair held at Old Dominion University in March. Students need to organize their project on a 3-sided backboard or on a piece of full-sized poster board. Please note: **Participants at the Tidewater Fair are required to have a 3-sided backboard.** The backboard or poster board must include all components of the project (as stated on the rubric) and be able to stand alone (no report is needed). I have also provided a list of useful science fair websites.

**PLEASE NOTE: Late projects will incur points deducted (15 pts. per calendar day). NO PROJECTS WILL BE ACCEPTED AFTER THE 21st OF DECEMBER (late grace period). Please call right away if a family emergency prevents your student from submitting their project on time. EXCUSED ABSENTEES MUST SUBMIT THEIR PROJECT ON THE DAY OF RETURN REGARDLESS OF BLUE/SILVER DAY. IF YOUR CHILD IS ON A SUSPENSION THE DAY THE PROJECT IS DUE, THE PARENT MUST BRING IN THE PROJECT ON OR BEFORE THE DUE DATE TO AVOID A LATE PENALTY. Students are required to bring their project to class. If a parent drops off a project in the main office, the student should pick it up and bring it to the teacher.**

Please sign and return the bottom portion of this letter to your teacher by **the first day of school.**

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I, the parent or legal guardian of \_\_\_\_\_ have read this letter concerning the science fair project.

\_\_\_\_\_  
Parent/Guardian Signature

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

## SCIENCE FAIR PROJECT REMINDERS

- Don't be late; remember 15 pts. off per calendar day late!
- Put your name(s) & block on the back of your backboard in black sharpie
- **BRING RUBRIC IN WITH PROJECT THE DAY IT IS DUE; DO NOT ATTACH IT TO YOUR BACKBOARD!**
- When describing your purpose remember to tell how it relates to a real world problem/situation.
- Your problem should be written in the form of a question, how or why are usually good starting words.
- Try to make your title catchy and/or describe the IV & DV in the title
- Throughout the entire backboard: **USE METRIC MEASUREMENTS**  
**DO NOT USE ANY PERSONAL PRONOUNS (for ex: I, you, your, our, my, he, she, their, etc.) points will be deducted for this.**
- If you do not have a control in your project, on board under that section write "None."
- All of your information/sections on your backboard should have a label according to what is on the rubric
- Data should have at least 3 trials and be arranged in a chart or table
- Analysis of data- this is a graph or two depending on project; line graph for data over time; bar graph is for finite information, pie chart for percentages
- Include photos that are meaningful & make sure they are labeled as to what they are showing
- In your results, summarize what was found out; compare data sets, averages, mode, rankings (if applicable), range, etc.
- Make sure the conclusion relates back to the hypothesis-was it supported or not, and why? Give data as supporting evidence. If certain things interfered with the possible outcome, mention those things and provide examples of how the experiment could be improved.
- Alphabetize your 3 or more sources. For web sites, the minimum is to give the name of website, web address then date accessed.
- If participants are testing something in your project, make sure their name is not on the backboard and instead you use participant 1, 2, 3, etc. You should have a sample size greater than 5-10, but the bigger the more reliable your data will be.

Date Received \_\_\_\_\_

## Science Fair Project Proposal

Accepted

**Due Date September 6/7**

Rejected

Teacher Signature

Name: \_\_\_\_\_

Block: \_\_\_\_\_

Project Partner (if applicable) \_\_\_\_\_

Block: \_\_\_\_\_

Project Title: \_\_\_\_\_

Where did your project idea come from? (Check one)

- Internet (provide full internet address) \_\_\_\_\_
- Book (give title and author) \_\_\_\_\_
- Family member (relation) \_\_\_\_\_
- Friend
- Media (Television, Radio)
- Science teacher (name) \_\_\_\_\_
- Project is a continuation from previous year's work
- Other (specify) \_\_\_\_\_

Where will your experimentation take place?

- Home
- Certified laboratory
- Parent's work
- Commercial setting (i.e., grocery store)
- Other (specify) \_\_\_\_\_

Estimated cost of project (excluding back board, office supplies like paper, pencil, calculator)

- \$0 - \$5
- \$6 - \$10
- \$11 - \$20
- \$21 - \$30
- \$31 - \$40
- more than \$40

Will you be using any chemicals, biological materials, or human subjects for your project?

- No
- Yes (If yes, circle below)
  - Human subjects
  - Cultures involving bacteria, mold, fungus etc.
  - Chemicals (including bleach, vinegar etc.)

Discuss the **quantitative data** you are measuring and how you plan to measure it. Ex: I will measure the total flight time, in seconds, of 3 rockets w/varied nose cones. (No qualitative measurements. Ex: the colors produced when white light goes via a prism., subjective scales that measure opinion)

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**Purpose-** Briefly describe what you are trying to find out.

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**Problem-** Format the problem or topic statement as a question beginning with how, why or what.

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**Hypothesis** What you want to test expressed in an 'If...then' statement. Reader should be able to determine what you changed in the IV from this statement.

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**Independent Variable (IV)** This is the variable that is changed/manipulated at the beginning of the experiment by the scientist.

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**Dependent Variable (DV)** This is the variable that is measured (quantitative data only) during the experiment by the scientist.

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**Procedures:** Must be numbered. Please be specific. If your project idea has come from the internet or a book, you must write out the steps. Do not copy and paste directly from the internet!! Do not include trip to store to buy materials. (All steps of your experiment should be included below, attach separate sheet as needed)

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**(Parent/Guardian Signature)**

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**(Student Signature)**

**SCIENCE FAIR PROJECT Name(s)** \_\_\_\_\_

**Date Submitted** \_\_\_\_\_ **Project Title:** \_\_\_\_\_

<b>Judging Rubric</b>							<b>Comments</b>
<b>Problem</b> (identified as a question)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Title</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Purpose</b> (To determine...)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Hypothesis</b> (clear and relates to the purpose)	<b>10</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>0</b>	
<b>Variables</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Constants</b> (things that stay the same for test groups)/ <b>Control</b> (test group used for comparison, if none, then write none)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Materials List</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Procedure</b> (numbered and detailed)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Data</b> (obtained using good science/at least 3 trials)	<b>10</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>0</b>	
<b>Chart(s)</b> all data included w/averages in table format	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Graph(s)</b> include averages	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Photograph</b> (atleast 1 showing experi., no internet pics)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Summary of Results</b> (explains and summarizes data in detail, provide data points, avgs. mean,	<b>10</b>	<b>8</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>0</b>	

median, mode; include sources of error)							
<b>Conclusion</b> (relate to hypothesis)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Neatness/Grammar</b> (word process all; avoid I, you, they, our, my)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Difficulty level</b> (advanced projects will score higher)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	
<b>Bibliography</b> (if no sources say so)	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>0</b>	

**Total Points**

\_\_\_\_/100

**On time** \_\_\_\_\_

15pt. deduction/day late

**Final Grade** \_\_\_\_\_



## Guidelines for Choosing a Science Fair Project

The following contains guidelines and suggestions to assist you in helping your child choose an appropriate project.

1. The project must be an experiment, not a demonstration or simply a research project. Volcanoes, solar system models, research projects on whales, etc. are not acceptable.  
To help determine if a project idea is an experiment:
  - It must identify a problem that you will try to answer through doing tests (This is usually a question).**
  - It must have results that can be measured, counted or recorded with photographs and drawings.**
2. Change only one thing (variable) in your experiment. Everything else must stay the same for each trial (test). For example, if you are testing the effect of plant food “xyz” on plants, you must use all the same type of plants, water them equally, give them equal amount of sunlight, etc. The only thing you can change is that half of the plants will get the plant food and half will not. This makes the test “fair”. Then you can measure and compare the growth.
3. Do more than one trial and/or use more than one or two subjects (example: plants) in your tests.
4. Use tools such as rulers, thermometers, or balances to measure correctly. Use metric.
5. Choose projects that require materials that are inexpensive, easy to obtain, and safe to use.
6. Make sure that you will have enough time to set up the experiment and observe and record the results. Some experiments with plants or animals may require two or more weeks to observe and measure the growth or response. These types of experiments are good choices, but start early!
7. The content and concepts in the experiment should be appropriate for the advanced grade level of the gifted student. Students should learn something from doing the project and should be challenged.

### **Unacceptable projects/Not allowed**

- Below gifted grade-level projects
- Projects involving **volcanoes, animal cruelty, or “musical heartbeats”**
- Most psychological projects unless you have a large number of human subjects (Note: 1 or 2 subjects representing an age or gender category is not enough)
- Projects involving **cookie or cake baking**
- **Projects involving growing mold on food (too basic and mold spores can cause illness).**

**DON'T EVEN THINK ABOUT PLAGIARIZING!**

# SCIENCE PROJECT WEBSITES

(All have http:// prior to address)

<http://biology.about.com/od/biologysciencefair/a/>

<http://school.discoveryeducation.com/sciencefaircentral/Getting-Started.html>

[www.energyquest.ca.gov/projects/index.html](http://www.energyquest.ca.gov/projects/index.html)

[www.sciencebuddies.com](http://www.sciencebuddies.com)

[www.scienceproject.com](http://www.scienceproject.com)

[www.stevespanglerscience.com/](http://www.stevespanglerscience.com/)

[www.crystal-clear-science-fair-projects.com/science-fair-project-ideas.html](http://www.crystal-clear-science-fair-projects.com/science-fair-project-ideas.html)

[www.factmonster.com/spot/sciproject2.html](http://www.factmonster.com/spot/sciproject2.html)

**\*Please Note: A project chosen from one of these websites does not mean it will be automatically approved. It must meet all other science fair requirements. 7th graders must choose projects at 8th grade level or higher; 8th graders must choose projects at 9th grade level or higher.**