**Mid-Columbia Regional Science and Engineering Fair**

**RULES**

**ANNOUNCEMENTS TO ENTRANTS:**
Any students enrolled in grades 6-12 in any public or private school in the Mid-Columbia region of Washington is eligible to enter his/her original exhibit that has not been displayed in previous Regional Fairs. Counseling and guidance will be provided upon request.

**EXHIBIT REQUIREMENTS:**
A tabletop space 122cm (48") wide by 76cm (30") deep is provided; 274cm (9') to the ceiling may be used. The display must be safely constructed so spectators will not be exposed to faulty construction or electrical wiring. Dangerous chemicals, explosives, open flames, microbial cultures and fungi, poisonous animals or plants are not allowed and will be removed. We recommend the use of colored photographs of such items. Spectator-oriented controls may be part of the display if clearly labeled. All items should be firmly attached to prevent theft. Exhibitors are expected to furnish their own 8ft. grounded electrical extension cords as necessary to reach the power connections. The Fair Association cannot assume liability for loss or damage to exhibit.

**RULES FOR ALL PROJECTS:**
**EXHIBITORS WHO DO NOT MEET THESE REGULATIONS WILL BE DISQUALIFIED.**
**NO ENTRIES WILL BE ACCEPTED AFTER FEBRUARY 26, 2013.**
**THERE WILL BE A $5.00 ENTRY FEE PER STUDENT.**

* NO TEAM PROJECTS. MCRSEF does not accept Team projects. If they are done as a team in your local school, you cannot send 1 member to represent that team project and enter it as an individual project.
* All projects in grades 6-12 must comply with the RULES of the [International Science and Engineering Fair](http://www.sciserv.org/isef/document/index.asp). (Your teacher can download a copy).
* Information involving state and federal regulations, controlled and hazardous substances, lasers, recombinant DNA, pathogens, animal and human research, gasohol, and tissue samples can be found in the Rules and Guidelines Booklet.
* Submit one copy of a typed abstract of the research - including objective (hypothesis), procedure, results (data), conclusions, reflections or applications - using not more than 250 words. Display this with the exhibit.
* A written REPORT based on the scientific method and a change LOG to Journal are required.
* Adult Sponsor Checklist, Research Plan and Approval Form MUST be signed before experimentation begins, and submitted with registrations.
* BEFORE RESEARCH BEGINS - All research involving live vertebrate animals, human subjects (including yourself), recombinant DNA, human or animal tissue, pathogenic agents, and controlled substances must be reviewed and approved by a local or regional Scientific Review Committee. Check with your adult sponsor for the proper forms.

**GETTING STARTED**
Before you begin, please note that research refers to library research and information gathering. Experimentation refers to work done in the field or laboratory after forming hypotheses.

* **Pick Your Topic** - Get an idea of what you want to study. Ideas might come from hobbies or problems you see that need solutions. Limit your topic, as you have little time and resources. You may want to study only one or two specific events.
* **Research Your Topic** - Go to the library and read everything you can on your topic. Observe related events. Gather existing information on your topic. Look for unexplained and unexpected results. At the same time, talk to professionals in the field, write to companies for information, and obtain or construct needed equipment.
* **Organize And Theorize** - Organize everything you have learned about your topic. At this point you should narrow down your hypothesis by focusing on a particular idea. Your library research should help.
* **Make A Timetable** - As you narrow down your ideas, remember to choose a topic that not only interests you, but can be done in the amount of time you have. Get out a calendar to mark important dates. Make sure to leave a week to fill out the necessary forms and to review your Research Plan with your Sponsor. Some projects need approval from a Scientific Review Committee (SRC) before they are started, so be sure to allow time for that process. Give yourself plenty of time to experiment and collect data - even simple experiments do not always go as you might expect the first time, or even the second time. After you have finished your experiments, you will probably need a few weeks to write a paper and put together an exhibit.
* **Plan Out Your Research** - Once you have a feasible project idea, you should write out a research plan. This plan should explain how you will do your experiment and exactly what it will involve. *Any student participating in the Science Fair is required to complete the Research Plan, Approval Form and Checklist.*
* **Consult Your Adult Sponsor** - You are required to discuss your Research Plan with your Adult Sponsor and get his/her signature of approval. Your sponsor should review your Research Plan and use the Checklist (Under Forms) to determine if you need any additional forms and/or SRC approval.
* **Conduct Your Experiments** - Give careful thought to designing your experiments. As you conduct your research and experiment, keep detailed notes of each and every experiment, measurement, and observation. Do not rely on memory. Remember to change only one variable at a time when experimenting, and make sure to include control experiments in which one of the variables are changed. Make sure you include sufficient numbers of test subjects in both control and experimental groups.
* **Examine Your Results** - When you complete your experiments, examine and organize your finding. Did your experiments give you expected results? Why or why not? Was your experiment performed with the exact same steps each time? Are there other causes that you had not considered or observed? Were there errors in your observations? Remember that understanding errors and reporting that a suspected variable did not change the results can be valuable information.
* **Draw Conclusions** - Which variables are important? Did you collect enough data? Do you need to do more experimenting? Keep an open mind - never alter results to fit a theory. Remember, if your results do not support your original hypothesis, you still have accomplished successful scientific research. An experiment is done to prove or disprove a hypothesis.

For more information concerning rules or general science fair questions, contact Director@mcsf.net.