

HSE-AUSTIN 1st ANNUAL SCIENCE FAIR



IMPORTANT DATES

- HSE handbook release and safety forms signed and turned into teachers by Oct. 30th
 - Parent Information Meeting November 2, 2009 6pm (4th/5th grade)
November 3, 2009 6pm (6-8 grade)
 - HSE Science Fair Entry Forms should be submitted by students (November 13, 2009). Students **cannot** change title of the project after they submitted the forms.
 - Rough Draft Power point will be submitted November 24th, 2009
 - Final Power Point Presentations will be submitted December 14th, 2009
 - Display Boards submitted to science teachers. January 13th-15th
 - In-class Presentations January 13-15th, 2010
 - Preliminary judging will take place on January 13th-15, 2010
 - **1st Annual HSE Science Fair: January 23, 2010**
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HSE SCIENCE FAIR RULES

“Harmony School of Excellence organizes a school-wide science fair every year. Due to our high expectations from our students in science, math and technology, each student is required to complete a research project in one of these areas (individual). Failure to do so will result in failing the science class”. (HSE Student Handbook)

1-All students in HSE are required to complete and submit a research project.

2-Students will receive two project grades for their exhibits/projects which will determine the majority of 3rd and 4th Report Card grades in Science class.

3-No late exhibits (display boards) is accepted.

Three Major Components for Science Fair

- 1- Experiment: a) choosing a topic
b) performing an experiment
 - 3- Visual Display: a) prepare a board that illustrates the complete project
b) display equipment and materials that are needed to explain the project
 - 4- Oral Presentation:
a) Orally present a summary of the project to your teacher, classmates, and judges.
b) share and explain all phases of project in an open setting
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Safety Guidelines

- Students should obtain approval for all projects including biological cultures, chemicals, fire, and radiation. All students **MUST** return a Science Fair Safety Form.
 - For the safety rules refer to science fair handbook.
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Categories

Life Sciences

- Agriculture
- Behavior/psychology
- Environmental sciences
- Geology/geography
- Medicine health/ Microbiology
- Botany / Zoology

Physical Sciences

Chemistry

Physics

Astronomy

Engineering/ Computer/Math

Engineering

Electronics / computer

Mathematics

Steps for the Science Fair Project

- **Information Gathering**
- **State the Problem**
- **Identify Variables:** see next slide
- **Make Hypothesis:** A hypothesis is an educated guess on what you think will happen in the experiment based on your prior knowledge

- **Examples:**

Poor hypothesis: Temperature may cause leaves to change color.

Good hypothesis (If-Then Statement): **If** leaf color change is related to temperature, **then** exposing plants to low temperatures will result in changes in leaf color.

Question	Independent Variable (what I change)	Dependent Variable (what I observe)	Controlled Variables (what I keep the same)
Does heating a cup of water allow it to dissolve more sugar?	Temperature of the water measured in degrees Centigrade	Amount of sugar that dissolves completely measured in grams	Stirring, Type of sugar "More stirring might also increase the amount of sugar that dissolves and different sugars might dissolve in different amounts, so to insure a fair test I want to keep these variables the same for each cup of water."

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- **Obtain Materials and Gather Equipment**
 - **Do the Experiment**
 - **Graph and Chart Data**
 - **Summarize/Analyze Results:** Summarize what happened. This can be in the form of a table of processed numerical data, or graphs. It could also be a written statement of what occurred during experiments.
 - **Draw Conclusions:** Try to answer your original questions. Is your hypothesis correct? Now is the time to pull together what happened, and assess the experiments you did.
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Other Things You Can Mention in the Conclusion

- If your hypothesis is not correct, what could be the answer to your question?
 - Summarize any difficulties or problems you had doing the experiment.
 - Do you need to change the procedure and repeat your experiment?
 - What would you do different next time?
 - List other things you learned.
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Display Board

It should consist of a tri-fold board, the project report, power point slides printed out, and anything that represents your project, such as models made, items studied, photographs, surveys, and the like. Keep it simple!!

- Tri-fold Boards can be purchased through the school for a lesser amount than at regular stores.
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Display Board



Other Info:

- *There will be outside judges who will come in and judge the projects. Judges will be engineers, professors, graduate students, or anyone that is very knowledgeable about science.
 - *The science dept. will be available to help the student with their project after school and on designated days out of the week.
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Finding a Topic

Strongly Suggested sites

www.sciencebuddies.org- quiz you can take and it will find topics that match up with your interest.

www.sciencenewsforkids.com –
