

The background of the entire page is a soft-focus photograph of children in a science laboratory. In the foreground, a wooden test tube rack holds several test tubes containing liquids of various colors (red, yellow, orange). A hand is visible on the left, holding a test tube. In the background, the faces of several children are visible, looking towards the camera with interest. The overall lighting is warm and bright, creating a positive and educational atmosphere.

Science Fair Packet

Information & Guidelines for Science Fair

January 24, 2017

**Montessori House
Elementary School and
Montessori House for
Children**



SCIENCE FAIR

A science fair gives students a chance to study areas of science that might particularly interest them. They go beyond the limits of the classroom to develop their own ideas. They use their own initiative to plan and create a science project using the scientific method as a guideline. Then, by displaying their project at the Science Fair, students share what they have learned with others and are recognized for their efforts.

Choosing a project: There are several types of science fair projects, a demonstration, a collection and a controlled experiment.

A *demonstration project* demonstrates how something works, for example, the infamous paper mache volcano.

A *collection* might display a collection of something one has gathered, ie. A rock collection.

An *experiment project* requires the student to ask a question that can be tested and answered using the scientific method steps.

Resources: Please research topics. Talk about what ideas, materials, books, information or guidance might be needed for the topics. Below are some websites that might be helpful in getting started. . .

<http://www.scienceprojects.com>

<http://www.billnye.com>

<http://school.discovery.com/sciencefaircentral>

<http://www.ipl.org/div/kidspace/projectguide/>

Parent Role: Parental involvement is important in this project. However, we ask that the involvement is supportive, directional and encouraging. Students are required to present their project in many ways. They may look to you for guidance or assistance in choosing a project, obtaining the necessary materials, assisting in

the writing process, feedback on their display board design or as an audience to practice their oral presentation. Please feel free to *assist* them and provide parent supervision for projects that may require it.

Materials: Cardboard display boards can be found at Hobby Lobby, Michael's and other craft stores for ~\$6.

Use this packet as a guide to complete your project. Pick a topic that interests you, learn a little and have fun!



Important Dates:

Assignment

**Registration form,
signed by parent and turned in to front desk**

Date Due

Fri, January 5th

**Science Fair and Share (6:00-7:00)
Students can set up projects at 5:30**

Wed, January 24th

Parents, family members and friends can come and visit the exhibits at 6:00 pm on Tuesday. Students may arrive at 5:30 to set up their projects. The fair will be in the MHES Handworks Studio. All projects must be taken home directly after the Science Fair.

SAFETY: Please do not have any hot plates or scalding, boiling water at the science fair. Open flames, flammable chemicals, bottled gas, or explosives of any kind are not permitted. On VOLCANO projects, there must be parent supervision. You cannot use a combustible process. Use non-flammable materials only.

**YOU WILL NEED TO MAKE ARRANGEMENTS TO GET YOUR
PROJECT HOME AFTER THE SCIENCE FAIR.**

If you have any questions, concerns, or need assistance with your project, please contact **Stacey Ripple at 713-562-8705 or staceyrynea@sbcglobal.net**.

PREPARING THE DISPLAY BOARD

Students will use a science fair display board that can be purchased at most of the area stores such as Target, Hobby Lobby or Michaels. The following page illustrates a sample display board and a list of items that students should include on their own display. These items will help observers understand the science fair project.

It is sometimes helpful to create a mini display before actually starting the work on your actual display board. The chart at the bottom of this page can be used to organize ideas and materials. Students can sketch on this form and plan their final project.

We encourage students to be creative in making their boards attractive. Remember, the viewer will be attracted by such things as color, special lettering, pictures, drawings, photographs, and charts, so make these items easy to read, organized and neat. Make this your best work!!



Display Board Ideas

Think of the display board as a "story board." It should tell the story of your questions(s), how you went about seeking information and answers, just how you did your investigation, discoveries you made, and what new questions or curiosities you have.

REMEMBER, USE THE SCIENTIFIC METHOD:

1. Identify the problem. What is your question?
2. Do research.
3. State a prediction (hypothesis.)
4. Design the experiment.
5. Conduct the experiment.
6. Observe and collect data.
7. Draw a conclusion.



SOME POSSIBLE ITEMS YOU WILL NEED FOR YOUR DISPLAY ARE:

1. Photographs
2. Drawings or diagrams
3. Samples of materials used
4. Charts, graphs, or other data
5. Resources used to gather information
6. A journal of how you went about your investigation (you could make a pocket to hold it on your display board out of construction paper).
7. Results of any surveys or experiments you constructed

Be sure to include your name, classroom, and the question you are investigating on your display board. You may use any art materials you wish to create your story board.



Science Lab Report

Purpose: (Question) What do you want to learn? _____

Hypothesis: (Prediction) What do you think will happen? _____

Materials: What materials do you need in order to do this experiment?

Research: What other information did you find about your topic? _____

Procedure: What steps will you follow to complete this experiment? _____

Observations: (Analysis) What happened during your experiment? What data (information) did you collect? (chart or table?) _____

Conclusion: Was your hypothesis correct? What did you learn from this experiment? What would you do differently next time?

Rules

1. ***All of the work on your science project is to be done at home!!***
This is a great way to explore the project together as a family. Time will not be given during class time as this is an OPTIONAL project for the students.
2. The science project should be made into a display with labels, lettering, pictures and/or an explanation of the project. Make the display attractive, interesting and easy to understand.
3. Projects should be done primarily by the student. Adult assistance is permitted and encouraged as mentioned earlier. Please remember this is your student's project and it should be your student's work.
4. The size of the project should be limited to table space of 36" x 36".
5. If electricity is to be used, it is urged that batteries be used, if possible. If wall current is needed, the project may not be able to be fully displayed during the fair. We cannot guarantee access to a plug.
6. At the conclusion of our science fair, it is the students' responsibility to remove their project and take it home.
7. Any questions should be directed to the parent coordinator not the teachers!



8. Be sure to learn a little and HAVE FUN!
9. Projects will not be judged. This event is just for fun and learning.

If you have any questions, concerns, or need assistance with your project, please contact **Stacey Ripple** at **713-562-8705** or **staceyrynea@sbcglobal.net**.