



## **AVIARA OAKS PTA SCIENCE FAIR GETTING STARTED GUIDE**

Thank you for your interest in AOE's 5th Annual Science Fair. Participation in a Science Fair helps to stimulate a student's interest in scientific investigation beyond what is taught in the classroom. Through visual exhibits, physical demonstration, and oral presentation, the Fair offers students a unique opportunity to expand their skills in a variety of ways. Although every student at AOE has the opportunity to participate in the Science Fair, *participation in this event is voluntary*.

The Fair is open to all students currently enrolled at AOE. All projects will be presented to AOE Staff in a non-competitive process. All students will be recognized for their participation.

This Getting Started Guide is designed to help students understand the requirements for Science Fair projects and think about the type of project they may enter, as well as provide deadlines for entering. If after reading this guide you have additional questions, please refer to the AOE Website at [www.aviaraoakselementary.com](http://www.aviaraoakselementary.com), which has additional information or email to individuals organizing the event at [teamppt@roadrunner.com](mailto:teamppt@roadrunner.com).

To participate in the Science Fair, all projects must be pre-approved. A Project Application is attached to this document. The application must be returned to school by the specified date for the entry to be approved.

### **FIRST STEPS**

1. Review this Getting Started Guide
2. Select a Project Type & Topic
3. Submit a Project Application to school

## **Three project types accepted at the AOE Science Fair**

### **1. An Investigation or Experiment**

This project is most often presented at Science Fairs. It is a display and explanation of an experiment that follows the scientific method.

### **2. A Demonstration or Working Model**

In this type of project, students demonstrate a particular scientific principle or fact.

### **3. A Collection of Natural Objects**

Collections are an assembly of items, sorted and categorized.

## **RULES & GUIDELINES**

**INDIVIDUAL AND GROUP PROJECTS:** Participants may enter a project individually, with a partner or with a group of three.

**EXPECTATIONS:** In addition to creating a project participants are required to complete a display board explaining their project, and must orally present their project to fellow scientists, guests and AOE Staff.

**COSTS & VALUE:** Project costs should be low. The investment should be primarily in time and effort. ***Store bought projects are not allowed.*** We cannot be responsible for valuable models or collections. Although everyone is careful, projects can become lost or broken.

**SIZE & SET UP:** Every project will be given space for one self-supporting display board with table space in front of it for collections, models, experimental equipment or materials relating to the exhibit.

**SAFETY:** Safety is essential at the Fair. Any project deemed by AOE Staff to be unsafe or inhumane is prohibited. The following rules are necessary for the safety of exhibitors and visitors:

- No dangerous or caustic chemicals
- No open flames or flammable liquids
- All electrical devices must be safe
- No containers of mold, bacteria or fungi may be brought to school
- No live animals, vertebrate or invertebrate may be brought to school
- No running water, drainage, gas or compressed air will be provided
- Limited electrical outlets may be available and must be requested on final registration

Exhibits that do not satisfactorily comply with these rules will not be displayed.



## **Display Board Guidelines**

The display board forms the background for the project and provides a structure for vertical display of graphs, charts, photographs, and other printed information.

**SPECIFICATIONS & SIZE REQUIREMENTS:** The display board must be a tri-fold and be, freestanding and stable; no backing support of any kind will be provided. Cardboard tri-fold display boards are available at Michael's, Office Depot, Staples, for approximately \$5.00, as well as from several on-line stores. Students may also construct display boards out of sturdy materials. Display boards should be no smaller or larger than the standard display board size of 36" high x 48" wide.

**WHAT TO INCLUDE ON YOUR DISPLAY BOARD:** See below for guidelines on what to display with your project.

## Investigation or Experiment Display Board Guideline

<b>Procedure</b> – What you did	<b>Title or Question</b> By: Your Full Name & Grade	<b>Results</b> – What happened?
<b>Pictures &amp; Drawings</b> 	<b>Purpose</b> – What you wanted to find out (Question)	<b>Charts &amp; tables</b> 
	<b>Hypothesis</b> – What you thought would happen	<b>Conclusion</b> – What you learned.
	<b>Who helped you</b>	


**Investigations:** The type of project most often presented at Science Fairs is the experiment / investigation. These presentations incorporate the Scientific Method and seek to answer a question -- the hypothesis -- at the beginning of the experiment.

### THE SCIENTIFIC METHOD

- STEP 1: Research: collecting information about your topic
- STEP 2: Problem: the scientific question to be addressed
- STEP 3: Hypothesis: your idea about the solution to a problem
- STEP 4: Experimentation: the process of testing your hypothesis
- STEP 5: Results: what happened when you tested your hypothesis: may include graphs, charts, tables, or photos.
- STEP 6: Conclusion: a summary of the findings and what you learned from the investigation. Did you get the results that you expected?

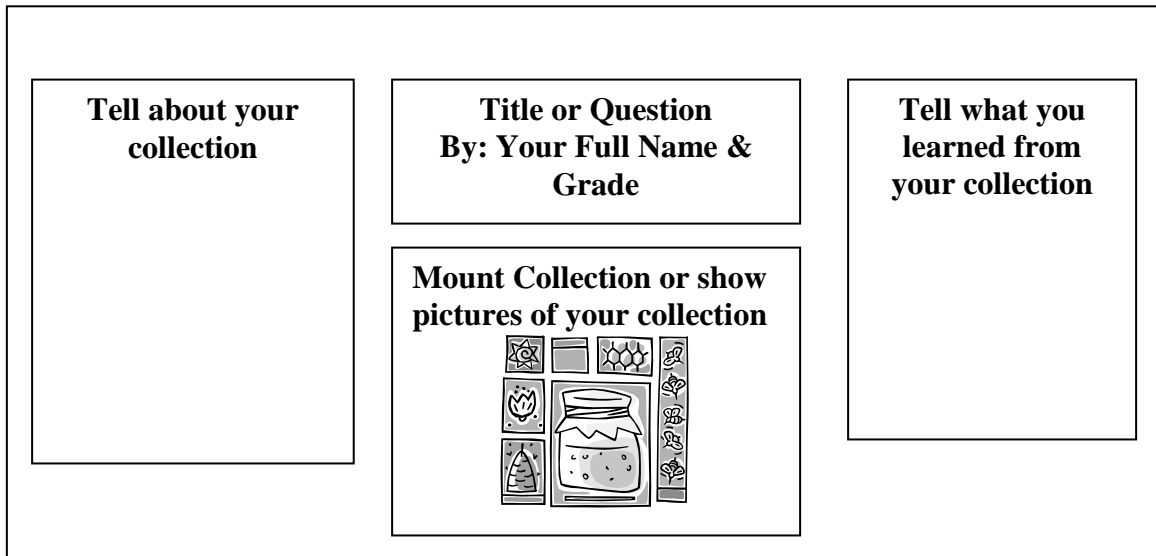
## Working Model

### Display Board Guideline

<b>Explanation</b>	<b>Title or Question</b> <b>By: Your Full Name &amp;</b> <b>Grade</b>	<b>Examples</b>
	<b>Labeled Diagram</b> 	<b>Bibliography</b>

**Model:** In this type of project, students demonstrate a particular scientific principle or fact. Students may wish to demonstrate how something works, a scientific phenomenon, or how something is created naturally or in the lab. Models may be of interesting scientific objects such as bridges, towers, pulleys, the solar system, volcanoes, the inside of the earth, sea floor, etc. Dioramas of animal habitats are also a suggestion.

## Collection Display Board Guideline



**Collections:** Collections are an assembly of items such as sea shells, birds nests, rocks, minerals, types of soil, insects, etc. that are labeled and grouped to show how they relate to each other and how they differ. Collections should include as many samples as possible to fully represent the topic.

### KEYS TO A FUN LEARNING EXPERIENCE

- It is important for the *student* to elect to participate.
- Encourage your child to create a project that is appropriate for his/her age level and ability. It should be interesting and require ***only a minimum of adult assistance.***
- Assist your child in planning a schedule to avoid last minute rushing. Once the topic is chosen, plan time for each step.
- Feel free to guide your child, but ***do not*** do the work for him.
- Keep in mind how much your child will benefit from doing most of the project himself. The goal is expanding students' appreciation for the fascinating world of science. "Learning through Science is Fun!"

### THE BEST PROJECT IS:

- Interesting to your child
- Provides a learning opportunity
- One that can be done in the amount of time you have before the Science Fair
- Something your child can do themselves (or with a little help)
- Safe!

**Recognition:** All students who enter an approved project will be given an Award of Participation and recognized for the special characteristics of their project. This year's Fair will not include selection of place winners.