



Science Fair



A variety of Science activities offered in Academic Rodeo
Contest Support provided by the University of Texas at Tyler School of Education and Psychology

Contest Rules

(Revised August 2018)

The purpose of the Academic Rodeo Science Fair is to encourage scientific experimentation and study. There are 4 Divisions in the Science Fair Contest:

- Display Only – a class project created by Kindergarten, 1st Grade or 2nd Grade classes under the teacher's direction.
- Experimental – 3 levels of competition for Elementary (grades 3 through 5), Middle School (grades 6 through 8), and High School (grades 9 through 12)
- Models and Demonstrations – 3 levels of competition for Elementary (grades 3 through 5), Middle School (grades 6 through 8), and High School (grades 9 through 12)
- Scientific Drawing or Illustration – 3 levels of competition for Elementary (grades 3 through 5), Middle School (grades 6 through 8), and High School (grades 9 through 12)

General Guidelines for All Projects:

1. Projects may not use chemicals or flammable materials that could be deemed dangerous or hazardous to the health of the general public. Chemicals, tissue samples or any element that would be dangerous or hazardous to the health of the general public may not be displayed at the Academic Rodeo Science Fair. Photographs of experiments are acceptable.
2. Display boards for science projects **MUST** be freestanding and no larger than 4' X 4'. Academic Rodeo will provide tables for all displays. Tables will not be against walls. **Display boards should be marked on the top left back with the student name, grade, category, and school.** Any display items should be marked as belonging to the student in some way.
3. **Journals should be labeled** for identification on the top left corner with the student's name, grade, school, and category.
4. Judging of entries in the **Science Fair** will occur on the set date and time designated on the Timeline. Displays must be set-up no later than one hour prior to the time set for judging. See the Contest Timeline for the set-up time frame.
5. Each student who is competing in the Science Fair, except for K – 2nd Display projects and Scientific Drawings and Illustrations, should be present for judges' interviews during the time specified for judging. The interview plays a significant role in scoring of the project. Project of any student not present will be judged but she/he will not receive the points given for an interview. It will be almost impossible for a student absent from judging to place in the top three. All projects entered will be displayed throughout the remainder of Academic Rodeo and photos of the projects will be on display in a Virtual Academic Rodeo during the East Texas State Fair.

Contest Format

- All Scientific Illustrations and Journal/Notebooks for Experimental and Demonstration projects are submitted approximately 2 to 3 weeks before the contest.
- Each entry is assigned a number based on the level, division and/or category of the project. This number is used to label all components of the project by Academic Rodeo, including score sheets.
- On the day of the contest, a 1 to 2-hour window is available for set-up of projects by students and/or teachers. See Academic Rodeo Timeline for schedule.
- At set-up, a card will be in place on the table to indicate the project that is to be placed in that space. The card will indicate the assigned project number (done by Academic Rodeo), Division, Category,

Level, Student Name, Grade, and School. Please notify the check-in volunteers if anything is in error. Approximately 3 projects fit on each side of the 8-foot table.

- After project has been set-up, teachers and students leave to return at the scheduled time for the contest.
- When judging begins, students are called in small groups to stand by project and be interviewed by one or more judges. The process is staggered to have younger students arrive first with secondary students arriving later, shortening the length of time at the contest.
- Once the student has been interviewed, he or she is free to leave.
- Teachers and parents must remain in the seating area or may look at entries from other contests that are NOT within the judging area. **No one** is to be in the judging area other than judges, students, and volunteers while judging is occurring. Any photos with projects should occur before judging begins or after judging has ended.
- Students with entries in Science Fair and Computer Science will be given flexibility as needed in when the projects will be judged at the contest.
- Students in Scientific Drawings or Illustrations Division do not attend the contest night.
- Kindergarten, 1st Grade, and 2nd Grade Class Displays are display only and students do not attend.

Project Requirements

Each Experimental and Demonstration project displayed should contain the following items. See the Science Fair Score Sheet to see how each item is scored.

- Project Board –The board should be free-standing and no larger than 4' X 4'.
- Journal outlining the entire process from developing the hypothesis to completion of results. In the Models/Demonstrations, the Journal will include research about the scientific principle modelled.
- Visual aids or other display items to explain the project and its results
- A one page overview of the projects research procedures and results with photo of the project board attached or inserted into the document – This will be used to display in a notebook during the virtual Academic Rodeo on display during the East Texas State Fair.

Resources

- There are many good overviews of how to develop experimental science projects on the internet.
- Environmental projects may find the Globe Project – globe.gov - a helpful resource.
- An overview of project and Journal elements will be available on the Science Fair page.

Procedures

- Journals/Notebooks are submitted several weeks prior to the contest for prejudging of that section of the score sheet and to determine that projects are in the correct category.
- Students, teachers or parents may bring projects to check-in and set-up during the designated time frame in the Contest Timeline.
- Students in Experimental and Model/Demonstration Divisions arrive at the time designated for judging.
- Students in Scientific Drawing or Illustration only submit entries and are not required to attend the contest.
- An area is provided in the building for waiting until the category is called for judging.
- No one is to be in the project display area while any group is being judged except judges and students for the particular judge.
- Students are released by category groups after judging for that category is complete.
- Results are posted within 2 to 3 days.

DIVISIONS

CLASS DISPLAY PROJECTS

The Class Display Division is designed for Kindergarten through 2nd grade classes to complete a **class** research project and encourage an interest at an early age in scientific research. One project from each class or up to three projects from each grade level (K-2) at the school will be accepted.

- The entire class will work together under the supervision of the classroom teacher to select a topic for research.
- The Scientific Method **MUST** be used throughout the project.
- The classroom teacher will present information to the class to inspire and support their research project. Students may be assigned small group or individual research activities to contribute to the background knowledge for the project and assist the entire class in developing the hypothesis and research activities.
- The components of the project should be suitable for the age of the students in the class.
- A Journal/Notebook should be maintained throughout the project giving details about the purpose and hypothesis, procedures and experiments performed, results, and conclusions of the class. Include individual and group graphs and charts to support the project information.
- Prepare a display of the project and its results. The display will highlight the information contained in the Journal or Notebook.
- Submit a short description of the project with a photo inserted into the document to display during the Virtual Academic Rodeo.
- Set-up can be by the teacher only or by the teacher and some or all of the students.
- Outstanding projects will be recognized with a certificate to be posted in the classroom.
- The class is not required to be present for judging. Schools are encouraged to bring their classes after the Science Fair has been judged to see all exhibits.
- No awards are presented in this Division other than participation ribbons and/or certificates.

EXPERIMENTAL PROJECTS

The Experimental Division should be projects involving scientific research and experimentation. The project will include a Lab Journal/Notebook with supporting research, the project hypothesis, procedures used, daily planning and activities in the research, results, and conclusions. A project cannot be judged without a Journal/Notebook.

- All projects **must** be designed to experimentally test a hypothesis.
- Each project must have been researched and developed within the last 12 months. If the project is an ongoing, long-term project, designation of work done in the last 12 months must be shown.
- **Students may work alone or in teams of 2 with each documenting his or her portion of the work in the Journal/Notebook.**

Categories:

- 1) **Behavioral Sciences:** The study of animal and human behavior – Projects related to animals and humans should be limited to observations of behavior, perceptions, etc. and should not cause harm in any way.
- 2) **Biological Sciences:** The study of plants, microorganisms and life processes - (Projects related to animals and humans should be limited to observations of scientific principles, perceptions, etc. and should not cause harm in any way. For example, an individual should not remove needed medications from a subject to observe results of the loss of that medication.)
- 3) **Chemistry:** Physical chemistry, organic chemistry (other than biochemistry), inorganic chemistry, soil chemistry and related chemical processes
- 4) **Earth and Space Science:** Astronomy, meteorology, geology

- 5) **Environmental:** Pollution (air, water, land), pollution sources and their control, waste disposal, impact studies, environmental alteration (heat, light, irrigation, erosion, etc.), ecology.
- 6) **Physical Science (Physics):** Physical properties at work, materials, plastics, fuels, pesticides, metallurgy, etc.

Each school may submit **6 projects** in each level in any combination of the 6 categories.

MODELS AND DEMONSTRATIONS

Models and Demonstrations Division involves students presenting a model and/or demonstration of a scientific principal.

Students may work alone or in teams of 2 with each documenting his or her portion of the work in the Journal/Notebook.

The student(s) must:

- a. Research the scientific principle or phenomenon and give adequate background information to show an understanding of the principle, including why the event occurs and factors which relate to or may influence the outcome or significance of the event.
- b. Describe what the model or exhibit shows and why the materials used demonstrate the principle
- c. Give conclusions about what was learned in the preparation of the model.

The **Journal/Notebook** must include credits for all sources used. The Journal/Notebook is critical in scoring of the project and the project will be considered ineligible without it and the research component of the Journal/Notebook.

Up to **three projects** may be entered in this division at each level of the school.

SCIENTIFIC DRAWING OR ILLUSTRATION

Scientific Drawing or Illustration Division will allow students to submit scientific drawings of various science principals and organisms. A scientific illustration could be thought of as operating on three levels:

1. A simple line diagram that is an accurate visual description, a plan or map
2. An illustration that visually conveys the subject accurately but incorporates specific details such as color, patterns, etc.
3. Artwork that is an illustration based on all of the above but is also aesthetically pleasing
4. Accuracy in terms of shape, scale and proportion, and related parts is important, regardless of the amount of detail.

Scientific correctness will receive the heaviest weight in scoring, but artistic attributes will be considered.

The drawing (between 8"x10" and 11"x14") must be mounted on poster board, no larger than 12"x18". Do NOT use foam board or canvas for mounting drawing as it cannot be displayed when projects are placed on boards with push pins.

Students must work alone in this division.

Up to **6 entries** per contest level (E, MS, or HS) are allowed per school.

Awards

1st, 2nd, and 3rd places are awarded in each category of each level in the Experimental Division.

1st, 2nd, and 3rd places are awarded in each level in the Models/Demonstrations Division and the Scientific Illustrations Division.

Elementary students who place will also receive a cash award. Middle and High School students who place are eligible to apply for Academic Rodeo Scholarships.

Students who do not place receive a Participation Ribbon.

Tips for Working with Your Students

REMEMBER . . .

Primary communication with Coaches and Sponsors is done through e-mail provided with the School/Group Registration done online. If a coach or sponsor is not receiving e-mail information about the contest, he or she should check Spam/Junk folders on the computer and contact Academic Rodeo for assistance with getting the current information.

Deadlines exist for a reason. Please be aware of them and follow them. The **Academic Rodeo Calendar** in a true calendar format is on the Getting Started and General Info pages. The **Science Fair Timeline & Checklist** is on the Science Fair page and gives specific details about deadlines and submissions. If you have a problem with a date or deadline, please contact Academic Rodeo, realizing that usually it is not possible to make a change or give “grace” for deadlines. Often judging or other timings are scheduled close to the due date. To be sure your students get to participate, follow the deadlines.

Please read the General Info for All Coaches and Sponsors.

The following tips and suggestions may be helpful to you in working with your students.

- Journals/Notebooks are most often the weakest component of the student’s project. It should be a thorough documentation of all stages of the project. A template is available on the Science Fair page to assist with this. Please enclose all papers in some type of notebook or folder.
- Label each Journal/Notebook with a label indicating the student’s name, grade, Division (Display, Experimental or Model), Category if an Experimental Project (Behavioral, Biological, Chemistry, Earth & Space, Environmental, or Physical), and school.
- Also label the back of Project Display boards and any display items.
- Hazardous materials are NOT permitted. Check before bringing items requiring electrical outlets. These may not be allowed depending on the project.
- Illustrations must be labeled on the back using the Illustration Label on the Science Fair page.
- Projects remain in the Academic Rodeo display until the Awards Celebration unless special permission is given to remove the project. When a student is given permission to remove the project for another contest, it must be returned before the Awards Celebration and the sponsor should be sure that a photo has been taken of the project before it is removed.