



SAN MATEO COUNTY OFFICE OF EDUCATION

Anne Campbell, County Superintendent of Schools

2012 SAN MATEO COUNTY SCIENCE, TECHNOLOGY, ENGINEERING & MATH (STEM) FAIR ALLOCATIONS, PROJECT CATEGORIES & GRADE LEVELS

Allocations

The number of entries or “slots” allocated to your school will depend upon the following factors:

- The number of science fair projects at each grade level from your school
- Whether or not your school has its own science fair
- The number of high quality projects from your school, based upon previous entries
- The number of projects your school would like to submit to the SMC Science Fair
- The level of support provided (volunteers) to the Fair by your school or district

To receive an allocation for your school, an *Intent to Participate* form must be completed and returned by November 10, 2011, or follow the online procedure for officially registering your school to participate.

Categories

- **Behavioral/Health/Social Sciences**
Projects that are related to health and the social sciences. Examples would be perception studies, aptitude and attitude surveys, and various exercise studies.
- **Biological Sciences**
Projects involving living or once-living things. Examples of projects in this category would be studies of plant growth, cell structure, bacteria, molds, preservatives or growth and development.
- **Earth Sciences**
Projects involving the earth and its processes. Examples of project topics would be the weather, astronomy, rocks/minerals, and water.
- **Ecology/Environmental Science**
Projects relating to the environment and the interdependency of living and non-living things on earth. Examples of project topics in this category would include field studies of beaches and creeks, the impact of products or processes on the environment, and solutions to environmental problems.
- **Engineering/Technology**
Projects that incorporate the design, manufacture, and operation of original and creative mechanisms that involve scientific principles. This category will have slightly different judging criteria, emphasizing originality, model or prototype design, testing, and refinements. Inventions are now included in this category.

- **Materials Sciences**

Projects that compare various types of materials as to their durability, effectiveness or other characteristics. Examples include comparisons of various home products, such as insulation, detergents, or teeth whitening products.

- **Mathematics**

Projects that solve and attempt to solve complex or sophisticated mathematical problems, including those involving computers. Examples would be graphical explanations of the Pythagorean Theorem, the four-color problem or unique math-related computer programs.

- **Physical Sciences**

Projects involving non-living things. Examples of project topics would include aerodynamics (such as flight comparisons of various types of paper airplanes), catalysts, crystal growth, evaporation rates, and electrical circuits.

Note: It is the teachers' responsibility to determine the appropriate category for each of their students' projects. The Fair tries to place like projects in the same category. However, the Fair has the discretionary right to re-classify projects if necessary, in order to allow our judges to compare similar types of projects.

Grade Levels

Each of the eight subject categories will have grade level divisions: 5th, 6th, 7th, 8th, and high school. **However, the Bay Area Fair accepts only individual projects from 7th through 12th grade; the California State Fair accepts individual and pair projects from grades 6 through 12.** Pair projects will be accepted at the San Mateo County Fair at ALL grade levels, and will be judged with the individual projects in the same category unless there are a significant number of pair projects in a specific category.

Awards

- Each student will receive a ribbon of participation.
- Each of the eight subject categories will have first, second, third place and honorable mention awards for the 6th, 7th, 8th, and high school divisions. ((No place or special awards but a summary evaluation for each 5th grade project.) However, the judges reserve the right to award multiple winners (e.g., two seconds) or not to award all places (e.g., no third).
- Special Awards will be given for projects chosen by various scientific and professional organizations.
- Outstanding projects by high school students will be given cash scholarships .

Questions? Please contact [Janet Shi](#), (650) 802-5355.