



ELIGIBILITY & PROJECT CATEGORIES

The Los Angeles County Science Fair is open to all students, grades 6-12, who have been selected as winners from a local school or district Science Fair. Each school may send a total of 13 entries, three of which may be Team Projects. The following list of category descriptions is prepared to help students and teachers properly select the exhibit category.

<i>Jr.</i>	<i>Sr.</i>	<i>PROJECT CATEGORY DESCRIPTIONS</i>
X	X	1. <u>ANIMAL BIOLOGY</u>: Studies of evolutionary origins, genetics, growth, morphology, studies of animals in their natural habitat (or reproductions of it).
X	X	2. <u>ANIMAL PHYSIOLOGY</u>: Studies of major animal organ system functions involving genetics, immunology, neurobiology, pathology, reproduction, or sensory biology in mammals.
	X	3. <u>BEHAVIORAL/SOCIAL SCIENCES</u>: Studies of behavior, conditioned responses, learned responses, learning, psychiatry, or psychology in humans and other animals, including the effects of chemical or physical stress on mental processes, anthropology and archaeology; studies or surveys of attitudes, behaviors, or values of a society or groups within a society (e.g., anthropology, archaeology, or sociology)
X		4. <u>BEHAVIORAL SCIENCES- NON-HUMAN</u>: Studies of behavior, conditioned responses, learned responses, learning, psychiatry, or psychology in non-humans, including the effects of chemical or physical stress on mental processes.
X		5. <u>BEHAVIORAL/SOCIAL SCIENCES- HUMAN</u>: Studies of behavior, conditioned responses, learned responses, learning, psychiatry, or psychology in humans, including studies or surveys of attitudes, behaviors, or values of a society or groups within a society (e.g., anthropology, archaeology, or sociology), and the effects of chemical or physical stress on mental processes.
X	X	6. <u>BIOCHEMISTRY & MOLECULAR BIOLOGY</u>: Molecular biology, molecular genetics, enzymes, photosynthesis, blood chemistry, protein chemistry, food chemistry, hormones.
	X	7. <u>CHEMISTRY</u>: Physical chemistry, organic chemistry (other than biochemistry), inorganic chemistry, materials, plastics, fuels, pesticides, metallurgy, soil chemistry.
X		8. <u>CHEMISTRY-APPLIED</u>: Measures and comparisons of materials durability, flammability, effectiveness for intended use, and product testing for real world applications.
X		9. <u>CHEMISTRY-GENERAL</u>: Physical chemistry, organic chemistry (other than biochemistry), inorganic chemistry, materials, plastics, fuels, pesticides, metallurgy, soil chemistry. This implies knowledge of the chemical structure of the materials being tested.
X	X	10. <u>EARTH/SPACE SCIENCES</u>: Geology, geophysics, physical oceanography, meteorology, atmospheric physics, seismology, petroleum geology, geography, speleology, mineralogy, topography, solar physics, astrophysics, orbital mechanics, observational astronomy and astronomical surveys.
X	X	11. <u>ECOLOGY</u>: Interaction of abiotic and biotic elements within any environmental investigation (habitats, food webs, oxygen, carbon & nitrogen cycles, biogeography, biomes), pollution sources (air, land, water), impact studies, resource access, environmental alteration (caused by heat, light, irrigation, erosion, etc.).

<i>Jr.</i>	<i>Sr.</i>	<i>PROJECT CATEGORY DESCRIPTIONS (continued)</i>
X	X	12. <u>ENGINEERING APPLICATIONS</u>: Project in which a potentially useful product is created (e.g., strengthening concrete, satellite reception improvement, solution to traffic jams, bionic heart/respiration monitors).
X	X	13. <u>ENGINEERING RESEARCH</u>: Engineering analysis, tests of devices and their operations, other than product comparisons.
X	X	14. <u>ENVIRONMENTAL MANAGEMENT</u>: Conservation of natural resources and usage modalities (crop rotation, use of renewable energy sources, terrace farming, recycling, clear cutting, etc.), environmental protections (emissions control, sewage and solid waste disposal, etc.)
X		15. <u>MATERIALS SCIENCE</u>: Studies of materials characteristics and their static physical properties. Includes measurements and comparisons of materials durability, flammability, and insulation properties (thermal, electrical, acoustic, optical, electromagnetic, etc.).
X	X	16. <u>MATHEMATICS & COMPUTER SCIENCES</u>: Calculus, geometry, abstract algebra, number theory, statistics, complex analysis, probability, topology, logic, operations research, and other topics in pure and applied mathematics, computer programs, languages, new developments in software or hardware, information systems, computer systems organization, computer methodologies, and data (including structures, encryption, coding, and information theory).
X	X	17. <u>MICROBIOLOGY</u>: Studies of prokaryotes, protists (excluding algae), and fungi (mycology), including genetics, growth and reproduction, and response to chemical, and physical stress. Includes bacteriology.
X	X	18. <u>PHARMACOLOGY</u>: Effect of any drug or chemical on any living animal, especially though not exclusively, humans. Studies should be at the cellular or organism level.
	X	19. <u>PHYSICS</u>: Experimental or theoretical studies of the physical properties of matter in all forms, Computer simulations of physical systems are appropriate in this category.
X		20. <u>PHYSICS- AERODYNAMICS/HYDRODYNAMICS</u>: Studies of aerodynamics and propulsion of air, land, water, and space vehicles; aero/hydrodynamics of structures and natural objects. Studies of the basic physics of fluid flow.
X		21. <u>PHYSICS- ELECTRICITY & MAGNETISM</u>: Experimental or theoretical studies with electrical circuits, electro-optics, electromagnetic applications, antennas and propagation, and power production.
X		22. <u>PHYSICS- GENERAL</u>: Experimental or theoretical studies of the physical properties of matter and energy in all forms (with the exception of fluids, electricity, and magnetism); computer simulations of physical systems are appropriate in this category.
X	X	23. <u>PLANT BIOLOGY</u>: Agriculture, agronomy, horticulture, forestry, plant taxonomy, plant genetics, hydroponics, and phycology (algae).
X	X	24. <u>PLANT PHYSIOLOGY</u>: Studies of major plant organ system functions involving genetics, immunology, pathology, and reproduction.
X		25. <u>PRODUCT SCIENCE</u>: Comparison and testing of natural and man-made products regarding effectiveness for their intended use in consumer-oriented applications.