

JUDGING CATEGORIES

Project Category Selection

Students in three age groups – Senior (9-12th Grade), Junior (7-8th Grade) and 5-6th Grade – compete in the fourteen categories listed below. Students choose their own categories, and the sophistication of the projects range from university level research to backyard and kitchen fun. Judges from Purdue faculty, staff, postdocs and graduate/undergraduate students are all qualified to judge a wide range of these projects. Some flexibility in judging choices is appreciated, so please indicate three categories you would be willing to judge. Even if you don't get your first choice, remember that these are student projects and your understanding of any of the topics will suffice!

- [AN] **Animal Science:** Development, ecology, animal husbandry, pathology, physiology, population genetics, systematics, and other experiments centered on animal studies
- [BE] **Behavioral & Social Science:** Clinical and developmental psychology, cognitive psychology, physiological psychology, sociology of humans
- [BI] **Biochemistry:** General biochemistry, metabolism, structural biochemistry – chemistry of biological systems.
- [BM] **Biomedical and Health Sciences:** Study of diseases and health - disease diagnosis and treatment, epidemiology, genetics, molecular biology of diseases, physiology and pathophysiology in medicine and veterinary medicine.
- [CB] **Cellular and Molecular Biology:** Building blocks for biological systems -cellular biology, cellular and molecular genetics, immunology, molecular biology.
- [CH] **Chemistry:** Chemistry of the physical world - analytical chemistry, general chemistry, inorganic chemistry, organic chemistry, physical chemistry.
- [EA] **Earth and Planetary Science:** Climatology, weather, geochemistry, mineralogy, paleontology, geophysics, planetary science, tectonics.
- [EN] **Engineering:** Bioengineering, civil engineering, chemical engineering, computer engineering, material science, mechanical engineering, robotics, thermodynamics.
- [ET] **Energy and Transportation:** Aerospace and aeronautical engineering, aerodynamics, alternative fuels, fossil fuel energy, vehicle development, renewable energy.
- [EV] **Environmental Science:** Air pollution and air quality, bioremediation, ecosystems management, environmental engineering, forestry, recycling, soil contamination and soil quality, waste management, water pollution and water quality.
- [MC] **Mathematics and Computer Science:** Algebra, analysis, applied mathematics, geometry, probability and statistics; algorithms, data bases, artificial intelligence, networking and communications, computational science and computer graphics, software engineering, programming languages, operating systems.
- [MI] **Microbiology:** Biology of microorganisms—antibiotics, antimicrobials, bacteriology, microbial genetics, virology.
- [MS] **Material Sciences:** Study of the integration of various materials in systems, devices, products and components that rely on their specific physical and chemical properties.
- [PA] **Physics and Astronomy:** Atoms, molecules, solids, astronomy, biological physics, instrumentation and electronics, magnetics and electromagnetics, nuclear and particle physics, optics, lasers, masers, theoretical physics, computational astronomy.
- [PL] **Plant Science:** Agriculture, agronomy, development, ecology, evolution, genetics, photosynthesis, plant physiology (molecular, cellular, organismal), systematics and other experiments centered on plant studies.