2024 Ritchey Science & Engineering Fair at Weber State University

Junior Division – March 14, 2024

The Ritchey Junior Science and Engineering Fair, grades 6th–8th, will be held in person at the Dee Events Center on the campus of Weber State University.

- Registration opens February 1st and closes February 29th.
- Project materials must be uploaded to ***ritchey.zfairs.com*** no later than midnight, February 29th.
- We will be holding our 8th grade Observer's Competition this year. Student permission forms will be available in late February.
- The awards ceremony will be held in person in the evening of Thursday, March 14th.

Senior Division – March 15, 2024

The Ritchey Senior Science and Engineering Fair, grades 9th–12th, will be held in person at the Dee Events Center on the campus of Weber State University.

- Registration opens February 1st and closes February 29th.
- Project materials must be uploaded to ***ritchey.zfairs.com*** no later than midnight, February 29th.
- The awards ceremony will be held in person in the evening of Friday, March 15th.

Categories

- Botany
- Chemistry
- Earth/Space Sciences
- Energy/Transportation
- Engineering/Computer Science
- Environmental
- Math/Physics/Astronomy
- Medical/Health
- Microbiology
- Social/Behavioral
- Zoology

ritchey.zfairs.com
For information contact ***sciencefair@weber.edu***

Botany

Study of plant life—Agriculture, agronomy, horticulture, forestry, plant taxonomy, plant physiology, plant pathology, plant genetics, hydroponics, algae, etc.

Chemistry

Study of the composition of matter and laws governing it—Physical chemistry, organic chemistry, inorganic chemistry, materials, plastics, fuels, metallurgy, soil chemistry, etc.

Earth/Space

Study of the universe—Geology, mineralogy, physiographic, oceanography, meteorology, seismology, geography, geophysics, etc. including solar system planetary projects—all other astronomy topics see Math/Physics/Astronomy.

Energy/Transportation

Study of the energy and transportation—Aerospace and Aeronautical Engineering, Aerodynamics, Alternative Fuels, Fossil Fuel Energy, Vehicle Development, Renewable Energies, etc.

Engineering/Computer Science

Technology projects that directly apply scientific principles practical uses—Civil, mechanical, manufacturing, aeronautical, chemical, electrical, sound, automotive, heating and refrigerating, transportation, environmental engineering, etc.

Environmental

Study of pollution sources and their control—Ecology, recycling, acid rain etc.

Math/Physics/Astronomy

Development and application of numerical computations, theories, principles and laws governing energy also includes computer sciences—Calculus, geometry, abstract algebra, number theories, statistics, complex analysis and probability. Solid state, optics, acoustics, superconductivity, fluid and gas dynamics, thermodynamics, magnetism, quantum mechanics, biophysics and states of matter, computer programming, computers in general etc. Also, astronomy projects (especially computational) except for solar system planetary topics (see Space Sciences).

Medical/Health

Study of disease and health of humans and animals—Dentistry, pharmacology, pathology, ophthalmology, nutrition, sanitation, dermatology, allergies, speech and hearing, etc.

Microbiology

Biology of microorganisms—Bacteriology, virology, fungi, bacteria, yeast, etc.

Social/Behavioral

Study of human & animal behavior and relationships—Psychology, sociology, anthropology, archaeology, linguistics, learning, perception, public opinion surveys, effects of stress, conditioned responses, etc.

Zoology

Study of animals—Animal genetics, ornithology, entomology, animal ecology, paleontology, cytology, histology, animal physiology, invertebrates, etc.