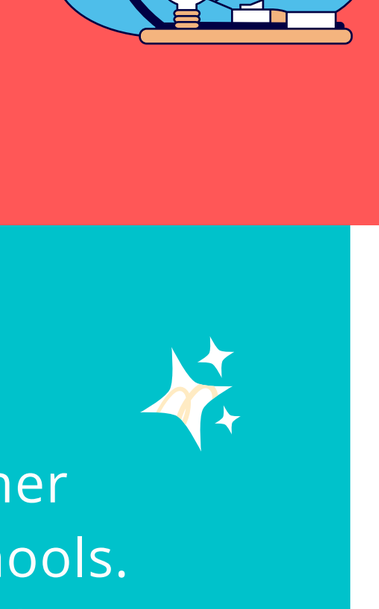
RANCHO SCIENCE OLYMPIAD

WHAT IS SCIENCE OLYMPIAD?

Exploring the World of Science

A team science competition, encouraging collaboration in events from a diverse series of scientific disciplines!



STUDY & LAB EVENTS

Prove your knowledge through tests! Study with your partner and answer questions as accurately and quickly as you can.

BUILD EVENTS

Collaborate to create contrived constructions and win the most points! There are several build events, each requiring patience and precision to assemble.

INVITATIONALS

On Saturday tournaments scattered throughout the year, take tests on another campus to compete against regional schools. Rancho frequently wins medals and trophies.

REGIONALS AND STATES

Beginning in February, Rancho participates in a bracket against other schools, starting with the regional competition in Orange County, up to the national level.

*These often involves waking at 6:00 AM and staying for the entire day.

WHAT WILL I DO?

As a member of our 2023–24 Science Olympiad team, you will be responsible for studying or building for the events you choose to pursue. This involves regular participation and collaboration with fellow team members, and taking frequent scrimmages to test your knowledge.

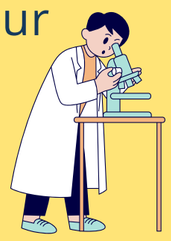
bit.ly/RanchoSciOly

INTEREST FORM

If you are interested in applying to be a member of our Science Olympiad team next year, please fill out the form at your earliest convenience.

TRYOUTS

The date(s) for both the incoming seventh and eighth graders' tryout tests will be announced later. In preparation for the tryouts, feel free to ask either our head coach, at PaigeMorris@iusd.org, or our study captain, at 27ChenTimothy@iusd.org, for more resources or with any questions you may have. We strongly recommend that you study in preparation for the tryouts.



Rancho Science Olympiad | Biology | Physics | Earth & Space | Chemistry | Inquiry

Frequently Asked Questions

What are next year's events?

- Life, Personal & Social Science
  - Anatomy and Physiology (important bodily systems and their functions, interpreting graphs on related topics, experiments, etc.)
  - Disease Detectives (diseases, injuries, disabilities and general health, epidemiology for an entire population, and related mathematics)
  - Ecology (a general understanding of ecological principles—how biotic and abiotic factors interact, and common processes of the ecosystem)
  - Forestry (knowledge of trees found in the United States, such as identification, ecological characteristics, human impact, etc.)
  - Microbe Mission (answer questions, solve problems, and analyze data pertaining to microbes and microscopes)
- Earth and Space Science
  - Dynamic Planet (general information relating to processes on Earth; the specific topic rotates every year, and has not been released for 2024)
  - Fossils (identification of various fossilized animals and plants, to provide details such as environment, mode of life, time period, etc.)
  - Meteorology (using scientific process skills and qualitative and quantitative analysis to analyze meteorological data; also a rotation event)
  - Reach for the Stars (identify a specified list of stars and other objects, and understand general characteristics of them, including mathematics)
  - Road Scholar (answer interpretive questions on state highway maps, USGS topographic maps, Internet maps, atlases, satellite/aerial images, etc.)
- Physics
  - Optics (properties and interactions of light with matter, and a lab portion—positioning lasers to optimally focus light around a barrier onto a target)
  - Wind Power (construct a device that transforms wind energy into electrical energy, and answer general questions related to alternative energy)
- Chemistry
  - Can't Judge a Powder (perform various tests on a powdery substance, and based on collected data, answer questions about the substance)
  - Crime Busters (analyze forensic information related to a fictional crime, and indict the culprit from behind a lab coat)
- Inquiry and Nature of Science
  - Codebusters (encrypt and decrypt messages through manual ciphers, and by cryptanalysis techniques, such as monoalphabetic substitution)
  - Experimental Design (design and conduct an experiment on a given topic, and report the setup and findings of the experiment, entirely on-site)
  - Fast Facts (in a short time period, fill in a grid of terms, which begin with a certain letter and match given scientific categories)
  - Write It Do It (a "writer" will write a description of a certain abstract construction, and without any other information, a "doer" will reconstruct it)
- Technology and Engineering Design
  - Air Trajectory (construct a device which, given only the gravitational potential of a falling mass, launches a projectile toward a target by any means)
  - Electric Wright Stuff (construct an airplane which flies using a capacitor-powered motor, to stay aloft for as long as possible)
  - Roller Coaster (construct a roller coaster which may be adjusted to guide an object to the finish line in as close to a target time as possible)
  - Tower (construct a light and tall tower that can carry the maximum load, using wood as the primary material)
  - Wheeled Vehicle (construct a vehicle that uses elastic energy to propel itself and travel a specified distance as quickly and accurately as possible)

How will Science Olympiad be organized?

- Science Olympiad will likely take place as an elective. This means that Science Olympiad will be a class like any other, with a grade (based on participation, e.g., studying for your events instead of throwing around a football).
- If you do not feel you have enough time for an elective, or are worried about having too many electives, you may discuss with head coach Mrs. Morris (PaigeMorris@iusd.org) about taking Science Olympiad outside of class (e.g., participating in tournaments without being in the class), only after you are admitted. This will require extra effort to collaborate with the rest of your team, and you may be limited in what you can accomplish.
- Regardless of whether you are in the class, all information will be sent through a Canvas course.

Tryouts?

- The schedule of tryouts has not yet been announced, but they will likely be after school in late April, with a makeup session, so you have plenty of time to prepare. We encourage you to check out scioly.org and soinc.org for resources. If you create a study guide, it may be used during the tryout (although some events have limits on their length; please email study captain Timothy Chen, at 27ChenTimothy@iusd.org with any questions).
- Tryouts will be held in a buffet style. You will be allowed to test for any event you like, but only in a set amount of time. Tests will ask similar questions to what would be asked in a real examination, although for construction events, the test will mainly ask about principles of design and theory, rather than any hands-on questions.
- Around 36 accepted students, and all wait-listed students will be notified in May. Students will receive resources to study over the summer, and tips on preparing for the upcoming season.

Thank you for your interest in joining Rancho Science Olympiad!

For any additional inquiries, comments, concerns, etc., please contact head coach Mrs. Morris, at PaigeMorris@iusd.org.