WHAT IS EXPERIMENTAL SCIENCE?
A course that allows students to independently explore science topics of interest with a goal of competing in science fairs. Students...
- Identify a problem in the world they hope to address.
- Design an experiment to characterize and address that problem.
- Collaborate with research mentors and solicit feedback on their research from experts and scientific competitions.

Experimental Science counts as an Honors science elective that satisfies the additional science credit requirement outside of the state mandated three equally rigorous courses (ex. Biology, Chemistry, or Physics).

WHO IT’S FOR
Students who are…
- Interested in science.
- Focused on scientific careers in the future.
- Looking to develop interpersonal and career skills.
- Looking to bolster their academic resume for college.
- Searching for a career in research.
- Driven and motivated.

WHAT DEVELOPS
As a result of participating in Experimental Science, students develop the following soft skills that are increasingly valuable to college recruiters and businesses:
- Time-management
- Organization
- Effective oral communication
- Analytical thinking
- Technical writing
- Authentic research skills
- Goal-setting

Mitchell Honeycutt devised a computer algorithm that could identify areas of potential stock volatility. The algorithm was able to identify options that were undervalued relative to market prices and subsequently sold them at a profit.

THE MAIN COMPETITIONS
- SCPS Regional Science & Engineering Fair (RSEF)
  - The first of three traditional science fairs competitions.
  - Researchers compete in 15 categories against the 9 public schools and additional private schools in Seminole County.
  - Traditionally held in February.

- Florida State Science & Engineering Fair (SSEF)
  - Nominations are earned at the regional fair level.
  - Students have the opportunity to win $1.2 million in awards, prizes, scholarships, and internships.
  - Traditionally held the last week of March.

- International Science & Engineering Fair (ISEF)
  - Nominations are earned at the regional fair level OR the state level.
  - Nearly 2000 students from over 75 countries compete in this competition.
  - Over $4 million available in prizes, scholarships, and internships.
  - Thirteen (13) ISEF alumni became Nobel laureates.
  - Traditionally held in May.

BY THE NUMBERS
Scholarships & Cash Awards
Since 2017, Oviedo students have earned...

- $108,500 in College Scholarships
- $9725 in Cash Prizes

The average... in Scholarships & in Cash Prizes

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Place Awards
Out of 55 projects since 2017, there have been...

- 47 Regional Award Winners
- 27 Nominations to State
- 12 State Award Winners
- 7 Nominations to International
- 2 International Award Winners

LION’S PRIDE
Oviedo currently has the top performing research program in Seminole County.

PRIOR PROJECTS
Animal Sciences
- Predatory Chromatophore Response of Octopus flou-us on Unfamiliar Prey
  - Benjamin Shirey
  - 1st Place RSEF, Recognition Award SSEF

Behavioral Sciences
- KoMotions: Keys to Emotional Cues
  - Sagna Patel
  - 1st Place RSEF, 1st Place SSEF, 5th Place in Behavioral Sciences ISEF

Cellular /Molecular Biology & Biochemistry
- Optimization of BiGFi1 Use for Dye-bridzyme-Based Fluorescent Sensors
  - Emma Stewart & Ali Owji
  - 1st Place RSEF

Mathematics & Computational Sciences
- Early Skin Cancer Detection Using Convolutional Neural Networks - Year 2
  - Mitchell Hammack
  - 2nd Place RSEF, 1st Place SSEF, Ying Scholar Finalist

Physics & Astronomy
- Effects of Meteorite Impacts During Planetary Formations
  - Ivan del Barco
  - 1st Place RSEF, 1st Place SSEF

Plant Sciences
- Gnathia Methodologies and Phenolic Antimicrobial Compounds in Decapod Crustaceans
  - Saadhana Sridharan
  - 2nd Place RSEF, Recognition Award SSEF

HOW DO I START?
1. See whether you have the time available in your schedule to commit to a yearlong research project.
2. Speak with Mr. Furiosi about potentially taking the class to determine if it’d be a good fit.
3. Speak with other Experimental Science students to see if the course fits your expectations.
4. Choose Experimental Science as an elective when selecting next year’s schedule preferences.
5. Begin thinking about scientific topics/fields that interest you.
6. Start looking at research mentor profiles at local universities or professional science and technology organizations.

But I’m taking AP Seminar or AP Research?
You can still compete in science fair as an AP Capstone student. Just pick a science topic! You’ll have to work with Mr. Furiosi outside of class or during AP Research to ensure science fair requirements are met.

Shirley Shirey left and Sagna Patel right show their research luck judges at the Richmond County Regional Science Fair. Ben studied for a graduate-studied octopus species raised in various prey items. Sagna studied how keeping certain species on site at an individual’s residence increases a topic and can possibly be applied to identifying risky behavior on the internet or regulatory decline in standards.