



## SUMMER PROGRAM 2020

The Teacher Research Academy (TRA) offers middle school, high school, and community college faculty unique professional development experiences at Lawrence Livermore National Laboratory (LLNL).

### TEACHER OUTCOMES:

- Gain increased understanding of science, technology, engineering, and math aligned with NGSS requirements
- Understand science in a real world context
- Improve ability to guide student research

### ACTIVITIES:

- Meet LLNL scientists
- Visit research laboratories
- Learn how to apply Common Core technical communication skills
- Use cutting edge science equipment, processes, and practices found in research laboratories

### INTERSHIPS:

- Paid internships
- 8 week program, June–August
- Placement in any workshop area

**Graduate course credit** available—CSU East Bay  
**Continuing education credit** available— CSU Chico

You must be a U.S. citizen to attend  
\$25 fee/workshop, payment due **2 weeks** prior

**TIME:** 8:30 am – 3:30 pm daily

**CONTACT:** Joanna Albala, Ph.D.  
Manager, Science Education Program  
STEM-Education@llnl.gov | 925.422.6803

## PROFESSIONAL DEVELOPMENT WORKSHOPS

Aligned with NGSS Disciplinary Core Ideas  
& Scientific and Engineering Practices



### TEACHER RESEARCH INTERSHIPS

Mentored research opportunities within LLNL research laboratories. Interns receive a \$5000 stipend at completion of the 8-week internship. Applications are competitive.

**June 8 – Jul 31**



### TECHNICAL WRITING

Prepares teachers to build students' technical-writing skills toward CCSS goals to improve lab instruction, technical literacy, lab notebooks, abstracts, and science posters.

**June 15 –16**



### BIOSCIENCE

Emphasizes overview of the field with instruction on basic skills to include DNA and protein analysis through inquiry and experimentation.

**June 8-12**



### MODELING FOR SCIENCE & MATH

Introduces concepts of computer modeling and simulation using programming with NetLogo to apply towards STEM curriculum using real-world applications.

**June 15 – 19**

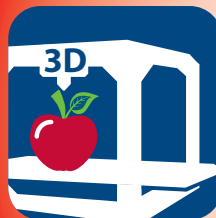


### FUSION/ASTROPHYSICS

Focuses on properties of electromagnetic radiation, spectroscopy, gravitation, and nuclear physics using tools employed in research laboratories through hands-on activities.

**Workshop 1: June 17-19**

**Workshop 2: June 22-26**



### 3D PRINT & DESIGN

Incorporates modeling, design, and three-dimensional printing for introduction to curriculum, print everyday objects from computational models using Tinkercad.

**Workshop 1: July 8 – 10**

**Workshop 2: July 13 – 17**



**REGISTER ONLINE:** [EDUCATION.LLNL.GOV](http://EDUCATION.LLNL.GOV)  
**REGISTRATION OPENS: FEBRUARY 2020**

Sponsored by the University Relations and Science Education Program  
Edward Teller Education Center (B6675) | Off Greenville Rd at East Gate Drive  
Lawrence Livermore National Laboratory | Livermore, CA 94550