



Aligned with NGSS Disciplinary Core Ideas  
& Scientific and Engineering Practices

## 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 online
- Virtual tours of research facilities
- Learn how to apply Common Core technical communication skills
- Use cutting edge science processes and practices found in research laboratories

Continuing education credit available—CSU Chico

TIME: 8:30 am – 2:30 pm daily

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REGISTER ONLINE:  
EDUCATION.LLNL.GOV

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Lawrence Livermore National Laboratory | Livermore, CA 94550

# VIRTUAL PROFESSIONAL DEVELOPMENT WORKSHOPS



### 3D PRINT & DESIGN

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

July 13 – 17



### 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 – 17



### BIOSCIENCE

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

July 6 – 10



### 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 – 17



### FUSION/ASTROPHYSICS

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

June 8 – 12



### PHYSICS WITH PHONE SENSORS

This workshop focuses hands-on activities designed to use science and engineering practices to explore core disciplinary ideas in physics using sensors in your smartphone.

June 22 – 26