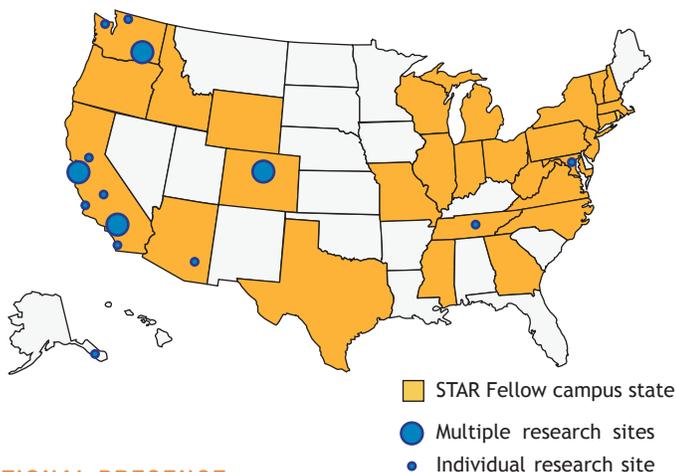




# research experiences for science and math educators



## NATIONAL PRESENCE

Partnering with the NSF Robert Noyce Teacher Scholarship Program and regional funders, STAR is a national program with participation from over half of all US states.

## STAR DELIVERABLES

STAR fellows produce a research poster viewable at: [digitalcommons.calpoly.edu/star](http://digitalcommons.calpoly.edu/star). Additionally, fellows create a classroom lesson or computer coding lesson plan consistent with NSGG standards. Visit our website at [StarTeacherResearcher.org](http://StarTeacherResearcher.org) for information and videos featuring the structure and impacts of the STAR Program.

## PARTNERS

STAR collaborates with national laboratories to provide cutting-edge research opportunities for aspiring teachers. Funding partners include public agencies (e.g., NSF, NOAA), and private organizations (e.g., Chevron).



## BY THE NUMBERS

>100K

students taught by STAR teacher-researchers to date

640

research internships provided since 2007

471

aspiring and early career participants

76

CSU and Noyce campuses with participants

28

cooperating laboratory facilities (national, university, and non-profit)



## IMPROVING THE RECRUITMENT, PREPARATION & RETENTION OF SCIENCE AND MATH TEACHERS

The STEM Teacher and Researcher (STAR) Program offers paid summer research experiences for aspiring K-12 STEM teachers. STAR enhances teaching and learning by engaging future educators in science, engineering, and mathematical practices as a part of their teacher recruitment and preparation. These STAR fellows are then better prepared to train the next generation of STEM professionals.

STAR is managed on behalf of the California State University (CSU) system by the Cal Poly Center for Engineering, Science and Mathematics Education (CESAME).

# partnering with the CSU to improve teacher preparation

### LESSON PLAN DISSEMINATION

All STAR Fellows produce lesson plans that capture the authentic research flavor of the STAR experience. Check out the following exemplar being presented at this year's STEAM Symposium. More details available at: <https://spacescience.arc.nasa.gov/microecobiogeomeadow-parks-middle-school-aquaponics-project-online/>.



Anne McHugh's 8th grade class at Meadow Park Middle School.



**One Step Closer to Mars with Aquaponics: STAR Activity!**  
**December 10, 2017, 11:45 a.m. to 12:45 p.m., Room: 3000**  
**Program ID: 201**

**Strand:** Supporting STEM/STEAM through 21st Century Learning Environments

**Pathways:** Making Standards Come Alive,

**Description:** Discover how the Mars generation can contribute to long distance space travel through real-world classroom inquiry and engineering design using replicate aquaponics systems. Leave with a high-engagement science inquiry and engineering design unit developed during summer research as NASA Ames.

**Anne McHugh:** Science Teacher, Beaverton School District; STAR Fellow, NASA Ames

**John Keller:** Cal Poly San Luis Obispo, STAR Program