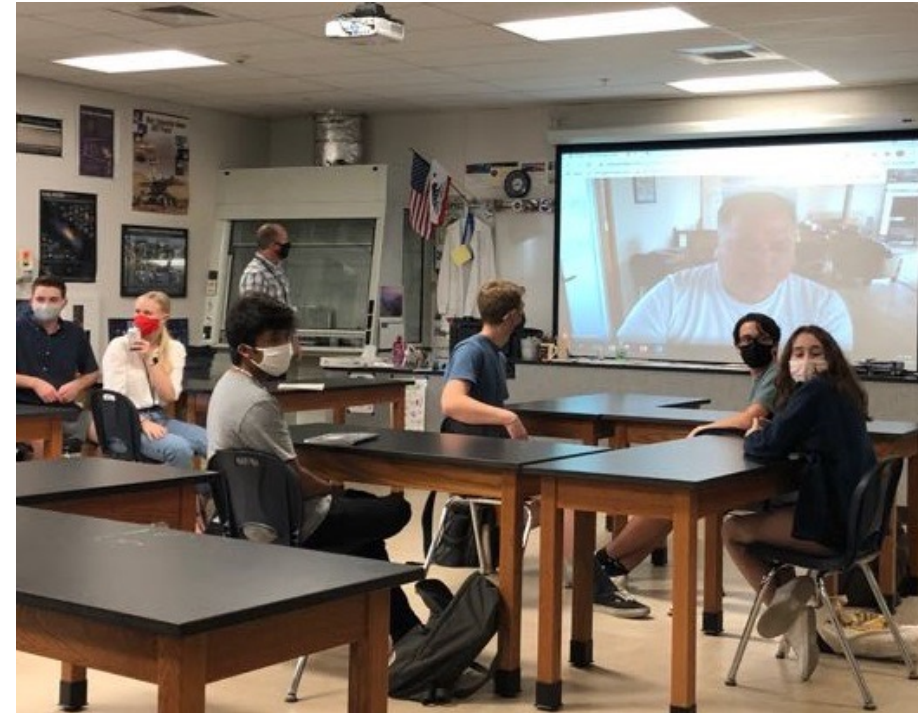


# Science Education Outreach: SSX Scientists Manage the Only Astrobiology Intern Program in the National Park Service

**Science Background.** Dave Des Marais (SSX), Niki Parenteau (SSX), and Mike Kubo (SSX/SETI) facilitated the 13th year of the Red Bluff High School Astrobiology Internship Program, which culminated in a graduation ceremony and public lecture on May 24, 2021. The program is a partnership between NASA ARC, Lassen Volcanic National Park, and Red Bluff High School, in rural Red Bluff, CA. It is the only astrobiology intern program within the entire National Park Service.

**Findings.** Each year students in the internship program travel to Lassen Volcanic National Park alongside NASA ARC scientists to gather samples from the volcanic land to see how they might compare to geology on other planets. Through lab and field work, they aim to understand how volcanic and hydrothermal processes affect microbe communities in the park. These microbes, which thrive in extreme environments, may help scientists learn more about life on early Earth or Mars.

**Impact.** The course emphasizes hands-on experiments and encourages students to think critically and solve problems. The content of the course integrates multiple disciplinary core concepts, including Earth Materials and Systems in the Earth and Space Sciences, Chemical Reactions in the Physical Sciences, and Interdependent Relationships in Ecosystems found in the Life Sciences. The overall goal of the program is to improve science literacy and increase interest in space science and STEM disciplines.



*NASA Ames scientist Mike Kubo addresses a class of interns via remote conferencing during the Astrobiology Program at Red Bluff High School. (Photo courtesy of David Michael, RBHS)*