

AMERICAN CLIMATE LEADERSHIP AWARDS

Celebrating Action from Local to National

HOW-TO GUIDE

High School Student Advancing Climate Solutions Through Research, Outreach, and Education

[Siddhan Shah - Tri-Valley Youth Climate Action Project](#)



[Watch Video](#)

Student Sid has led a heat mapping research study in partnership with TVYCAP (a local environmental nonprofit) and taught local residents about various environmental challenges.

Sid identified local Urban Heat Islands (UHIs) covering 80k residents with temperatures 14° higher than surrounding areas. These hotspots can result in heat-related illnesses and deaths, a rise in power outages, as well as increased utility rates. Sid and his fellow students designed low-cost sensors to install in city locations and on personal cars. He also helped map out 3 high schools to detect potential UHI hotspots.

They proposed various strategies to mitigate these issues, such as reflective coating on roofs, expanding shade structures, and increasing the vegetation on campus. He also built an application to identify UHIs by creating heatmaps and integrating satellite and user data.

Sid and his fellow volunteers have also hosted the Tri-Valley Youth Summit and Innovation Fair annually to teach children to create climate change solutions. He also worked at a national environmental nonprofit to create an online environmental course for U.S. high schools.

Replicate This!

How To Get Started

1. Collect data for your research topic
2. Work with state water districts to research solutions
3. Create a presentation outlining your issue and its effects
4. Present to civic or local authorities
5. Look for avenues to implement local initiatives to mitigate climate change