

REPORT 2022/2023



SCIENCE IN OUR COMMUNITY PRESENTS



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Acknowledgements

MISSION STATEMENT

The Stan State Science in Our Community Outreach Program is dedicated to science education and public engagement. This program, supported by volunteer efforts of Stan State students, faculty, and staff, provides STEM activities to educationally and economically disadvantaged students in the campus's service area.

VISION STATEMENTS

The Science in Our Community STEM Outreach Program seeks to:

- · encourage the community to visit the local campus;
- encourage students to be engaged in STEM subjects (Science, Technology, Engineering, and Mathematics);
- encourage local students to attend Stan State and consider a STEM major, especially those populations underrepresented in the STEM Community (i.e., Hispanics and women);
- allow Stan State students to teach the community about Science and its importance in society today;
- promote Science as lifelong learning for all citizens.





STEM Ambassadors

The STEM Ambassador Program is a substantial volunteer program for undergraduate students in STEM and non-STEM disciplines. This program provides Stan State students the opportunity to develop leadership and teamwork skills and the ability to share their knowledge of Science gained in the classrooms with a K-12 audience. Internships are also available if students desire to earn credit for their participation. In addition, STEM Ambassadors lead classroom activities for the Junior Scientist and Solar Suitcase Program and take the lead in preparing and conducting Science Saturday and Science Day activities.

Science Day

In person: The open-house environment will feature 10 a.m. to 2 p.m. activities in the Naraghi Hall of Science, the Science 1 Building, the Greenhouse, and the Sustainable Garden. There will also be tours of the Trans-California Pathway, an outdoor arboretum featuring plant communities native to a transect of California from the Central Valley to the High Sierra. With more than 40 activities available, students and their families will receive a "Passport to Science" booklet to track their activities throughout the day.

Science Fairs

In person: STEM Ambassadors and other student volunteers take two or more STEM interactive activities to the school site. They work with the K-12 students and the community members on these activities while answering their questions about Science concepts.

PROGRAMS CONT:

Junior Scientist

Virtual: The program works virtually with Cunningham Elementary, Wakefield Elementary, and Osborn Elementary. In which STEM Ambassador takes the lead on one-hour science lessons free of cost. We also provide the schools with material allowing students hands-on experience. While doing this, we continue to align the in-class curriculum.

Science Saturday

In person: Science Saturday involves three hours of exploring one science discipline with two to three activities focused on that discipline. The faculty, staff, and STEM Ambassadors lead these activities.

Delhi Medical Academy

In person: This program serves students within the Delhi Unified School District who are interested in using their high school experience as a pathway to careers in healthcare. The program targets qualified and motivated high school students. The program's goals are to provide high school students with hands-on experience and practical knowledge. This allows them to explore different career opportunities in the health industry. Its' focus is to assist and support educationally and economically disadvantaged students to successfully prepare for entry-level or post-secondary study positions in health care after graduation. Additionally, it exposes students to colleges and universities at the undergraduate and graduate levels.

PROGRAMS CONT:

Bird Walk

In person: Faculty member takes the lead on doing a small Walk around near Naraghi Hall of Science while talking about the Bird species on campus. Along with providing binoculars for the participants for the session to observe the Bird species on campus. These sessions are offered to all ages every semester each month.

Classroom Visits

In person: The classroom visits involve the faculty, staff, or STEM Ambassadors taking the lead on creating and presenting an activity by going into the classroom in person or virtually.

STEM Series

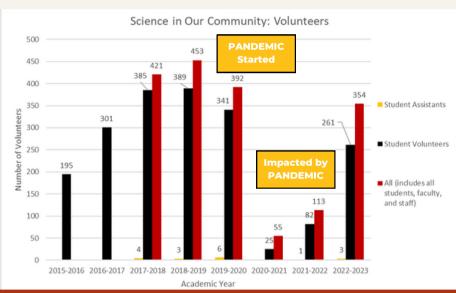
In person: This program started in Spring 2023 and was led by a STEM Ambassador who worked with fellow students, staff, and faculty members to create multiple STEM activities. These activities were led over a Month, once every week. The program allows the K-12 students to work on multiple topics and build on what they learn over the multiple sessions while learning the techniques they would use as College students (e.g., keeping lab journals, lab safety, and more). The event was held on Stan State campus, allowing students to work in various labs and classrooms.



Volunteers Data 2022-2023

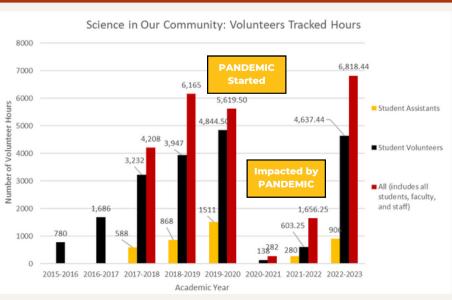
DUE TO THE ONGOING PANDEMIC, STARTING THE ACADEMIC YEAR OF 2020-2021, ALL THE SCIENCE IN OUR COMMUNITY ACTIVITIES WERE PRESENTED VIRTUALLY, SUCH AS ZOOM, THE SCIENCE IN OUR COMMUNITY WEBPAGE, AND OUR SIOC YOUTUBE CHANNEL. THIS ENSURED THAT WE WERE FOLLOWING THE GUIDELINES OF THE CENTER FOR DISEASE CONTROL AND PREVENTION (CDC) AND ENSURING THE SAFETY OF THE STUDENTS, FACULTY, STAFF VOLUNTEERS, AND COMMUNITY MEMBERS.

THUS, THE SCIENCE IN OUR COMMUNITY PROGRAM HAS BEEN CONDUCTED VIRTUALLY FOR 2020-2022.



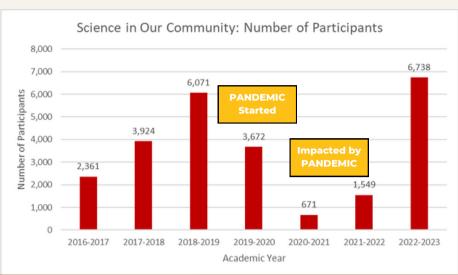
FROM THE ACADEMIC YEAR 2021-2022 TO 2022-2023, SCIENCE IN OUR COMMUNITY INCREASED BY MORE THAN 213% STAN STATE STUDENT VOLUNTEERS AND 90 COLLEGE OF SCIENCE PROFESSORS AND STAFF MEMBERS.

ALL VOLUNTEERS CONTRIBUTED **MORE THAN 1.656 HOURS OF VOLUNTEER TIME,** AN INCREASE OF **OVER 312% FROM** THE PREVIOUS YEAR. THESE VOLUNTEERS CONTRIBUTED **ABOUT** \$254,447.76 **WORTH OF** VOLUNTEER TIME**.



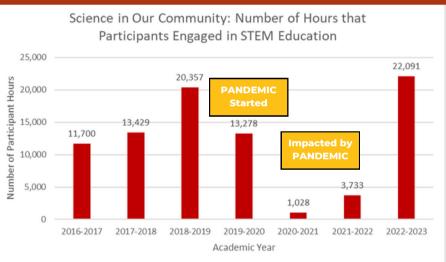
^{**}Value of Volunteer Time Report | Independent Sector Resources

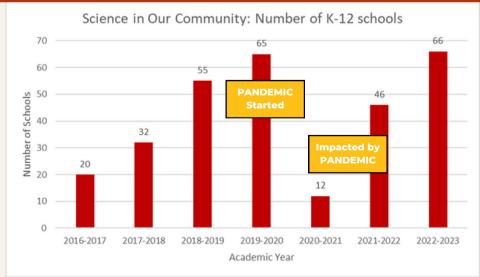
Number and hours of Participants Engaged in STEM Education 2022-2023



SCIENCE IN OUR
COMMUNITY
SERVED MORE THAN
6,738
PARTICIPANTS,
WHICH IS AN
INCREASE OF MORE
THAN 335% FROM
THE PREVIOUS
YEAR. THE NUMBER
OF PARTICIPANTS
REPRESENT MORE
THAN 9% OF
**POPULATION IN
TURLOCK IN 2023.

THE PARTICIPANTS
RECEIVED MORE
THAN 22,091
HOURS OF FREE
HANDS-ON STEM
INSTRUCTION.
THIS IS AN
INCREASE OF
MORE THAN 492%
FREE HANDS-ON
STEM
INSTRUCTION
HOURS.





THE PROGRAM
SERVED OVER 66
SCHOOLS IN
OUR REGION.

^{**}TURLOCK, CALIFORNIA POPULATION 2023 (DEMOGRAPHICS, MAPS, GRAPHS) (WORLDPOPULATIONREVIEW.COM)

1	ASPIRE 4 PALS: SOLAR SUITCASE
2	JUNIOR SCIENTIST-OSBORN ELEMENTARY SCHOOL: MAKE A MARKER MAN FLOAT
3	JUNIOR SCIENTIST-CUNNINGHAM ELEMENTARY SCHOOL: MAKE A MAKER MAN FLOAT
4	JUNIOR SCIENTIST-WAKEFIELD ELEMENTARY SCHOOL: MAKE A MAKER MAN FLOAT
5	FARMER'S MARKET: HOW TO MAKE A MARKER MAN FLOAT
6	FARMER'S MARKET: MICROSCOPE ORGANISM DISPLAY
7	FARMER'S MARKET: COLORING PAGES
8	JUNIOR SCIENTIST-OSBORN ELEMENTARY SCHOOL: WAVES & FREQUENCY
9	JUNIOR SCIENTIST-CUNNINGHAM ELEMENTARY SCHOOL: WAVES & FREQUENCY
10	JUNIOR SCIENTIST-WAKEFIELD ELEMENTARY SCHOOL: WAVES & FREQUENCY
11	SCIENCE SATURDAY: FABULOUS FIBERS
12	ASTRONOMY NIGHT: ROTATING IMAGES AND SHORT TALKS
13	ASTRONOMY NIGHT: MAKE YOUR OWN STRAW ROCKET
14	ASTRONOMY NIGHT: MAKE YOUR OWN PLANET
15	ASTRONOMY NIGHT: MAKE YOUR ASTRONANUT FLOAT
16	ASTRONOMY NIGHT: WHAT DID HUBBLE SEE ON YOUR BIRTHDAY?
17	ASTRONOMY NIGHT: DIFFRACTION GRATINGS AND LAMPS
18	ASTRONOMY NIGHT: COSMIC RAY DETECTOR
19	ASTRONOMY NIGHT: SCALE MODEL OF SOLAR SYSTEM
20	ASTRONOMY NIGHT: TELESCOPES OUTSIDE
21	ASTRONOMY NIGHT: ROOF TELESCOPE

22	BIRD WALK 1
23	BIRD WALK 2
24	DELHI MEDICAL ACADEMY: EKG
25	DELHI MEDICAL ACADEMY: CELLS, LOOKING UNDER THE MICROSCOPE
26	ENVIRONMENTAL COMMUNITY RESOURCES FAIR: OZOBOTS
27	ENVIRONMENTAL COMMUNITY RESOURCES FAIR: COLORING PAGES
28	JUNIOR SCIENTIST-CUNNINGHAM ELEMENTARY SCHOOL: CELL BAGGIE MODEL
29	JUNIOR SCIENTIST-OSBORN ELEMENTARY SCHOOL: CELL BAGGIE MODEL
30	JUNIOR SCIENTIST-WAKEFIELD ELEMENTARY SCHOOL: CELL BAGGIE MODEL
31	BIRD WALK 3
32	SCIENCE DAY: VIDEO SHORTS
33	SCIENCE DAY: MATH: TO INFINITY AND BEYOND!
34	SCIENCE DAY: PHYSICS DEMONSTRATIONS
35	SCIENCE DAY: ELECTRICITY AND OPTICS SHOW
36	SCIENCE DAY: THE OFFICE OF INFORMATION ON TECHNOLOGY (OIT) CONNECTION
37	SCIENCE DAY: WARRIOR FAB LAB
38	SCIENCE DAY: AVIAN ADVENTURE
39	SCIENCE DAY: PALENTOLOGIST FOR THE DAY
40	SCIENCE DAY: LIFE IN COLD BLOOD
41	SCIENCE DAY: CREATE YOUR OWN "MARSHMOOUTH"
42	SCIENCE DAY: THE SCIENCE BEHIND SLIME

43	SCIENCE DAY: INVESTIGATING THE HUMAN BODY: LEARNING ABOUT YOUR HEART, LUNGS, AND SKELETON
44	SCIENCE DAY: CELL ALIVE!
45	SCIENCE DAY: COLOR OF SCIENCE
46	SCIENCE DAY: LEARN ABOUT INVASIVE SPECIES
47	SCIENCE DAY: MOSQUITOES AND MOSQUITO DISESES
48	SCIENCE DAY: MATH ACTIVITIES
49	SCIENCE DAY: RECYCLING & COMPOSING
50	SCIENCE DAY: CLIMATE CHANGE AND YOU
51	SCIENCE DAY: WANT TO TEACH SCIENCE?
52	SCIENCE DAY: INSITE-THE INSTITUTE FOR SYMBIOTIC, INTERACTIONS, TEACHING, AND EDUCATION IN THE FACE OF A CHANGING CLIMATE
53	SCIENCE DAY: HOW TO JUDGE A LIQUID USING NUCLEAR MAGNETIC RESONANCE SPECTROSCOPY
54	SCIENCE DAY: DART MASS SPECTROSCOPY
55	SCIENCE DAY: PUT YOUR FABRIC TO THE TEST
56	SCIENCE DAY: IT'S ELECTRIC
57	SCIENCE DAY: CHEEK CELL SLIDES
58	SCIENCE DAY: ARE YOUR STRONGER THAN COTTON?
59	SCIENCE DAY: PERIODIC TABLE
60	SCIENCE DAY: CHEMISTRY GOES POP!
61	SCIENCE DAY: SOLAR OBSERVING
62	SCIENCE DAY: PLANT A MILKWEED ON TRANS-CA PATHWAY!
63	SCIENCE DAY: TOUR OF POLLINATOR GARDEN

64	SCIENCE DAY: POLLINATOR ART
65	SCIENCE DAY: NORTHERN SAN JOAQUIN NATIVE PLANT SPECIES (CNPS)
66	SCIENCE DAY: KNOW YOU VEGETABLES
67	SCIENCE DAY: GREENHOUSE TOURS
68	SCIENCE DAY: WOMEN IN STEM
69	SCIENCE DAY: CODING WITH OZOBOTS
70	SCIENCE DAY: 3D PENS
71	SCIENCE DAY: FORENSIC BIOTECH ACADEMY
72	SCIENCE DAY: FLOATING ART
73	SCIENCE DAY: STRAW ROCKETS
74	SCIENCE DAY: THE ADMISSIONS AND OUTREACH SERVICES OFFICE
75	SCIENCE DAY: ASPIRE GRANT
76	SCIENCE DAY: CURL UP WITH A GOOD SCIENCE BOOK!
77	SCIENCE DAY: STEM AMBASSADORS
78	SCIENCE DAY: ROBOTS IN NURSING
79	SCIENCE DAY: PRACTICE MAKES PERFECT
80	SCIENCE DAY: ULTRASOUND, CAN YOU FIND MY HEART?
81	SCIENCE DAY: YOUR LUNGS WILL BLOW YOUR MIND WITH OUT MAKE A LUNG ACTIVITY!
82	SCIENCE DAY: INTUITIVE ROBOT
83	SCIENCE DAY: SQUID DISSECTION
84	SCIENCE DAY: WARRIOR YOUTH PROGRAM INFORMATIONAL BOOTH

85	SCIENCE DAY: LET'S MAKE A BOUNCY BALL
86	SCIENCE DAY: CHEMISTRY REACTIONS
87	SCIENCE DAY: LAVA LAMP
88	SCIENCE DAY: DENSITY COLUMN
89	SCIENCE DAY: TORNADO IN JAR
90	SCIENCE DAY: SURFACE TENSION
91	SCIENCE DAY: GETTING PSYSCHED ABOUT THE SCIENCE OF PSYCHOLOGY
92	SCIENCE DAY: STANISLAUS AUDUBON SOCIETY
93	FUN WITH SCIENCE NIGHT: OZOBOTS
94	FUN WITH SCIENCE NIGHT: MICROSCOPE ORGANISM DISPLAY
95	FUN WITH SCIENCE NIGHT: STEM QUESTIONS
96	FUN WITH SCIENCE NIGHT: COLORING PAGES
97	FAMILY STEAM NIGHT: OZOBOTS
98	FAMILY STEAM NIGHT: MICROSCOPE ORGANISM DISPLAY
99	FAMILY STEAM NIGHT: STEM QUESTIONS
100	FAMILY STEAM NIGHT: COLORING PAGES
101	SPRING CARNIVAL: STRAW ROCKETS
102	SPRING CARNIVAL: STEM QUESTIONS
103	STEM SERIES: FAB LAB "CREATE A CUSTOM BUTTON & 3D PEN"
104	STEM SERIES: MAKE YOUR OWN CELL CHARM
105	BIRD WALK 4

106	STEM SERIES: OBSERVING MICROORGANISMS WITH MICROSCOPES
107	STEM SERIES: STRAWBERRY DNA EXTRACTION
108	STEM SERIES: GROW YOUR OWN GARDEN/FLOWERS & VEGETABLES
109	DELHI MEDICAL ACADEMY: ACID/BASE BALANCE
110	DELHI MEDICAL ACADEMY: EPIDEMIOLOGY
111	STEM SERIES: MAKE AN ATOMIC MODEL
112	STEM SERIES: ENGINEER A MARSHMALLOW TOWER
113	STEM SERIES: COLOR WITH CABBAGE PH OF ACIDS AND BASES
114	JUNIOR SCIENTIST-CUNNINGHAM ELEMENTARY SCHOOL: ROCK CANDY LAB
115	JUNIOR SCIENTIST-WAKEFIELD ELEMENTARY SCHOOL: ROCK CANDY LAB
116	STEM SERIES: MAKE A BLOOD MODEL
117	STEM SERIES: BUILD A NEURON!
118	STEM SERIES: BUILD A PROTEIN/MUTANT PROTEINS
119	BIRD WALK 5
120	CLASSROOM VISIT: STATE OF MATTER



K-12 Schools that Participants Came From 22-23

1	ANOTHONY CATHOLIC SCHOOL
2	ASPIRE VANGUARD COLLEGE PREPARATORY ACADEMY
3	BLAKER-KINSER JUNIOR HIGH SCHOOL
4	BRET HARTE ELEMENTARY SCHOOL
5	BUHACH COLONY HIGH SCHOOL
6	CARROLL FOWLER ELEMENTARY SCHOOL
7	CONNECTING WATERS CHARTER SCHOOL
8	CROWELL ELEMENTARY SCHOOL
9	CUNNINGHAM ELEMENTARY SCHOOL
10	DANIEL SAVADE MIDDLE SCHOOL
11	DELHI HIGH SCHOOL
12	DELTA CHARTER SCHOOL
13	DENNIS EARL ELEMENTARY SCHOOL
14	DUTCHER MIDDLE SCHOOL
15	ELIM ELEMENTARY SCHOOL
16	EVELYN HANSHAW MIDDLE SCHOOL
17	FRANKLIN ELEMENTARY SCHOOL
18	FRED C. BEYER HIGH SCHOOL
19	FREEDOM ELEMENTARY SCHOOL
20	GLADYS POET-CHRISTIAN ELEMENTARY SCHOOL
21	GRATTON CHARTER SCHOOL
22	GREAT VALLEY ACADEMY SCHOOL

K-12 Schools that Participants Came From 22-23 Cont.

23	GREAT VALLEY ELEMENTARY SCHOOL
24	GUSTINE ELEMENTARY SCHOOL
25	HARMONY ELEMENTARY SCHOOL
26	HICKMAN CHARTER SCHOOL
27	HICKMAN MIDDLE SCHOOL
28	HILMAR MIDDLE SCHOOL
29	JAMES C. ENOCHS HIGH SCHOOL
30	JOHN H. PITMAN HIGH SCHOOL
31	JOSEPH A. GREGORI HIGH SCHOOL
32	JULIEN ELEMENTARY SCHOOL
33	KEYES ELEMENTARY SCHOOL
34	KEYES TO LEARNING CHARTER SCHOOL
35	LA ROSA ELEMENTARY SCHOOL
36	LAS PALMAS ELEMENTARY SCHOOL
37	LIVINGSTON HIGH SCHOOL
38	LIVINGSTON MIDDLE SCHOOL
39	LOS BANOS ELEMENTARY SCHOOL
40	MALONADO HOMESCHOOL ACADEMY
41	MARTINEZ ELEMENTARY SCHOOL
42	MESA VERDE ELEMENTARY SCHOOL
43	MONTE VISTA MIDDLE SCHOOL
44	MOUNTAIN TOP CHRISTIAN ACADEMY

K-12 Schools that Participants Came From 22-23 Cont.

45	NORTHMEAD ELEMENTARY SCHOOL
46	OSBORN ELEMENTARY SCHOOL
47	PARADISE ELEMENTARY SCHOOL
48	SACRED HEART CATHOLIC PRESCHOOL
49	SACRED HEART CATHOLIC SCHOOL
50	SACRED HEART ELEMENTARY SCHOOL
51	SAINT ANTHONY'S CATHOLIC SCHOOL
52	SANDRA T. MEDEIROS ELEMENTARY SCHOOL
53	SELMA HERNDON ELEMENTARY SCHOOL
54	ST. ANTHONY SCHOOL
55	ST. STANISLAUS CATHOLIC SCHOOL
56	TURLOCK CHRISTIAN ELEMENTARY SCHOOL
57	TURLOCK CHRISTIAN JUNIOR HIGH SCHOOL
58	TURLOCK EARLY CHILDHOOD EDUCATION
59	TURLOCK HIGH SCHOOL
60	TURLOCK JUNIOR HIGH SCHOOL
61	USTACH MIDDLE SCHOOL
62	VALLEY COLLEGE HIGH SCHOOL
63	VIRGINIA PARKS ELEMENTARY SCHOOL
64	WAKEFIELD ELEMENTARY SCHOOL
65	WALNUT ELEMENTARY SCHOOL
66	YAMATO COLONY ELEMENTARY SCHOOL

Higher Education that Participants Came From 22-23

1	CALIFORNIA STATE UNIVERSITY, STANISLAUS
2	MODESTO JUNIOR COLLEGE
3	UNIVERSITY OF CALIFORNIA, MERCED

Day Care Program that Participants Came From 22-23

1 CALIFORNIA STATE UNIVERSITY, STANISLAUS-CHILD DEVELOPMENT CENTER

Elderly Care Program that Participants Came From 22-23

1 COVENANT LIVING OF TURLOCK

STAFF & TEAM MEMBERS

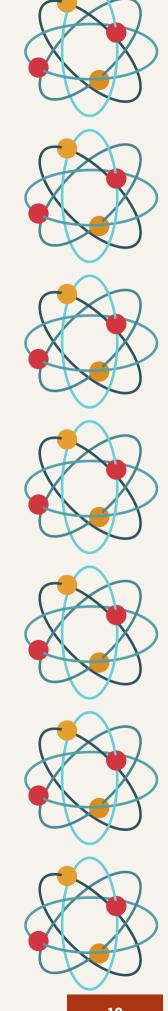












NEXT STEPS:

In 2023-2024, the Science in Our Community program will continue to offer programs such as Junior Scientist, Science Saturday, Science Day, and more. The program will continue to focus more on grants to support the program to continue providing the students and community with these opportunities. The program will take the feedback from Science Day 2023 to make changes to Science Day.

Junior Scientist & Science Saturday

The program will take feedback from Junior Scientist school sites and make changes, if necessary. Science Saturdays will continue to be offered in person.





Science Day

Take the feedback received for Science Day and make modifications to the event to make it more.

Grants

The team will continue to work on finding and applying for grants that align with Science in Our Community program.



Acknowledgements

Listed below are names of those who supported the Science in Our Community throughout this past year in making these events possible:

- Science in Our Community Steering Committee Members:
 - Dr. Elvin Aleman
 - Dr. Andrew Gardner
 - Ms. Shannon Hernandez
 - 。 Dr. Brian Jue

- 。 Dr. Dae Hee Kim
- Dr. Wendy Matthew
- Dr. Brian Morsony
- Mr. Alfredo Vargas
- Teacher Recruitment and Retention Program
- Dr. Mark Grobner
- Dr. Oddmund Myhre
- Student Volunteers:
 - Spoogmai Ahmad
 - Margaret Creighton
 - Mahnoor Raza
- STEM Ambassadors and Stan State Student Volunteers
- Stan State Science Faculty Volunteers
- Other Stan State Staff members
- Stan State Student STEM Clubs

We thank everyone for their continued support to the Science in Our Community Program.

