

# UCSanDiego (CReaTe

Center for Research on Educational Equity, Assessment & Teaching Excellence

## ANNUAL REPORT

Academic Year 2022-2023

# CREATE works with partners to #CREATE quity in San Diego's educational opportunities.

For 25 years, CREATE has helped leverage UC San Diego's resources to

# INVEST IN SAN DIEGO'S YOUNG PEOPLE

before they apply to college.



- We also support students by investing in the K-12 educators who serve them.
- We support precollege efforts for K-12 students, teachers, families, schools, districts, and community organizations in the San Diego and Imperial Valley regions.
- We support **community college connections**.
- We help UC San Diego colleagues to design programming to meet key local education needs.
- We also research and evaluate K-12 and K 20 education efforts so they #CREATEequity!

## CREATE

## Sub-Projects/Sub-Organizations, guided by Themes

#### K-12 COLLEGE PREPARATION & K20 STUDENT SUCCESS

- Early Academic Outreach Program
- TRIO Outreach Programs
- Other student-focused programming:
  - CREATE STEM Success K20 Outreach
  - LISTEN Lab: Youth Participatory Research
    - CS LISTEN
    - UC LISTEN
  - #USvsHate

#### **TEACHER PROFESSIONAL DEVELOPMENT**

- San Diego Area Writing Project
- California Reading and Literature Project
- UC San Diego Math Project
- San Diego Science Project
- Computer Science PD
  - Code.org
  - Computer Science Teachers Association San Diego Chapter
- #Schooltalking

## EDUCATION OUTREACH, PARTNERSHIPS, & COMMUNITY-BUILDING: MAJOR SUB-PROJECTS & GRANTS

- Defense STEM Education Consortium (DSEC)
- NCWIT Aspirations in Computing
- Climate Champions
- Coding Our Future
- CSforEL
- Code Si / Bilingual Coding Nights

#### **CREATE EQUITY K20 CONSULTING**

- Supports for Education Program Design & Evaluation
  - CREATE STEM Success Initiative
  - Recent Supports to Faculty

#### **RESEARCH & EVALUATION**

- Recent Research in Equity and Education
- Evaluation of Education-related Projects & Activities

**10-YEAR VISION: #CREATEquity DESIGN LABS** 

## SAPEP P-20 = CREATE

## Student Academic Preparation and Educational Partnerships (SAPEP)

K-20 Regional Intersegmental Alliances (also known as P-20) align campus SAPEP programs and their local and regional K-20, community and business partners to increase rates of "a-g" course completion and college enrollment.

Reference: Student Academic Preparation & **Educational Partnerships Impact Framework** 

## Broadly, SAPEP programs include:

- Articulation/ASSIST
- ArtsBridge
- EAOP
- MESA Community College
- MESA College Prep
- Puente Community College
- Puente High School
- P-20
- Student-Initiated Programs
- Transfer Prep
- UC Links
- UC Scout

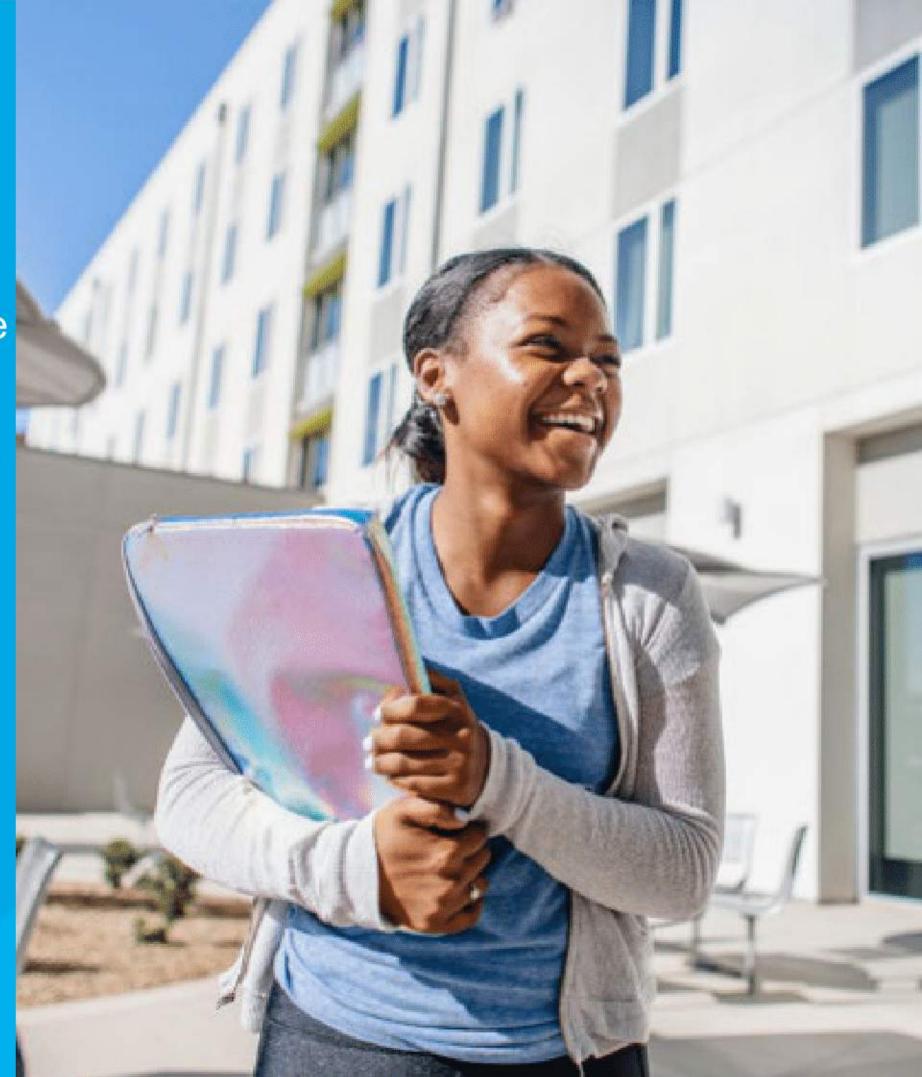
Reference: SAPEP 2019-20 Fact Sheet

## OUTREACH AND EDUCATIONAL PARTNERSHIPS SANDRA WILLIAMS-HAMP, EXECUTIVE DIRECTOR

- Advance the University's 2030 goals anchored in expanding equity and access
- Expand pipeline opportunities for community college and transfer intending high school students
- Expand and support regional K-20 collaborations
- Increase our data support and communications
- Encourage collaboration and innovation across our K-20 outreach and academic preparation portfolio
- Expand professional growth and learning
- Nurture new coalitions with strategic partners



Graduate, Undergraduate and Equity Affairs



## SAPEP P-20 = CREATE

## **SNAPSHOT OF P-20 SYSTEMIC WORK**

- Helps provide support and opportunities directly to students in partner schools, both via school-specific programs and as part of larger programs
- Partners with schools across our region and has formal, historic, signed-MOU partnerships with two, and existing signed MOUs and/or scopes of work with districts for various more specific partnership projects.
- **Provide support** to our formal partnership schools at the administrative and policy levels
- Provide support to educators in partner schools, both as school-specific programs and as parts of larger programs

• Serves as the hub organization (as SAPEP P-20) that supports administratively and financial programs inside our organization (CSMPs and EAOP/TRIO)

Our SAPEP work, which lives at CREATE, also steer campus, community, and philanthropic/grant resources toward remedying particular K12 opportunity gaps affecting underrepresented students in our region.



## SYSTEMATIC PARTNERSHIPS THAT CREATE WORKS WITH TO CREATE K-12 OPPORTUNITIES TO LEARN:

#### **CREATE-AFFILIATED PARTNERS:**

Code.org, Early Academic Outreach Program, San Diego Computer Science Teachers' Association, Math for America San Diego, San Diego Science Project, San Diego Area Writing Project, TRIO, UC San Diego Mathematics Project, National Center for Women & Information Technology (NCWIT) Aspirations in Computing.

#### **ON-CAMPUS ADMINISTRATION PARTNERS (ALL UCSD):**

Analytical Writing Program, Birch Aquarium at Scripps Institution of Oceanography (SIO), Center for Student Involvement, Chancellor's Associates Scholars Program, Eleanor Roosevelt College, Extension, Halicioglu Data Science Institute, Qualcomm Institute, San Diego Supercomputer Center, Scripps Institution for Oceanography, Student Affairs, Teaching + Learning Commons, and Thurgood Marshall College.

## ON-CAMPUS ACADEMIC/FACULTY PARTNERS (FROM THE FOLLOWING DEPARTMENTS/SCHOOLS):

Biology, Economics, Education Studies, Jacobs School of Engineering, Mathematics, Pharmacy, Physics, School of Medicine, San Diego Education Research Alliance (SANDERA) (of Economics), and Sociology

#### OTHER EDUCATIONAL INSTITUTIONS/ORGANIZATIONS

Balboa Park Museums, California Environmental Literacy Initiative, California NGSS Collaborative, Earthlab, Elementary Institute of Science, San Diego County Office of Education, San Diego Unified School District, Sweetwater Union High School District, High Tech High, Malcolm X Library, Parent Institute for Quality Education (PIQE), Reuben H. Fleet Science Center, Teaching Tolerance, and the overall National Center for Women & Information Technology (NCWIT)

#### **EXTERNAL FUNDING PARTNERS**

Clean Tech, Department of Defense, Gates Foundation, National Science Foundation, Patricia and Christopher Weil Family Foundation, U.S. Department of Education, Gary Kraut (philanthropist), JP Morgan Chase (alumna donor), Rohr STEM Fund, Price Philanthropies, and Yankelovich Center for Social Science Research

# K12 COLLEGE PREPARATION & K20 STUDENT SUCCESS

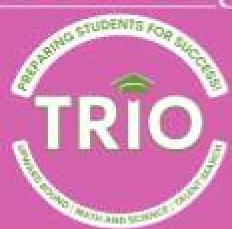
## Early Academic Outreach Program (EAOP) eaop.ucsd.edu

- In Fall 2022, of the **81 EAOP students** enrolling in the UC system, **50 came to UC San Diego**. 2/3 of those heading to UC San Diego were Latinx. EAOP serves low income, first generation students enrolling in UC San Diego and college overall.
- This year, an estimated **1,900 EAOP** (and TRIO) students and family members came to our campus for **Comienza Con Un Sueno** ("It Begins With a Dream"), including from Imperial Valley.
- This year, EAOP started an intentional African American Scholars Initiative.

Students recently served: Projected ~9,000



## UC San Diego



Our program houses five federally funded TRIO programs: two Upward Bound programs, two Upward Bound Math & Science programs and a Talent Search program.

Collectively, we serve more than 900 low income, first generation students in 13 schools across San Diego County.

Carri Fierro, Director

Susan Perez, Associate Director s3perez@ucsd.edu

UC San Diego



## UPWARD BOUND | UPWARD BOUND MATH & SCIENCE | TALENT SEARCH

## PROGRAM HIGHLIGHTS

#### SUMMER RESIDENTIAL PROGRAM

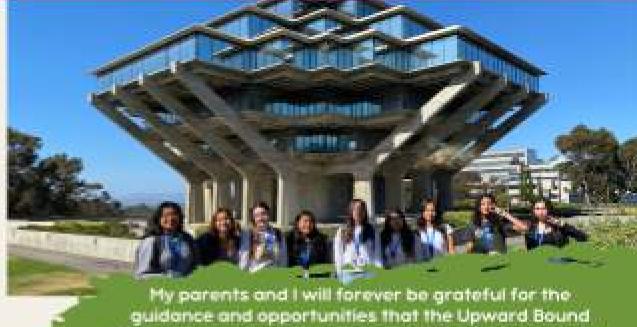
Approximately 150 TRIO students attended an intensive, residential summer academic program on the UC San Diego campus this summer 2023. They experienced extended access to our campus, classes taught in our lecture halls, life in our dorms and dining halls, daily campus recreation activities, and in-depth information about campus academics provided by admissions and current UC San Diego students & staff. This created a rich experience for our low income first generation students of color before they decide where to apply to college.

#### UCSD FALL 2022 TRIO ENROLLMENT N=23

Ethnicity	Percentage of 2021-2022 TRiO Seniors
Hispanic	31%
Multi-Racial	26%
Black/African American	4%
Asian	9%
White	30%

#### OUTCOMES OF OUR YEAR-ROUND SERVICES

- 98% of our 2023 graduating seniors completed and submitted the Free Application for Federal Student Aid (FAFSA)
- TRIO worked with 248 seniors in 2021-2022, 101 of whom enrolled in community college for financial reasons.
- In Fall 2022, of the 36 TRIO students enrolling in the UC system, 23 came to UC San Diego.



guidance and opportunities that the Upward Bound
Math & Science staff gave me\_opportunities that helped
me get a full ride to the University of Notre
Dame\_something I had thought I would only be able to
dream about.

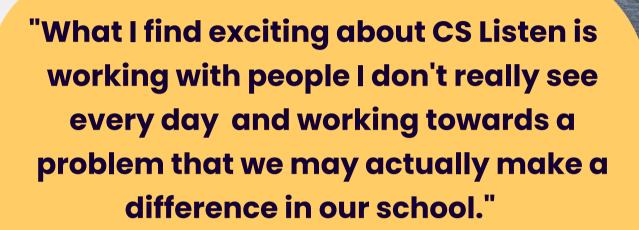
Valeria M.

UCSD TRIO was the catalyst and my support system. They educated me about what college is, the importance of education, and how I can take the steps necessary to achieve my goals... will be pursuing my Ph.D in Clinical Psychology (and) I would not be where I am without UCSD TRIO



TRIO.UCSD.EDU | CREATE.UCSD.EDU

## YOUTH PARTICIPATORY RESEARCH: CS LISTEN



-Prince A., Class of 2021

"My students are learning that they can have a voice."

- Mae Coching, CS Teacher



# Learning and Inquiring with Students Through Equity Networks

- Computer Science Learning and Inquiring with Students through Equity Networks (CS LISTEN) is a youth participatory action research (YPAR) project that investigates the lack of diversity in K-12 computer science education.
- **Purpose:** To better understand the underlying factors that hinder underrepresented students' engagement in K12 computing pathways.
- This project positions students from 9 high schools, especially those historically underrepresented, in the driver's seat of LISTEN's work to broaden CS engagement.

This research is funded by the National Science Foundation CSforAll Grant Award #1923406.



YOUTH PARTICIPATORY RESEARCH: UC LISTEN

## **UCLISTEN**

# Learning and Inquiring with Students Through Equity Networks

- Funded by the University of California
   Office of the President (\$220,000)
- UC LISTEN uses YPAR (Youth Participatory Action Research) to address application, admission, and yield in the University of California schools among underrepresented students
- Over 80 students have had the opportunities to become student coresearchers



## **#US**vsHate

It really makes you think about the things that are going on in the world. I enjoyed being able to use my creative abilities to showcase my voice and what I believe is right.

I enjoyed being able to express our opinions and perspectives. I enjoyed being able to see how other people interpreted many topics as well.

I liked how it was relevant due to what is happening in the US right now.

> I liked how the project encouraged the class to have a meaningful conversation about the injustices and inequality that many people still face everyday.

## **USvsHate.org**

Even though we may be a little bit younger than most, we have a better perspective and are well educated on certain topics, and would like to share our point of views and knowledge about things.

It was teaching us about the real issues in our society and how we have the power to stop them.

#USVSHATE ("US VERSUS HATE") IS AN EDUCATOR- AND YOUTH-LED MESSAGING PROJECT DESIGNED TO COUNTER BIGOTRY IN SCHOOLS, CREATE WELCOMING CLASSROOMS, AND EMBRACE INCLUSION AND JUSTICE FOR ALL IN OUR DIVERSE SCHOOLS AND

SOCIETY.

It's been liberating for some of these kids. Every day they're walking through the halls, seeing these [anti hate messages]. Some teachers stop their group as they walk by and read them. It's been powerful.

I asked students, 'Should we do this with our group? With the school?' And they said, we want to do it with the whole school. So we did it with the whole school. And we got hundreds of submissions.

Only positive change! Totally encourages classroom discussions about important topics.

An Educator- and Student-Led Anti-Hate Messaging Project
We seek to unite school communities against hate, bias, and injustice.
#USvsHate is a national project of UC San Diego CREATE and has engaged 16,000
students.

# TEACHER PROFESSIONAL DEVELOPMENT













## **Professional Development Series**

Based on the specific needs of each school and the participating teachers, experienced SDAWP Teacher Consultants present practical strategies and approaches in workshop format, designed to improve student writing.

1784 contact hours 2021-22 academic year

1658 contact hours 2022-23 academic year

across 15 school sites

## The Dialogue

A publication of the San Diego Area Writing Project featuring writing from fellows. Click the image to read the latest issue!



#### **Invitational Summer Institute**

Since 1977, the Invitational Summer Institute (SI) is a leadership institute for the K-16 community of teachers and instructors interested in deepening their understanding of the teaching of writing.

350+ community of fellows

## **Annual Fall & Spring Conferences**

An interactive learning opportunity for educators and administrators who support student writers in all content areas. Learn how to meet your students where they are and allow them to gain confidence, fluency, skills, and resilience in their writing that leads to academic success!

15 years of conferences

## Young Writers' Camp

The goal of our summer Young Writers' Camp (YWC) programs is that each young writer, regardless of skill level, has the time and space to experiment in a variety of genres while developing creativity and confidence.

20+ years of summer camps serving students grades 3-transfers



"My daughter absolutely loved this camp. The positive encouragement, new friendships and creativity she found has sparked a fondness for writing that did not exist before."

"My son loved your camp! You have a great, enthusiastic staff and a super program. The works he created and brought home blew us away! I'm really proud of him and what he accomplished during your program."



@sandiegoareawp

facebook.com/SDAWP







Established in 1977

## 2022-2023

### **Professional Development Series**

Based on the specific needs of each school and the participating teachers, experienced SDAWP Teacher Consultants present practical strategies and approaches in workshop format, designed to improve student writing.

Participating School Districts: SDUSD, CVESD, CVUSD, HTH
72 hours across 7 school sites
1658 contact hours

## The Dialogue

A publication of the San Diego Area Writing Project featuring writing from fellows since 1977. The aim of The Dialogue is to provide a vital network for the dissemination of information and ideas.

28th publication of The Dialogue Featuring 6 SDAWP Fellow's articles



#### **Invitational Summer Institute**

The Invitational Summer Institute (SI) is a leadership institute for the K-16 community of teachers and instructors interested in deepening their understanding of the teaching of writing. The SI provides a dynamic, dialogic environment for a diverse group of educators to examine their roles as writers, teachers and leaders.

7 new teachers joined our 350+ community of fellows that began in 1977

#### **Annual Conferences**

An interactive learning opportunity for educators and administrators who support student writers in all content areas. SDAWP Fellows lead presentation that demonstrate how to meet your students where they are and allow them to gain confidence, fluency, skills, and resilience in their writing that leads to academic success!

15 years of conferences152 attendees 2022-23



@sandiegoareawp



facebook.com/SDAWP





Established in 1977

## 2022-2023

## Young Writers' Camp

The goal of our summer Young Writers' Camp (YWC) programs is that each young writer, regardless of skill level, has the time and space to experiment in a variety of genres while developing creativity and confidence. Our summer programs range from creative writing to improving analytic writing and writing the college admission essay.

"Thanks to YWC I can work on being more concise with my writing and continue expressing myself."

-Camper Testimonial 8th Grader, Poway Unified School District "He loved it and asked to return back next summer. He would always tell us stories at dinner about camp! His enthusiasm for writing grew,. He felt he could do anything-empowering.

-Parent Testimonial
4th Grader, Private School



20+ years of summer camps

7 programs offered Summer 2023

206 students grades 3-12 participated

"My son really enjoyed coming to the camp. Prior to the start, he was somewhat hesitant about attending, as writing is not his favorite academic activity. However, after returning from the first day he was ecstatic and was delighted to be going to camp each morning thereafter.

-Parent Testimonial
6th Grader, San Diego Unified School Distict









#### CONTACTS

#### San Diego Regional Co-Directors:

Sarah Peterson & Betsy Hall

Fiscal & Program Manager: Clarissa White



### **CRLP VISION**

A community of courageous educators transforming literacy practices to achieve equity for a socially just world.

#### **OPEN PROGRAMS**

Spanish-English Biliteracy Transfer (SEBT)
Institute: 60 attendees, 2 Cohorts ~ SU'22 &

WI'22 (CVESD, SDUSD, CVUSD)

CA Dyslexia Guidelines: 65 attendees, 3-hr study session; 90 min. overview (UCSD EDS)

**Administrators' PLC Series:** 70 registrants, 90-min. sessions/10 mo. (SUHSD, SDUSD, CVESD, SBUSD, SYSD, ICOE)

**Teacher Leadership Invitationals:** 3x/year at Birch Aquarium SU'22, Kendall Frost Wetlands WI'22, UCSD CREATE SP'23

### Onward Teacher Leader Book Club (Year 6):

Cultivating relationship & resiliency in community

#### **REGIONAL PARTNERSHIPS**

**DEEP~SDUSD:** 4 Elementary Schools

CA GEAR UP~SDUSD: 5 Secondary Schools CLSD~SDCOE: 5 Districts across CA Region

9

Coding our Future~CREATE~SDUSD: 3rd,

4th, 5th grade CS + STEAM advisory for Multilingual Learners via Integrated ELD

Science Innovators~SDSP~National SD:

Supporting Multilingual Learners via Integrated ELD

Learning Squared~EIS~Science Delivered~DEEP:

Design & Delivery of 10 Science & ELA/ELD Lessons in 2nd/3rd grades at Webster & Encanto (SDUSD)

"I felt like a refresh button was pressed for me...
Being around like-minded teachers, feeling
supported, seen, and heard in such a reflective
community... I am so grateful!"

~CRLP Teacher Leader (CVESD),
WI'22 Invitational

## \*Teachers As Learners

"Thank you for all that you do! I always walk away from CRLP sessions feeling valued and more knowledgeable."

~ CLSD Educator Academy Participant (NSD), 2023









#### CONTACTS

**Statewide Executive Director:** Shervaughnna Anderson-Byrd

Fiscal & Program Manager: Clarissa White

"I love feeling re-energized from colleagues. It's a different type of restart for me compared to when I try to practice self-care and re-energize myself."

"The CRLP Community is a place where I feel trust every time we connect."

## STATEWIDE PROGRAMS: 2022-2023 HIGHLIGHTS

**Community Of Practice:** 80 Attendees, 6 Sessions (Ca Educators)

Social Emotional Literacy Conference: 105 Attendees, 2 Day Conference W/8- 90 min Workshops (CRLP-UCLA W/CRLP SO, CA Educators)

June Convening Conference - Teachers Leading the Way: 125 attendees, 2 day conference in San Diego. 90-min. sessions. (California Educators)

Statewide Teacher Leader Invitational
Series: 100 attendees, Denormalizing
Literature, Uncovering The Leader You Want
To Be, Living, Learning & Living In Disrupted
Spaces.

#### **STATEWIDE PARTNERSHIPS**

- California Collaborative For Educational Excellence (CCEE)
- 21st Century California School Leadership Academy (21CSLA)
- 21st Century California School Leadership Academy Universal Transitional Kindergarten Initiative (21CSLA UTK)
- Computer Science For English Learners (CSforEL)

## UC SAN DIEGO MATH PROJECT

HTTPS://MATHPROJECT.UCSD.EDU/

## **Partnerships**

- Oceanside Unified School District, Dept. of Defense Education Agency
- Gates Foundation CARE Network in 14 middle schools
- UCoP Gear-Up
- Sweetwater Union High School District Project GoSAMa

## **Open Invitation Events**

- Teaching Fractions Through Ratio
   Reasoning Parts A, B (~50 teachers)
- Fostering Ratio & Proportional
   Reasoning Parts A, B (~50 teachers)
- Argumentation in Mathematics, (~25 teachers)

## UC SAN DIEGO MATH PROJECT

HTTPS://MATHPROJECT.UCSD.EDU/









#### SDSP Vision

We inspire curiosity, confidence, and innovations for science educators in the greater San Diego region.

## Co-Directors: Alec Barron & John Spiegel

sdscienceproject.org

### Community

Build and support science educator networks that empower professionals with equity mindsets for science learning.

#### Learning

Deliver engaging science programs and resources in response to the interests and needs of educational partners

#### Research

Build bridges between researchers and educators through shared learning.

### **Featured Programs**

The **Teacher** / **Researcher Collaborative** is a program that helps K12 science teachers learn about the latest research in science, engineering, and education.

The Climate Champions Design Summits support participating teams with learning about a local climate-based phenomenon. From exploration of this phenomenon, teams will learn how to use the Understanding Global Change framework to support constructing models and evidence-based explanations.

The **Science of Sound and Music** workshops and curriculum resources are part of Listening to Waves, a project sponsored by the National Science Foundation. This project seeks to inspire students to develop a deeper appreciation of both science and sound.

## Regional Partnerships

San Diego County Office of Education
San Diego Unified School District
Sweetwater Union High School District
Chula VIsta Elementary School District
National School District
Escondido Union School District
Escondido Union High School District











## Recent Highlights

- California Educators Together Lesson Design Institute: Two day event on July 18th and 19th for 98 teachers to participate in lesson design work and to build community across the state.
- Climate Champions Design Summit: Two day event on March 14th and 15th, 2023 was an event for 38 science teachers to learn about a local climate-based phenomenon. From exploration of this phenomenon, teams will learn how to use the Understanding Global Change framework to support constructing models and evidence-based explanations.
- National District Science Champions Summer Institute from July 13th-16th. Over 30 teachers learned about the California Next Generation Science Standards and prepared for Science Teaching Studios to support instructional practices in science.
- Science of Sound and Music Workshop: Over two days, July 12th and 13th, 2023, 16 teachers learned about web applications designed by Dr.
   Victor Minces to inspire students to develop a deeper appreciation and understanding of the science of sound and music.
- May Community of Practice: This meeting on May 23rd, 2023, was a place of teachers to recharge their "teacher batteries." A community strengthening networking event.
- May Teacher Researcher Collaborative: On May 18th, 2023, Dr. Bernie Bastien-Olvera from Scripps Institution of Oceanography gave
  presentation on the climate crisis. This meeting was collaborative with the teachers who attended.
- Fostering undergrad development: The project prides itself on recruiting UCSD undergraduate students and nurturing their professional development. In May 2023, first-years Ria Singhania and Leyna Pham joined the team. They have developed the San Diego Science Project's website, social media, and video content.

# Code.org Regional Partnership Program

https://create.ucsd.edu/programs/professional-development/code.org.html

- Since 2019, CREATE has been the **regional partner** for Code.org in San Diego.
- We have served over 200 teachers across the country, mainly in southern California through CSTA San Diego.
- We have generated over \$230,000 of revenue.
- Through partnerships and grants, we have awarded over \$70,000 in professional development scholarships for teachers serving schools with predominantly lowincome and underrepresented students.

I never thought that coding could be something I enjoy. I thought it would be something that I was bad at and that I'd be absolutely miserable doing. But because Code.org introduced coding to me in such an easy to understand way and because at the end of each lesson we'd be left with a project we can really call our own, I found myself really enjoying it."

- Annie, Student at Kearny High Education Complex

"It does not matter what type of experience you have. If you come in and want to learn, you can learn. The instructors are knowledgeable and when you ask questions, they will work through them."

-Avion Weaver, Twin Rivers Unified
School District

"I found the professional learning program to be excellent and it alleviated any fears I have of not having any in-depth knowledge of computer science. I can still teach computer science to students successfully and powerfully."

-Matthew Rowland, San Juan Unified School District

# COMPUTER SCIENCE TEACHERS ASSOCIATION, SAN DIEGO

## **CSTA San Diego**

## https://sandiego.csteachers.org/

- Housed inside CREATE since 2018, CSTA San Diego has seen a robust growth from 10 teacher
   participants to over 60 teachers across the San Diego region.
- CSTA San Diego is governed by elected board members and holds quarterly meetings committed to professional development and networking.

## 2022-23 Accomplishments:

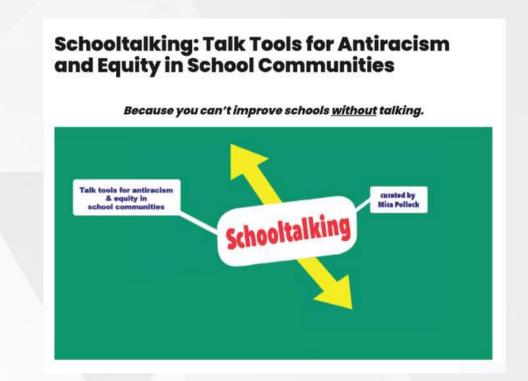
- We held 20 events funded by grants, including Qualcomm, NFINIT, and NIWC Pacific to host professional networking events.
- These industry partners have also directly offered scholarships and internships to San Diego students.

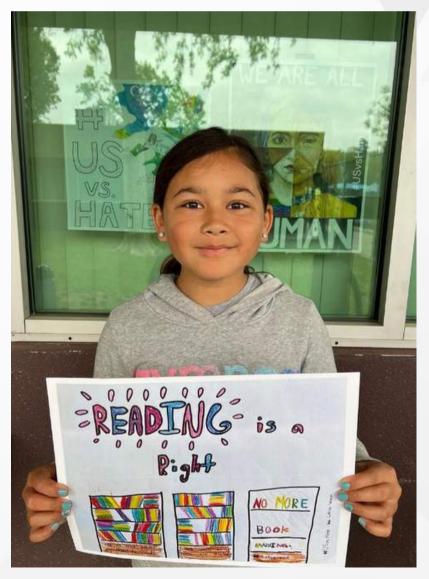


## #Schooltalking at CREATE

Professional development with CREATE Director Mica Pollock, exploring antiracism, equity, antibias, and communication efforts today. In 2022-2023:

- We offered supports nationally to schools and districts using <u>Schooltalk</u> and <u>Everyday Antiracism</u>
- Our <u>recent professional development series</u>, "Supporting All of <u>Us</u>," engaged five national teacher support organizations and reached nearly 3200 participants from across the country.
- Our public research unwaveringly <u>supported educator</u> <u>persistence</u> amidst new <u>efforts to restrict</u> diversity-related teaching & learning.
  - Teachers' strategies for <u>navigating local "pushback"</u> to basic inclusion teaching.
  - Strategies for <u>amplifying youth voices</u> inside and beyond classrooms.
  - Handling debates over anti-bias teaching today.
  - Exploring <u>"anti-hate" efforts</u> in an era of emboldened bigotry.





#### Don't box me in with your stereotypes!



**#USvsHate** 

# EDUCATION OUTREACH, PARTNERSHIPS, AND COMMUNITY-BUILDING:

Major Subprojects & Grants, 2022-2023

#### **DODSTEM.US | CREATE.UCSD.EDU**

## DEFENSE STEM EDUCATION CONSORTIUM

#### **UCSD CREATE DSEC Staff:**

Susan Yonezawa; syonezawa@ucsd.edu

Beto Vasquez; alv002@ucsd.edu

Ovie Soto; osoto@ucsd.edu

Darren De Leon; d1deleon@ucsd.edu



@DoDstem



@dodstem



facebook.com/DoDSTEM

## San Diego STEM Ecosystem Hub Meetings

CREATE leads 4 quarterly San Diego Hub meetings to leverage the resources of UCSD, DSEC, and the SD STEM ecosystem to leverage educational and community impact.

## Science and Art Expos

Both the Barrio Logan and Southeast San Diego Science & Art Expo's are inclusive and annual art, science, and culture fairs that welcome families from all around San Diego.



## NCWIT Regional Initiative: San Diego

NCWIT will partner with CREATE on a K-16 focused Regional Initiative in San Diego to connect within the San Diego computing ecosystem and amplify DSEC partnerships.

## STEM OFFERS Camp & Internship Program

To increase STEM exposure at an early age, inperson camps were designed for 3rd-5th graders and focused on teaching students that anyone can be a scientist or engineer!



UCSD CREATE is one of the 4 DSEC hubs, specializing in expanding the DSEC partner footprint in San Diego through equitable and mindful planning.

"I think the partners that we have at UCSD are like our great representatives of the communities we're serving... It feels truthful. It's a very pleasant collaboration... It helps us to feel like we're doing things that are in aligned with what San Diego communities actually want."

BARRIO LOGAN AND SOUTHEAST SAN DIEGO SCIENCE & ART EXPOS

Partly funded through DoD STEM DSEC, the Barrio Logan and Southeast San Diego Science and Art Expo is an inclusive and annual art, science, and culture fair that welcomes families from around southern San Diego.



## DODSTEM.US | CREATE.UCSD.EDU



SAN DIEGO STEM ECOSYSTEM HUB MEETINGS

## What was one of the **highlights** working with UCSD CREATE?

"They are aware of the demographics and culture and they align us with really good community partners and drive the mission of exposing our kids to meaningful experiences. Also bilingual opportunities are so important and UCSD finds bilingual scientists and engineers so that kids can see themselves and take pride in that heritage and be empowered by their bilingual skills. Also teaching how powerful and important central and south American historical leadership in STEM like the Mayans and Aztecs-- UCSD does a really good of supporting our unique culture."



NCWIT REGIONAL INITIATIVE 2022-23 SPOTLIGHT

## The NCWIT Regional Initiative in San Diego includes:

- (Ongoing) Serve as the San Diego Regional Affiliate organization for the NCWIT Aspirations in Computing (AiC) High School Award competition
- C4C San Diego CS Summit for **50 middle and high school** counselors
- C4C workshop for 20 college students in the San Diego region who are pursuing their counseling licensure and degrees
- Instructor-led tutorial for 30 counselors on how to use the AspireIT toolkit for afterschool and informal educational experiences
- 5 Aspirations in Computing alumni as spokespeople during outreach events for 50 San Diego high school students
- Engaging 50-100 Latina women and their families in an inperson TECHNOLOchicas event in San Diego
- Academic Alliance webinar series for 10-20 post-secondary institution representatives in the San Diego region.



How, if at all, has the workshop changed your approach to being a counselor?

Link to full article here.

"This workshop has helped me promote Computer Science to our students. I am better able to articulate career paths and let students know that Computer Science is for all students, at any skill level. It has helped me demystify the perception that Computer Science is only for "smart" students. It has helped me promote computer science to female students as well."

- Brittany Oka

## CSforEL

## https://csteachers.org/pd-opportunities/csforel/

- The Computer Science for English Learners (CSforEL) project, a four-year initiative funded by the US Department of Education, aims to attract, retain, and engage English learners in AP Computer Science Principles (AP CSP) across Arizona, New Mexico, Texas, and Southern California (San Diego, Imperial, Los Angeles, Riverside, and Orange counties).
- CSforEL has successfully launched a pilot group (2020), Cohort A (2021), and Cohort B (2022). Cohort C, the final group in this project phase, is scheduled to begin their first year in **June 2023**.

I think this is some of the best training I have received on helping English-language learners. I love the workbook. I love the strategies. I love the practice and feedback and the ability to see how other teachers use the strategies.

-San Diego teacher

I am more deliberate with my planning to address language use and practice. My planning takes longer and my lessons do as well, but I think both are more effective in supporting students in their language practice.

-San Diego teacher

# Climate Champions

https://climatechampions.ucsd.edu/

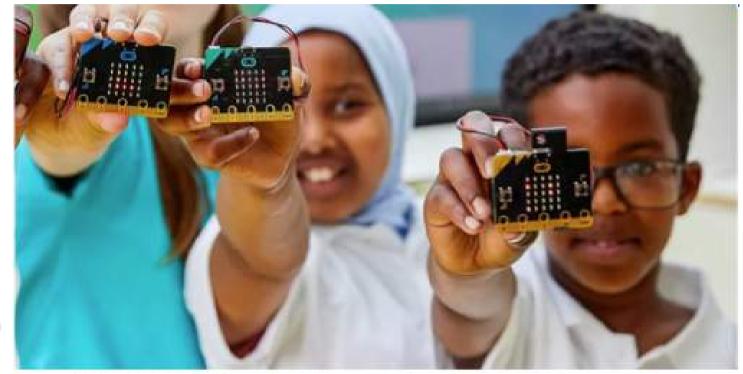
We connect university, K12, and community to get more teaching, learning, and action on climate in regional schools.

Started in 2020 with seed funding from UCSD Social Sciences Climate Action Lab, we're now working with Scripps SoCal Heat Hub and UC Bending the Curve: Climate Education for All.

We engage numerous K12 districts and statewide organizations to advance climate change and environmental justice literacy.

Climate Champions is learner-centered and standards-aligned, focused on equity, justice, inquiry, observation, data, and regional relevance in global context.

Nan Renner, nrenner@ucsd.edu, Alec Barron, awbarron@ucsd.edu

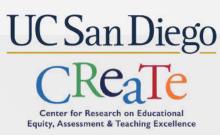




# CREATE EQUITY K-20 CONSULTING

Supports for education program design and evaluation

## CREATE STEM SUCCESS INITIATIVE (CSSI) 2022 - 2023



## **CSSI YEAR 10 HIGHLIGHTS**

## **ALMOST 20 GRANTS** & CONTRACTS



this year supported by CSSI-CREATE staff have been awarded to campus and community partners.

National Science Foundation (NSF) grant supports specifically offered to UC San Diego Faculty.

\$26.4 Million

in grants/contracts brought to UC San Diego with support of CREATE-CSSI staff.



## SINCE WE STARTED (YEARS 1-10)

2,000+ CSSI projects<sup>1</sup> with UC San Diego and community partners.

300+



teacher professional development efforts supported with immediate impact on hundreds of local precollege students each year and thousands more over time.

evaluations conducted on 110+ projects supporting K-20 students and educators to date.

300+



UC San Diego faculty, staff, postdocs, and student organizations supported to conceptualize, design, expand, evaluate, or execute education equity projects, including outreach/education plans and impact/evaluation broader for more competitive grants.

See our "Recent Supports to Faculty" list

# CSSI STAFF SUPPORTED UC SAN DIEGO FACULTY

to create new learning opportunities for local students, teachers, and communities.

SEE OUR FULL, COMPREHENSIVE LIST OF CSSI FACULTY SUPPORT HERE.



## 2023 SNAPSHOT OF CSSI SUPPORT TO UCSD FACULTY, STAFF, AND STUDENTS

#### **SCRIPPS INSTITUTION OF OCEANOGRAPHY**

Baumann-Pickering, Simone, Associate Researcher, Scripps Institution of Oceanography

2023: San Diego Science Project director, Alec Barron consulted with Simone Baumann-Plckering to consult on the design of educational activities for a future NSF proposal.

## Eddebbar, Yassir, Postdoctoral Scholar, Integrative Oceanography Division, Scripps Institution of Oceanography

2023: San Diego Science Project director, Alec Barron and CREATE Birch Aquarium liaison Nan Renner consulted on Broader Impacts design on educational activities for a California Climate Action Grant.

#### **UC SAN DIEGO SCHOOL OF MEDICINE**

Breen, Ellen, Associate Researcher, School of Medicine

2023: CSSI staff supported grant submission, Micro Level Oxygen Transport Mechanisms in Elite Diving Mammals: Capillary RBC to Myofiber.

#### **ADDITIONAL UC SAN DIEGO CENTERS AND INSTITUTIONS**

#### HALICIOGLU DATA SCIENCE INSTITUTE

Watson-Parris, Duncan, Assistant Professor, Halicioglu Data Science Institute

2023: CSSI Staff supported Broader Impacts.

#### SAN DIEGO SUPERCOMPUTER CENTER

Sinkovits, Robert, Interim Director of Education, San Diego Supercomputer Center

2023: CSSI staff supported the grant re-submission, Comprehensive Learning for End-Users to Effectively Utilize Cyberinfrastructure (COMPLECS). NSF CyberTraining: Implementation proposal.

#### **QUALCOMM INSTITUTE**

Grieco, Andrew, Assistant Research Scientist, Qualcomm Institute 2023: CSSI staff supported grant submission, development and implementation of the Quantum Sensing Educational Kit.

## SEE OUR FULL, COMPREHENSIVE LIST OF CSSI FACULTY SUPPORT HERE.

# RESEARCH AND EVALUATION

# EQUITY AND EDUCATION RESEARCH PUBLICATION HIGHLIGHTS

SUPPORTED, SILENCED, SUBDUED, OR SPEAKING UP? K12 EDUCATORS' EXPERIENCES WITH THE CONFLICT CAMPAIGN, 2021– 2022 (2023)

The Conflict Campaign: Exploring Local
Experiences of the Campaign to Ban "Critical
Race Theory" in Public K-12 Education in the
U.S., 2020-2021 (2022)

Next steps toward an inclusive country?

Inviting and amplifying youth voice in public anti-hate messaging (2022)

"CREATE has given the K12 community an anchor AND an arbor to navigate and weather political shifts battering educators, children and youth caught in the maelstrom."

**Teachers) Leader** 

- AFT (American Federation of

# RECENTLY-FUNDED EVALUATIONS SPOTLIGHT: D-ENTERPRISE

## WHAT

Diversifying & Engaging the
Navy through Technical
Education & Recruitment
Partnerships for Research
Innovations in Science &
Engineering

SIO grant awarded by Office of Naval Research (ONR)

This planning award will create the base that will support a longer-term ONR-funded program

## WHY?

To develop and foster three US 'hubs' that will each then work to strengthen the pipeline from education to career in the geosciences (with a focus on ocean science)

Each hub will include a large, research-intensive university that has a strong ocean science base and local Navy connections, a local Navy entity, and several minority serving institutions/colleges (MSIs)

## **BIG PICTURE**

The longterm program's goal is to increase diversity in the ocean sciences, and in particular with regard to Navy careers and careers that can otherwise benefit the Navy



The 3 research-intensive universities include UC San Diego/SIO, the University of Rhode Island, and the University of Southern Mississippi

See <u>here</u> for more recent supports to UC San Diego Faculty, leveraging UC San Diego research for the K12 community and beyond.

# WHAT'S NEXT FOR CREATE?

## 10-year vision: #CREATEequity Design Labs

## Combining CREATE insights for scalable education improvement

As a team of researchers and practitioners over the next decade, we'll be pursuing sharable, scaleable models for improving schools and systems in themes like these:

- Community Engagement Lab
- LISTEN Lab
- Equality/Anti-bias Lab
- Student Support Lab
- Teacher Networking Lab
- College Access Lab
- Broader Impact Lab
- Climate Education Lab

- Designing community education outreach, with communities
- Tapping youth as researchers to improve schools and systems
- Professional development and student voice embracing diversity, equity, inclusion, antibias, and antiracism
- Specific interventions supporting diverse student development and success, precollege and K20
- Leveraging the power of educator learning networks
- Key innovations in college access efforts
- Designing ways of leveraging faculty research to benefit
   K12 communities
- Equipping and empowering youth and teachers to counteract climate change and literally save the planet