

# SCIENCE & ENVIRONMENTAL LITERACY

== DECEMBER 2021-SANTA CLARA COUNTY OFFICE OF EDUCATION ==

## SEASON'S GREETINGS

We hope you were able to find much deserved rest and opportunities to recharge over Thanksgiving Break! As we enter the last month of 2021, December brings time to reflect on the past year and an opportunity to envision and set our intentions for 2022.

Looking ahead to next year, the SCCOE Science team is working on some new and exciting professional learning experiences that will launch in 2022. We will be offering two different Science series that feature best practices in NGSS pedagogy to support equitable outcomes for ALL students. *Creating Powerful Learning Experiences in Science* professional learning series is already open for registration! See the flyer in the next section for more information. We are also in the planning stages of an Environmental Literacy Summit and a Community of Practices to support School Garden Initiatives. Stay tuned for more information!

It's also time to support many Districts with their science curriculum adoption utilizing the Toolkit for Instructional Materials Evaluation (TIME) and we have been reaching out to those who have expressed interest in this. If you need support with your science curriculum adoptions or are needing to start this process, please let us know.

### WHAT DOES THE SCCOE SCIENCE TEAM DO?

We are here to support teachers and administrators in their implementation of NGSS through coaching, professional learning, and strategic planning.

We also support environmental literacy, sustainability and school garden initiatives.

### HOW CAN THE SCCOE SCIENCE TEAM HELP OUR DISTRICT/SCHOOL?

Feel free to reach out to our team via email or phone.

Jennifer Mutch at [Jmutch@sccoe.org](mailto:Jmutch@sccoe.org)

Tara Sikorski at [Tsikorski@sccoe.org](mailto:Tsikorski@sccoe.org)

We are here to support your high quality science and environmental literacy instruction.

# Upcoming Events



## 2021 LEADERSHIP & LEARNING SERVICES CATALOG



Santa Clara County  
Office of Education

## PLISD CATALOG

2021-2022 Professional Learning and Instructional Support Division (PLISD) Catalog

# CREATING POWERFUL LEARNING EXPERIENCES IN SCIENCE - PROFESSIONAL LEARNING SERIES IN WINTER/SPRING 2022



Santa Clara County  
Office of Education

1290 Ridder Park Drive  
San Jose, CA 95131  
www.sccoe.org

## Creating Powerful Learning Experiences in Science



## Professional Learning Series in Winter/Spring 2022

Santa Clara County Office of Education invites all TK-12 Educators and Administrators to the Creating Powerful Learning Experiences In Science Professional Learning Series in Winter/Spring 2022.

Participation in the workshop series includes:

- 6 virtual sessions
- 4 optional sessions for Coaching and Support
- A copy of Ambitious Science Teaching
- Materials

Optional Sessions for Coaching & Support Dates:

- Thursday, February 17, 2022
- Tuesday, March 15, 2022
- Wednesday, April 20, 2022
- Tuesday, May 10, 2022

\*\*All support sessions will be virtual from 3:30-5pm\*\*

**For more information, please contact:**

Jennifer Mutch • Science Coordinator •

[jmutch@sccoe.org](mailto:jmutch@sccoe.org)

Tara Sikorski • Science Coordinator •

[tsikorski@sccoe.org](mailto:tsikorski@sccoe.org)



**Dates:**

Wednesday, January 19, 2022

Wednesday, February 2, 2022

Tuesday, March 1, 2022

Tuesday, April 5, 2022

Tuesday, May 3, 2022

Tuesday, May 24, 2022

**Time:** 4 to 5:30 p.m.

**Location:** Virtual

**Audience:** TK-12 Educators and Administrators

**Grade Level(s):** TK – 12

**Cost:** \$250

Teams of three, get their Administrator in for FREE

**Registration:**

<https://na.eventscloud.com/650525>

**REGISTER HERE: CREATING POWERFUL LEARNING EXPERIENCES**

# LEARNING AND LEADING FOR EQUITY: A COLLABORATIVE CONVENING

Santa Clara County  Office of Education

## Learning and Leading for Equity

A Collaborative Convening



**Saturday, January 22, 2022**

9:00 a.m. - 12:30 p.m.

A **FREE** Virtual Event

Sponsor Giveaways for Attendees

Register at <http://sccoe.to/learningforequity>

...a space for families, students, educators, and community to co-create ideas by leveraging the vast wealth of generational wisdom and experiences, and a diversity of voices and values to inspire and equip educators to do deeper equity work.

**For Educators & Administrators**

Through the lens of equity, this collaborative convening will address:

### Inclusion & Belonging

Supporting educators, students and families in this current, fluid environment to create a sense of inclusion and belonging so students feel safe, cared for and heard so they can learn and thrive.

### Personalized Learning

Empowering students, parents, and teachers to advocate for space to engage in innovative practices that support student centered and personalized learning that humanizes students.

### Family-Centered Practice

Partnering with families and co-creating ways to empower them and advocate for student success.

### Keynote Speaker



**Andratesha Fitzgerald**  
Antiracism & UDL Author

### Featured Speakers

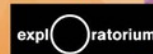


**Dr. Julia Aguirre**  
Culturally Responsive  
Mathematics Teaching



**Dr. Stepan Mekhitarian**  
Personalized Learning  
Data Analysis

### Including Presentations by



And Educational Leaders from the Santa Clara County Office of Education

For more information contact Paula Leggett at [pleggett@sccoe.org](mailto:pleggett@sccoe.org)

**REGISTER HERE: LEARNING AND LEADING FOR EQUITY**

**VALLEY WATER & SCCOE  
ENVIRONMENTAL LITERACY EDUCATOR**


## WE STILL HAVE SPACES AVAILABLE!!

We can catch you up with the first session (it was recorded). Our next session is on January 19, 2022. Contact Jenn Mutch if you are interested. [jmutch@sccoe.org](mailto:jmutch@sccoe.org)


This grant-funded project will establish a cohort of Teachers, TOSAs, and Instructional Coaches eager to learn about infusing water education, environmental literacy, and NGSS-based lessons and projects into your teaching. A stipend and classroom materials will be offered at the completion of the program.

If you are interested, please see the following requirements:

1. Attendance at all workshops and RAFT in-person seminar.
2. Development and implementation of 1 or more lessons or units that are water education, environmental literacy, and NGSS focused. More details will be provided throughout the cohort.
3. Partnering with Valley Water's Outreach Team to co-present lessons to classrooms throughout the 2021-2022 school year.
4. Present an overview of the lesson(s) and/or unit that was developed over the school year with a final reflection and student feedback. This presentation will be done at one of the dates in May.



1250 Ridder Park Drive  
San Jose, CA 95131  
[www.sccoe.org](http://www.sccoe.org)



### Valley Water and SCCOE Environmental Literacy Educator Cohort

This grant funded project will establish a cohort of Teachers, TOSAs, and Instructional Coaches eager to learn about infusing water education, environmental literacy, and NGSS-based lessons and projects into your teaching. A stipend and classroom materials will be offered at the completion of the program.

If you are interested, please see the following requirements:

1. Attendance at all workshops and RAFT in-person seminar.
2. Development and implementation of 1 or more lessons or units that are water education, environmental literacy, and NGSS focused. More details will be provided throughout the cohort.
3. Partnering with Valley Water's Outreach Team to co-present lessons to classrooms throughout the 2021-2022 school year.
4. Present an overview of the lesson(s) and/or unit that was developed over the school year with a final reflection and student feedback. This presentation will be done at one of the dates in May.


**Dates:**  
September 8, 2021- 3:30 to 5 p.m.  
November 3, 2021- 3:30 to 5 p.m.  
January 19, 2022- 3:30 to 5 p.m.  
March 16, 2022- 4 to 6:30 p.m.  
May 18, 2022- 3 to 5 p.m. OR  
May 25, 2022- 3 to 5 p.m.

**Location:**  
Virtual and In-person

**Audience:**  
Educators, TOSAs, and Instructional Coaches

**Grade Level(s):** TK – 12

**Application Link (and more details):**  
<https://forms.gle/DoXyyoIJEGAgCSof6>



**For more information, please contact:**  
Jennifer Mutch • Science Coordinator • (408) 453-6587 • [jmutch@sccoe.org](mailto:jmutch@sccoe.org)

# VALLEY WATER & SCCOE ENVIRONMENTAL LITERACY COHORT

The next meeting is January 19, 2022

## 2021-2022 ENVIRONMENTAL LITERACY LEADERSHIP COLLABORATIVE



1290 Ridder Park Drive  
San Jose, CA 95131  
www.sccoe.org



### 2021-2022 Environmental Literacy Leadership Collaborative

The Environmental Literacy Leadership Network is a collaborative that will explore ways to infuse environmental literacy into classrooms and schools.

We will develop a vision for environmental literacy and sustainability, build partnerships, and connect formal and informal educators in Santa Clara County.

**Dates:**

Thursday, September 23, 2021  
Thursday, October 21, 2021  
Thursday, November 18, 2021  
Thursday, January 20, 2022  
Thursday, February 24, 2022  
Thursday, March 24, 2022  
Thursday, April 21, 2022  
Thursday, May 19, 2022

**Time: 3 to 5 p.m.**

**Location:**

Virtual via Zoom

**Audience:**

TK-12<sup>th</sup> Grade Teachers, History/  
Social Science Teachers, Health  
Teachers, Science Teachers,  
TOSA's, Instructional Coaches,  
Informal Environmental Educators,  
and Community Based Partners

**Grade Level(s):** TK – 12

**Registration:**

<https://na.eventscloud.com/618910>

**For more information, please contact:**

Jennifer Mutch • Science Coordinator • (408) 453-6691 • [jmutch@sccoe.org](mailto:jmutch@sccoe.org)

# REGISTER HERE: ENVIRONMENTAL LITERACY COLLABORATIVE

The next meeting is January 20, 2022

## 2021-2022 TOSA AND INSTRUCTIONAL COACHES NETWORK MEETING



1290 Ridder Park Drive  
San Jose, CA 95131  
[www.sccoe.org](http://www.sccoe.org)



## 2021-2022 TOSA & Instructional Coaches Network Meeting

Santa Clara County Office of Education invites all Coaches, Mentors and TOSAs (Teachers on Special Assignment) to the: **2021- 2022 TOSA & Instructional Coaches Network Meetings**

- Develop your leadership skills as you learn more about supporting teachers with content, pedagogy, and technology.
- Network with other instructional leaders across Santa Clara County.
- Explore how to support teachers with Project Based Learning (PBL), Universal Design for Learning (UDL), integration of content areas, equity, and inclusion.

**Dates:**

September 21, 2021  
October 19, 2021  
November 16, 2021  
January 18, 2022  
February 22, 2022  
March 22, 2022  
April 19, 2022  
May 17, 2022

**Time: Noon to 2 p.m.**

**Location:**

Virtual via Zoom

**Audience:**

TOSA's, Mentors, Coaches

**Grade Level(s):** TK – 12

**Registration:**

<https://na.eventscloud.com/618909>

**For more information, please contact:**

Jennifer Mutch • Science Coordinator • (408) 453-6692 • [jmutch@sccoe.org](mailto:jmutch@sccoe.org)

## REGISTER HERE: TOSA & INSTRUCTIONAL COACHES NETWORK

The next meeting is January 18, 2022

### MY NAME, MY IDENTITY STUDENT DESIGN CHALLENGE

The My Name, My Identity Initiative Project Team at the Santa Clara County Office of Education (SCCOE) invites educators to submit student work from the Student Design Challenge. For directions of the Student Design Challenge, visit <https://bit.ly/studentDchallenge>.

With an intent to create a platform to honor student voices, selected student work will be posted on the My Name, My Identity webpage. In addition, teams of students will be invited to share their ideas at the Santa Clara County Bilingual/Multilingual Learner Educators Showcase scheduled for April 28, 2022.

Submission is available between September 1 to December 10, 2021. An SCCOE Media Release Form\* will need to be completed for each participating student. For any questions or if other arrangements are needed, please contact Keysha Doutherd at [KDoutherd@sccoe.org](mailto:KDoutherd@sccoe.org).



### Directions

#### Theme

- Students in PreK – Grade 2: Kindness
- Students in Grades 3-12: Helping others feel safe and welcome in your classroom, at school or in your community

#### Prompt

What can you do to help others feel safe and welcome in your classroom, at school, or your community?

#### Tools

[Student Design Dash Template](#)

[Design Dash Facilitators Guide](#)

#### Eligibility

PreK – 12<sup>th</sup> grade educators are encouraged to submit student work in a digital representation including artwork and writing. If the student work is a video, please limit the length of the video to not to exceed two minutes.

#### Submission Requirements

- Preschool to 12<sup>th</sup> grade student work will be submitted to SCCOE via an online submission form. Only one (1) student work submission per student or group accepted. Educators can submit the work of the entire class as one entry. [View the rubric.](#)
- Submissions will be made through the My Name, My Identity Student Design Challenge [Submission Form](#) posted at <https://www.sccoe.org/sclis/mnmi/Pages/default.aspx> and will be available September 1 to December 10, 2021.
- For any questions or if other arrangements are needed, please contact Keysha Doutherd at [KDoutherd@sccoe.org](mailto:KDoutherd@sccoe.org).

**STUDENT DESIGN CHALLENGE SUBMISSION FORM**

**Partner Workshops & Events**

**CALIFORNIA ASSOCIATION OF SCIENCE  
EDUCATORS (CASE)**

# IN PERSON EVENT FOR NORTHERN CALIFORNIA- JANUARY 22, 2022.

## Better Together: Northern California CASE Regional Gathering

**Date:** Saturday, January 22, 2022 | **Time:** 8:45 am - 4:00 pm

**Location:** San Joaquin COE - FabLab

2707 Transworld Drive, Stockton, CA

**Fee:** \$65 Members | \$85 nonmembers

**Better Together: Northern California CASE Regional Gathering**

Learn, Share and Connect with other Science Educators

Spend the day attending workshops, networking, and a social happy hour!

Saturday, January 22, 2022  
8:45am – 4:00pm  
San Joaquin COE - FabLab  
Social happy hour  
German Guys  
10438 Waterloo Rd  
Stockton, CA 95215

\$65 members  
\$85 nonmembers

CASE is committed to creating an event experience where we can gather together in a safe and healthy environment. Note that we will provide the necessary measures to ensure that each participant's well-being is our top priority. Please visit the CASE website for COVID-19 protocols.

Register Online  
<https://bit.ly/3c5p1W>

Don't miss our opening session with **Stephen Callahan!**

Stephen Callahan

SAN JOAQUIN COUNTY OFFICE OF EDUCATION

case STEMscopes

SCAN ME

QR code

Science equipment illustration

## CASE CONFERENCE 2022 - SAVE THE DATE!!!



Save the date for the 2022 California Science Education Conference!  
We'll be FACE-TO-FACE in sunny Palm Springs from October 14-16.  
More details coming soon!



## CA NGSS STATEWIDE IMPLEMENTATION

**NEXT GENERATION  
SCIENCE  
STANDARDS**

# CA NGSS Statewide Implementation

Online Professional Learning  
Building Student Sensemaking Through Disciplinary Literacy

**REGISTER AT [CANGSS.ORG](https://cangss.org)**

The banner has a dark purple background with a starry, galaxy-like pattern. The text is white and yellow, with the registration link highlighted in a yellow box.

**REGISTER HERE: CA NGSS STATEWIDE IMPLEMENTATION**

Online Professional Learning-Building Student Sensemaking Through Disciplinary Literacy

# CALIFORNIA ACADEMY OF SCIENCE TEACHER WORKSHOPS



## TALK, WRITE, DRAW: TOOLS FOR MEANING MAKING IN SCIENCE (GRADES 4- 12)

In this online workshop, you will build your repertoire of strategies to support students in constructing explanations, communicating ideas, and tracking their own learning. Session participants will act as learners and explore what it's like to use these strategies to do their own meaning-making. We will then debrief the experience, highlight the strategies we used, and provide resources that empower participants to implement them in their classrooms. This workshop is designed for teachers of grades 4 - 12. All educators are welcome.

**Saturday, December 11, 2021**

**9:00 am - 11:00 am (Pacific time)**

**Cost: \$25**

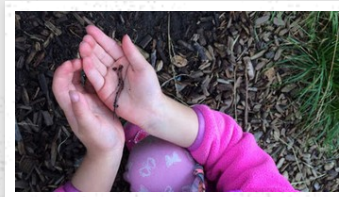
**Registration will close on or before Friday, Dec 10.**

**REGISTER HERE: TALK, WRITE, DRAW WORKSHOP**

## LET'S GO OUTSIDE! (GRADES PREK-3+)

Are you wondering how to help young children to become active and engaged explorers? This workshop is for you!

We will model strategies that support young children exploring their school yard, around their home, or another outdoor setting. We will demonstrate ways to lead this learning equitably, both remotely and in-person. You will have the opportunity to talk with fellow educators and apply strategies to your own unique teaching context.



This workshop is designed for Preschool - 3rd grade teachers, but teachers of older students may also find it valuable. All educators are welcome.

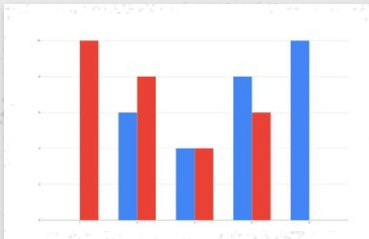
**Saturday, January 22, 2022**

**9:00 am to noon (Pacific time)**

**Cost: \$35**

**Registration will close on or before Friday, January 21**

**REGISTER HERE: LET'S GO OUTSIDE WORKSHOP**



## **DIGGING INTO DATA (GRADES 6-12)**

Support students in using data to draw conclusions and tell stories about the world. Prepare them to think critically about claims made based on data and correlations.

This three-hour online learning experience will be highly interactive and will engage you in small-group discussions and individual exploration. You will try out activities as a learner, as well as reflect with your peers on how to apply these ideas in your own teaching.

This workshop is designed for teachers of grades 6 - 12. All educators are welcome.

**Saturday, February 5, 2022**

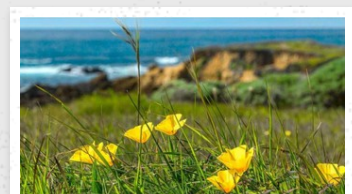
**9:00 am to noon (Pacific time)**

**Cost: \$35**

**Registration will close on or before Friday, February 4.**

**REGISTER HERE: DIGGING INTO DATA WORKSHOP**

## **THRIVING CALIFORNIA (GRADES 4-8)**



By exploring the world around us, we can find clues that will tell us about California's past and present. What we learn can help us to shape solutions that will ensure a thriving California for the future.

Ecology and ecosystems are big concepts. In this workshop you will engage with some strategies that make them both accessible and relatable. These strategies will involve direct interactions with both the natural and the built environment around us.

You will be supported to figure out how the strategies we practice in this workshop might be translated for successful implementation in your unique teaching & learning context.

This workshop is designed for people who work with grades 4-8, but is not limited to that range and all educators are welcome.

**Saturday, March 12, 2022**

**9:00am - 12:00pm (Pacific Time)**

**Cost: \$35**

**Registration will close on or before Friday, March 11.**

**REGISTER HERE: THRIVING CALIFORNIA WORKSHOP**

## **EXPLORING YOUR ENVIRONMENT WITH MATH AND SCIENCE (GRADES 3-5)**



What do scientists and mathematicians have in common, and how do they work together? Experience model activities that bring together math practices and science practices and support students to succeed at both. These activities will also get students outside and exploring their local environment. Workshop participants will reflect on the experience and discuss ways to apply these pedagogical strategies in your own context. This three-hour online learning experience will be highly interactive and will engage you in small-group discussions and individual exploration.

This workshop is designed for teachers of grades 3 - 5. All educators are welcome.

**Saturday, March 19, 2022**

**9:00am - 12:00pm (Pacific Time)**

**Cost: \$35**

**Registration will close on or before Friday, March 18.**

**REGISTER HERE: EXPLORING YOUR ENVIRONMENT WORKSHOP**

## **BUSES AND BIOFUELS: SUSTAINABLE TRANSPORTATION**

Buses and Biofuels: Sustainable Transportation | California Academy of Sciences



**Grade level:** 6-10


**Length:** 4 minutes

**NGSS Disciplinary Core Ideas:** MS-ESS3.A, MS-ESS3.C, MS-ESS3.D, MS-ETS1.1

For Video Discussion Questions and Accompanying Activity, please visit

[https://www.calacademy.org/educators/buses-and-biofuels-sustainable-transportation?  
utm\\_campaign=educator\\_ews\\_20211129&utm\\_medium=email&utm\\_source=Mailjet](https://www.calacademy.org/educators/buses-and-biofuels-sustainable-transportation?utm_campaign=educator_ews_20211129&utm_medium=email&utm_source=Mailjet)

## **GREEN GUARDIANS PRESENTS: EXPLORING CARBON FOOTPRINTS WITH K-2 STUDENTS PROFESSIONAL LEARNING WORKSHOP**



# Exploring Carbon Footprints with K-2 Students Workshop

December 9th @ 4:30pm PT

**VISIT [BIT.LY/32KTR3F](https://bit.ly/32KTR3F)**

**TO REGISTER!**

Presented By



**green  
guardians**



GREEN GUARDIANS  
PRESENTS

# EXPLORING CARBON FOOTPRINTS WITH K-2 STUDENTS

## PROFESSIONAL LEARNING WORKSHOP

This virtual professional learning workshop and the corresponding pilots are designed to provide teachers with the confidence and instructional materials to **advance environmental literacy** in their classrooms.

Each teacher will be provided with a **\$50 gift card** for piloting the materials and completing the survey. There will be up to **\$500** in prizes and giveaways awarded for participation and a class engagement challenge!

Through readings, activities and discussions, students follow the story of a wildfire that has caused Aunt Kitty to evacuate her home. This extreme weather event frames the inquiry into carbon footprints.



**Presenter:**

Yvonne Qiu, Senior Instructional Designer  
Green Guardians

→ Register here: [bit.ly/32Ktr3f](https://bit.ly/32Ktr3f)

### REGISTER BY DEC. 8TH

Space is limited to 50 teachers

#### Who can sign up?

Kindergarten or 2nd-grade teachers in California who want to integrate environmental education into their instruction.

**REGISTER NOW** 

#### IMPORTANT DATES:

- December 9th: Workshop 4:30-6:30PM Pacific Time
- December 9th-February 28th: Pilots, surveys, and challenge submissions
- March 1st: Challenge winners announced



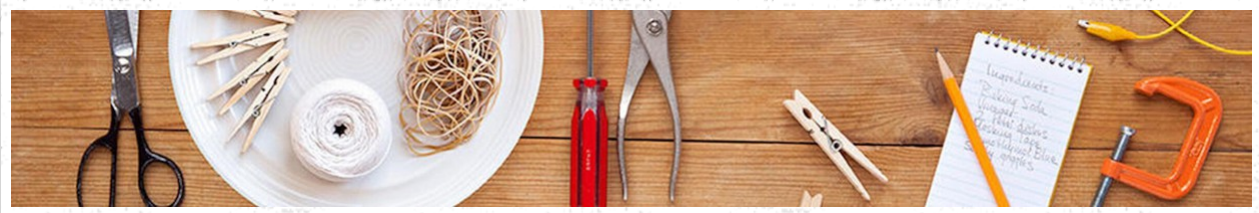
**The Tech Interactive**

**THE TECH INTERACTIVE**

## The Tech Challenge 2022: Kinetic Commotion



## Partner Resources



## EXPLORATORIUM- LEARNING TOOLBOX

Monterey Bay Aquarium

LOGIN | FOR MEMBERS | SHOP

VISIT ANIMALS JOIN & GIVE ACT FOR THE OCEAN FOR EDUCATORS

# Learning at home

**Support children's learning at home for grades PreK through 12.**

These online courses and family-friendly science activities encourage a sense of wonder and connection to the natural world while teaching important science concepts.

Love our educational resources? Support us with a donation.

## MONTEREY BAY AQUARIUM LEARNING AT HOME RESOURCES

**Teacher Opportunities**

**Acterra**

**YOU(TH)  
BE THE  
CHANGE**

# ENVIRONMENTAL AND SOCIAL JUSTICE AWARENESS DAYS

Earth Calendar or Eco Calendar

## TOWARDS EQUITY: EXPLORING LANGUAGE DEVELOPMENT THROUGH SCIENCE PRACTICES



### Towards Equity: Exploring Language Development through Science Practices



#### Overview

We are recruiting twelve elementary teachers in grades 3-5 from across California to participate in a one-year, online professional learning community (PLC) focused on supporting students who are labelled as English language learners (“ELLs”) in science. In this PLC, you will be provided with opportunities to design and test strategies to promote the participation of ELLs in scientific sensemaking through engagement in science practices in your own classroom. We will engage in cycles of inquiry in which we identify challenges in our own teaching contexts, develop and implement practices and tools to overcome these challenges, and collaboratively reflect on evidence of their effectiveness. Teachers will be offered an honorarium of \$1,200 for their participation in the project.

#### What will I learn?

- Strategies for supporting all students, especially “ELLs” in engaging in science practices;
- Interrelationships between language, culture, race, power and participation in science learning.

#### How will I learn?

- Through monthly online synchronous meetings (via Zoom), one Saturday a month from 9am - 11am PST (1/15, 2/5, 3/5, 4/9, 5/7, 6/4);
- Through optional opportunities for consultations with facilitators;
- Through readings, engaging in collegial discussions, brainstorming new ideas for classroom practice, and reflecting on your own instruction and that of other educators.

#### Who is eligible to participate?

We are looking for teachers who...

- Teach science consistently in Grades 3-5 in California public schools using CA NGSS-aligned materials that engage students in science and engineering practices;
- Teach students who are classified as ELLs and have an interest in supporting their participation in science discourse and discussion;
- Have an interest in engaging with educational theories about science learning, language, and equity;
- Have an interest in engaging in inquiry cycles using classroom video to develop classroom practices/tools.

#### Collaborators



**Emily Miller**  
University of Wisconsin



**Emily Reigh**  
Stanford University



**Maria Chiara Simani**  
University of California



This project is funded by the California Science Project through the 2020 Elementary and Secondary Schools Emergency Relief (ESSER) funds.

Application: <https://tinyurl.com/TowardsEquityinScience>

Contact: [evreigh@stanford.edu](mailto:evreigh@stanford.edu)

**APPLY NOW: TOWARDS EQUITY IN SCIENCE**

## **BIOMIMICRY LEARNING SEQUENCE PROJECT**



### **Biomimicry Learning Sequence Project**

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#### **Biomimicry Cadre**

A Cadre is a team that develops, presents, and revises an NGSS phenomena/problem-based 3-dimensional learning sequence that prominently showcases biomimicry examples and principles targeted for a specific grade.

The purpose of this work is to support K-5 teachers in incorporating designed-for-NGSS and biomimicry instruction into their classroom with a high-quality learning sequence and teacher professional learning.

During the development and revision of a learning sequence phase of the project, each Cadre works in teams of three that consist of individuals representing a classroom teacher, a NGSS teacher leader, and a biomimicry practitioner. The Cadre becomes a team of two (classroom teacher and biomimicry practitioner) to plan for and deliver teacher professional learning. All members have teaching experience at the grade level their work targets. Cadre members work with the Biomimicry Institute and WestEd's K-12 Alliance to incorporate best practices throughout all phases of the project and attend to the Next Generation Science Standards (NGSS) and the instructional shifts called for by *A Framework for K-12 Science Education*, biomimicry components, and, as appropriate, California's Environmental Principles and Concepts.

For the learning sequence development phase of the project, the Cadre (classroom teacher, a NGSS teacher leader, and a biomimicry practitioner) participate in 3 days of virtual professional learning and planning time that includes:

- Grounding in research in how people learn
- Phenomena/problem based 3-dimensional learning
- Biomimicry principles and concepts
- Framing instruction that is motivating and coherent from the student perspective
- 5E instructional model
- Functioning as a team

For the institute planning and implementation phase of the project, the Cadre (classroom teacher and a biomimicry practitioner) participate in 2 days of virtual professional learning and planning time that includes:

- Framing adult-level content
- Facilitation strategies

**Cadre Agreements • Biomimicry Institute and K-12 Alliance, WestEd • Page 1**

Rosanna Ayers from the Biomimicry Institute and Jill Grace from the K-12 Alliance are recruiting K-5 teachers for a cadre focused on biomimicry. Help Rosanna and Jill with recruitment by writing to Rosanna with recommendations at [rosanna.ayers@biomimicry.org](mailto:rosanna.ayers@biomimicry.org).

# NEW JOURNAL ON CLIMATE CHANGE FROM CASE



[CLICK HERE TO READ THE CALIFORNIA JOURNAL OF SCIENCE ED](#)

## NAVIGATING THE POLITICAL DIMENSIONS OF CLIMATE CHANGE TEACHING AND LEARNING

[STEAM TEACHING TOOLS CLICK HERE TO READ](#)

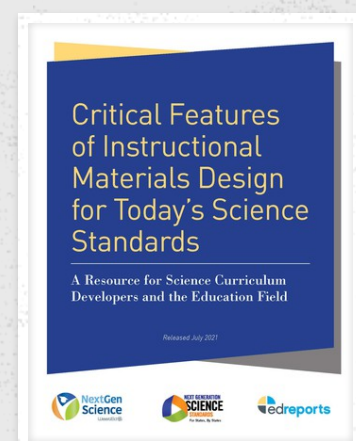
[CLICK HERE TO VIEW - STEM TEACHING TOOLS - Navigating the Political Dimensions of Climate Change Teaching and Learning](#)

## SCIENCE CURRICULA NEW RESOURCE

Critical Features of Instructional Materials Design for Today's Science Standards:

A Resource for Science Curriculum Developers and the Education Field

Today's science standards have initiated a significant shift in all parts of the science education system. As a result, science instructional materials are also changing. Educators, school and



district administrators, and developers of instructional materials need to be able to develop a common vision of high-quality curricula that will prepare students for success in school and beyond.

This resource is jointly authored by EdReports and NextGenScience to illustrate critical design features of science instructional materials and provide common language for describing high-quality materials.



[\*\*CLICK HERE TO READ THE RESOURCE\*\*](#)

The National Academies of  
SCIENCES • ENGINEERING • MEDICINE

CONSENSUS STUDY REPORT

## Call to Action for Science Education

BUILDING OPPORTUNITY FOR THE FUTURE



[CLICK HERE TO READ THE NASEM CALL TO ACTION](#)

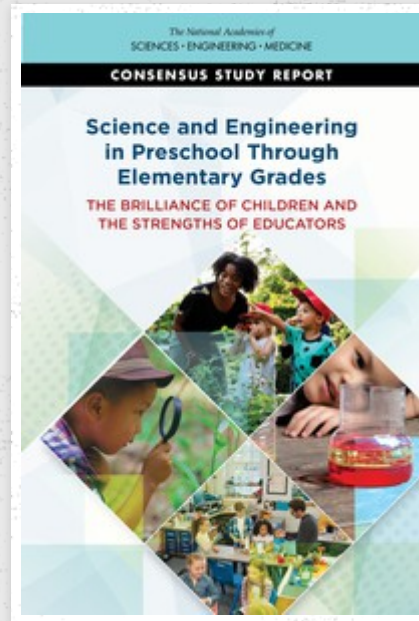
This report sets a bold vision for the future of high quality science education looking across all of grades K-16 and puts equity and opportunity at the center. It also explores role of science education for participation in democracy and daily life

## SCIENCE AND ENGINEERING EDUCATION NEEDS TO BE PRIORITIZED THROUGH FIFTH GRADE, SAYS NEW REPORT

Starting in early childhood, children are capable of learning sophisticated science and engineering concepts and engage in disciplinary practices. They are deeply curious about the world around them and eager to investigate the many questions they have about their environment. Educators can develop learning environments that support the development and demonstration of proficiencies in science and engineering, including making connections across the contexts of learning, which can help children see their ideas, interests, and



practices as meaningful not just for school, but also in their lives. Unfortunately, in many preschool and elementary schools science gets relatively little attention compared to English language arts and mathematics. In addition, many early childhood and elementary teachers do not have extensive grounding in science and engineering content.



**[CLICK HERE TO READ THE NASEM ELEMENTARY SCIENCE REPORT](#)**

**ENVIRONMENTAL LITERACY COMMUNITY BASED PARTNER HUB**

**ENVIRONMENTAL LITERACY COMMUNITY BASED PARTNER HUB**

A new website that features Community Based Partners that provide environmental education based experiences.



## SCCOE

<https://www.scc-enviro-ed.org/>



## WALDEN WEST

<http://www.waldenwest.org/>



## CAELI

<https://ca-eli.org/>



## SMCOE

<https://eeproviders.smcoe.org>



## SANTA CRUZ COE

<https://sites.google.com/view/environmental-literacy-for-all/professional-learning>



## SJCOE

<https://www.sjcoescience.org/environmental-literacy.html>



## VALLEY WATER

<https://www.valleywater.org/>  
Distance Learning Resources:  
[Distance Learning NEW FOR 2020 | Santa Clara Valley Water](#)



## EVOLS

<https://www.evols.org/>  
Distance Learning and COVID Modified Resources:  
[2020/21 Programs \(COVID Modified\) | Environmental Volunteers - Environmental Volunteers \(evols.org\)](#)



## LIVING CLASSROOM

<https://www.living-classroom.org/>



Santa Clara County  
Office of Education

## ISTEAM- SCIENCE & ENVIRONMENTAL LITERACY

 @sccoe

The mission of the Science Department is to provide service and support for all educational stakeholders. We offer workshops, conferences, and student events that promote the Next Generation Science Standards (NGSS).

Science explores and explains phenomena around us. It is a way of gaining, organizing, applying, and conveying knowledge of that phenomena. Having science as one of the core contents in K-12 education is vital as it influences our culture and has allowed society to flourish.

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 [sccoe.org/isteam/science/Pa...](http://sccoe.org/isteam/science/Pa...)

### SCCOE SCIENCE GOOGLE WEBPAGE

For even more resources, workshops and upcoming conferences, please visit our webpage. We are updating this weekly. Please also let us know if you have any events or workshops that you would like to share.