CLIMATE CHANGE

EDUCATION FOR ALL

PRESIDIO
GRADUATE SCHOOL

About Presidio Graduate School

Presidio Graduate School is the first and only independent graduate school focused entirely on sustainability and social justice. Every day, our students, alumni, and faculty reimagine and rebuild a more just and sustainable planet for all.

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Why Us?

In 2020, we identified a gap in teacher preparedness to teach climate literacy, and we knew we could utilize our expertise in sustainability education to help.

Presidio launched the Climate Education for All program with the mission of providing all teachers with the climate literacy skills and tools they need to educate the next generation on climate change science, causes, and solutions.

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Teach the Teachers

*One academic study shows that **if we teach climate change to just 16% of high school students** (up from 1%), we can reduce more C02 than electric vehicles, offshore wind farms, or afforestation efforts.*

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The most effective and scalable way to ensure a climate-friendly future.

86% of U.S. teachers would like to teach climate change in their classroom. But of those, only 42% do.

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Barriers to Teaching Climate Change

- Teachers don’t believe climate change is related to their subject area.
- Teachers don’t have enough training or support they need to teach climate change.
- Teachers don’t know the science behind climate change, even science teachers.
- Teachers know teaching climate change can be traumatic for their students.

What do you think?

What do you see as the greatest challenge teachers face in teaching climate change?

Climate Change Education for All supports interested teachers to create climate literate students by:

- Providing online learning for teachers to boost their own climate science knowledge and climate literacy.

- Equipping teachers of all subjects and all grade levels with the knowledge, skills, and resources to incorporate climate education into their existing curriculum.

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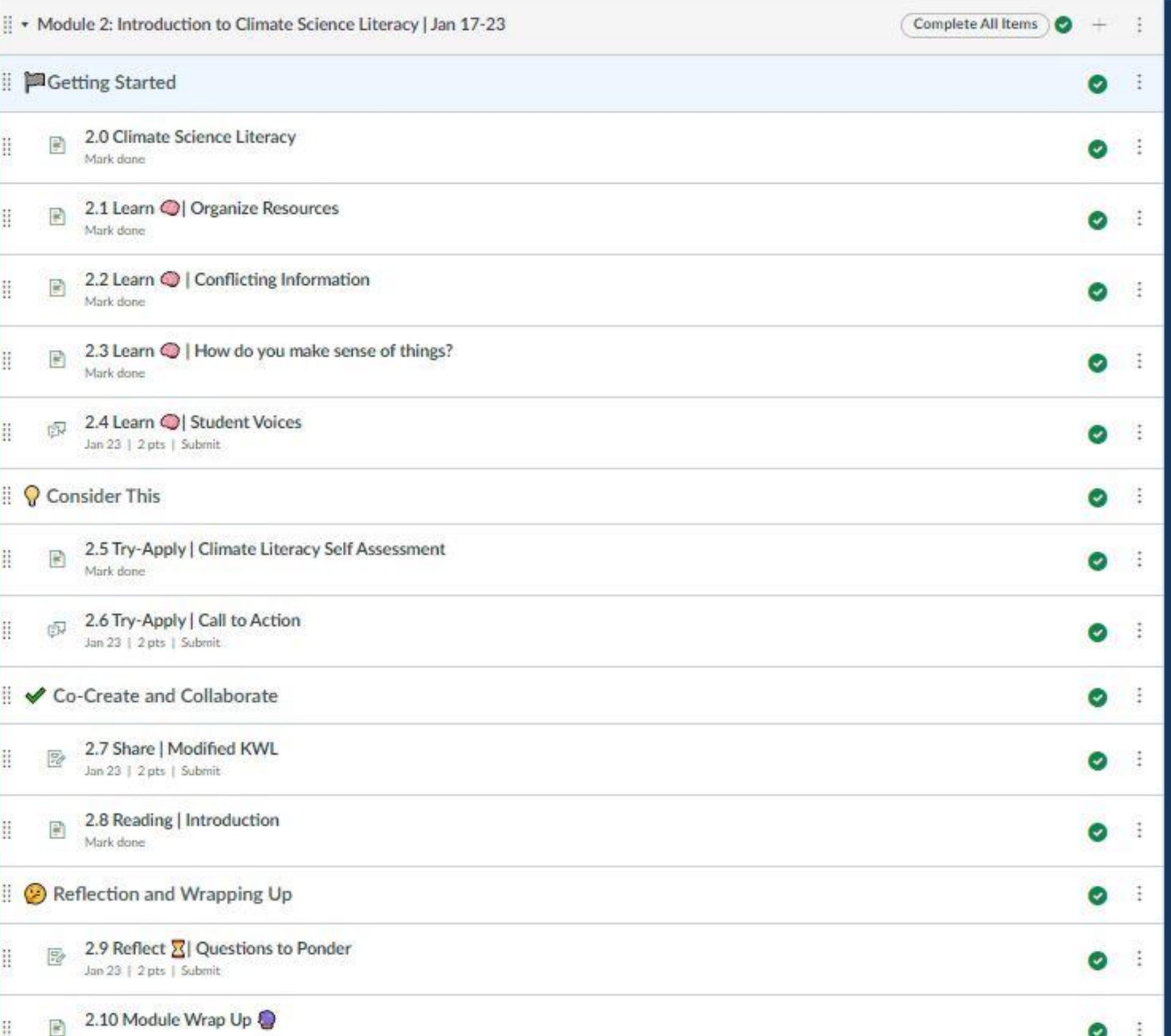
Designed to Overcome the Barriers to Teaching About Climate Change

- A polarized topic that could trigger push-back
- Lack of preparation in the foundations of climate science
- Psychological challenges related to concerns of eco-anxiety amongst students

Course Design

- Designed for adult learners
- Co-creation, peer collaboration, and constructivism are fundamental in each course
- Facilitators provide authentic feedback, coaching, and assessment

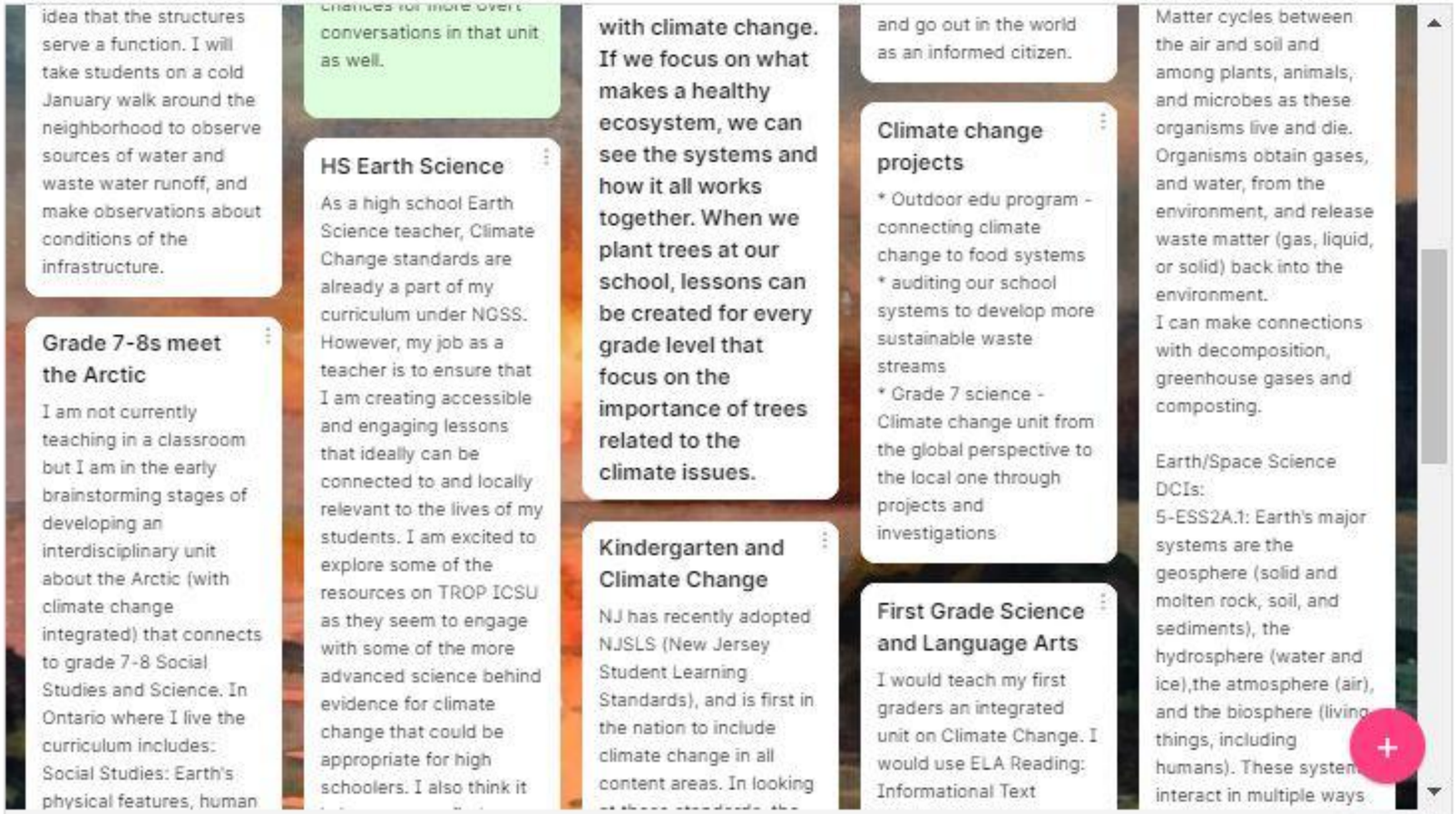


Instructional Design

Initial Brainstorming

Let's brainstorm some initial ideas how climate change concepts might connect to your existing curricula. The final project is submitting a variety of lessons or a unit in which you have augmented your curriculum with climate change concepts. Throughout the course, you will be designing and brainstorming different ideas that lead up to the project.

1. Review the final project information.
2. Review your state standards (or district standards) for your grade level(s), subject area(s).
3. Explore some ideas to include climate change. TROP ICSU may support your brainstorming.
4. Post your idea(s) on where you might include climate change concepts in your current curriculum to the Padlet below by selecting the + and adding your ideas. Add to ideas that have been posted or like them.



Instructional Design

Teacher Professional Development
Three Course Options

Teaching
Climate Change Essentials
Nine-Week Course
For All K-12 Educators

Teaching
Extreme Weather
Four-Week Course
For K-12 Science Teachers

Teaching
Climate Justice
Four-Week Course
For All K-12 Educators

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FREE Enrollment for teachers taking the course for PD Hours/CEUS.
Graduate Credit Option Available

Teaching Climate Change Essentials Course

Why should I take the course?

- Be inspired to integrate climate change into your classroom
- Build your competence and confidence to teach climate change within a local context
- Create, curate, and share recommendations on effective climate approaches and materials

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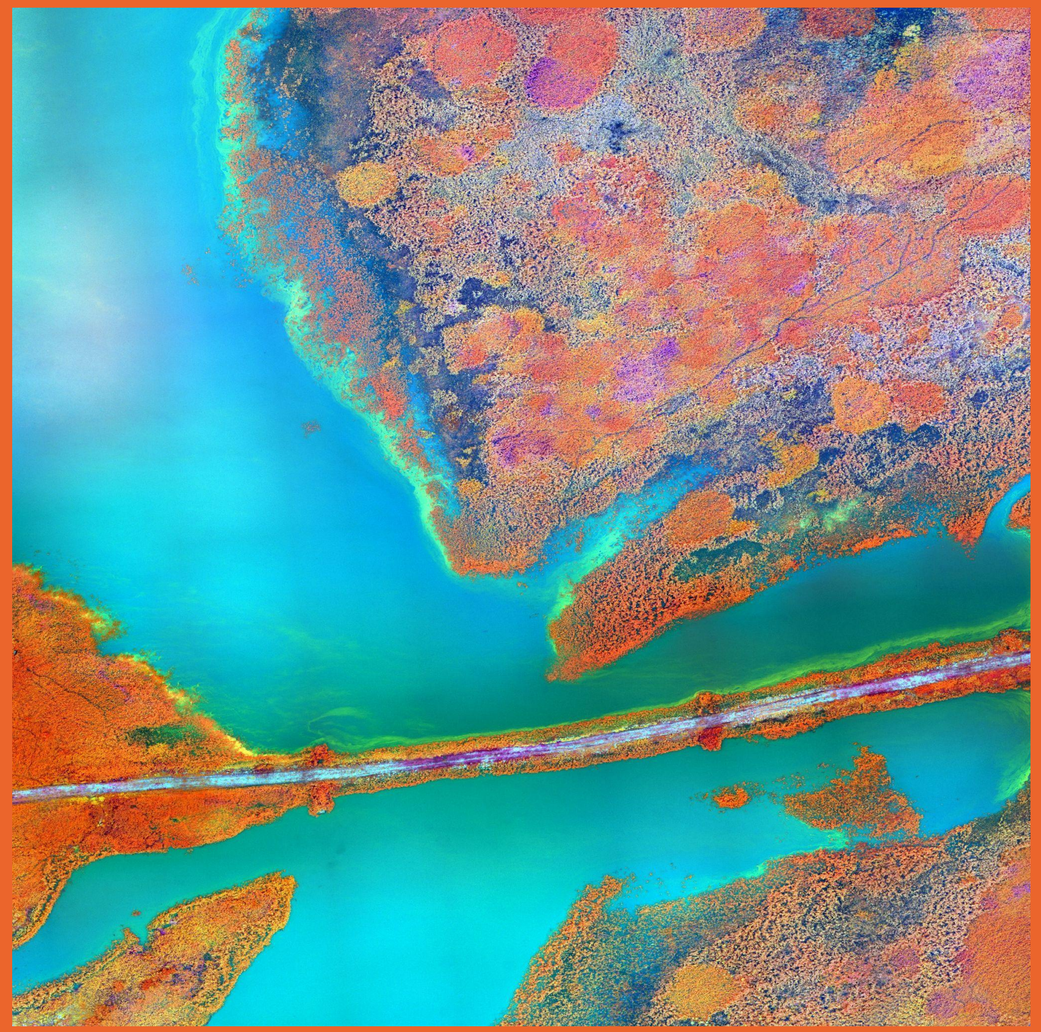
Teaching Climate Change Essentials Course

Learning Objectives

- Explain the fundamentals of climate science literacy.
- Analyze how climate change impacts the planet and people, especially people in marginalized communities.
- Design entry points to include these fundamentals in a variety of existing K12 curriculum.
- Explore and adapt real world curricula and resources for use in classrooms.
- Compare and contrast climate change solutions that teachers and students might participate in personally, locally, and globally.



Teaching Climate Change Essentials
Course Structure

- **Nine-week online course (45 hours)**
  - Nine learning modules, one per week
- **Three live webinars - small group conversation with subject experts**
- **Facilitated forum for peer-to-peer collaboration**
- **Comprehensive syllabus**
- **Readings, video and vetted resources that can be used with students**

NOT A CURRICULUM!

TEACHER PD SYLLABUS
Teaching Climate Change Essentials

CLIMATE CHANGE IN YOUR CLASSROOM

CLIMATE SCIENCE LITERACY

CLIMATE SCIENCE 101

MINDSETS AND CLIMATE SCIENCE

CLIMATE CHANGE SOLUTIONS

CLIMATE CHANGE URGENCY

CLIMATE CHANGE'S HUMAN IMPACTS AND INEQUITIES

CLIMATE JUSTICE - GOING DEEPER

+ Final Project

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COURSE FACILITATORS & WEBINAR LEADERS

Jenny Combs

- Executive Director of a Consortium of 37 rural schools in Montana focused on high quality PD and curriculum support
- Masters in Curriculum and Instruction
- Experienced mentor, instructional coach and facilitator
- Experienced in standards-based classroom PD
- 25+ years education experience
- Math and English Teacher
- Finalist Montana Presidential Award for Excellence in Mathematics

COURSE FACILITATORS & WEBINAR LEADERS

Wilford Welch

- Author '*In Our Hands - a Handbook for Intergenerational Actions to Solve for the Climate Crisis'* - course textbook.
- Board chair of environmental nonprofit organizations: NatureBridge and National Outdoor Leadership School
- Leader of trash removal initiative on Mount Everest that introduced notion of 'Leave No Trace.'
- Experienced lecturer and educator on International Business Management
- Former US Diplomat in Asia and international business consultant

COURSE FACILITATORS & WEBINAR LEADERS

Nancy Metzger-Carter

- Sustainability Curriculum Coordinator at Sonoma Academy
- Education Leader with Schools for Climate Action
- Masters in Education
- Recognized Educator of Distinction from National Association of Independent Schools

COURSE FACILITATORS & WEBINAR LEADERS

SUBJECT to CLIMATE

Dan Castrigano

Dan Castrigano was a STEM and humanities middle and high school teacher for 11 years. He is passionate about environmental justice. Dan is currently Chief Content Officer at Subject to Climate.

Nita Seng

Nita Seng is a middle-school teacher and instructional lead with a focus on social justice education and social-emotional learning. Nita is Chief Learning Designer at Subject to Climate.

Archibong Akpan

Archibong Akpan is a Climate Scientist, International Panel on Climate Change (IPCC) Expert Reviewer, Data Analyst and Environmentalist. A Climate Reality Leader trained by Al Gore, in 2014 in South Africa. He is Director of Climate Science at Subject to Climate.

Elizabeth Wade

Elizabeth has experience in teaching, scientific research and lab work, self-publishing books, and working for environmental nonprofits. She is passionate about climate education and protecting what's left of nature.

Feedback from Course Participants

- 97% of teachers said the course made them more confident to teach climate change.
- 100% of participants said they are likely to incorporate climate change into their lesson plans.
- 94% agree the knowledge they have gained will have a direct impact on students.
- 100% agree the course was well organized and facilitated.

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I came away with tools in my toolbox to enhance this concept for young students in a way that won't frighten them with doom and gloom, but give them an opportunity to find ways to make changes.

Elementary School Teacher, KY

The scope of the reading material was well done. Articles, surveys, quizzes, etc. all taught me things that I didn't know and will make useful class materials.The class was also organized and there was timely feedback from the instructor.

“Climate Change Essentials provided me with the valuable resources to be a better teacher of climate change. I have already used some of those resources in the classroom and my students find them engaging and motivating. Thank you!”

11th and 12th Grade Teacher
Marine and Marine Biology

TEACHING CLIMATE CHANGE ESSENTIALS

Couse Start Dates

May 2, 2022

June 6, 2022

September 12, 2022

Teaching Extreme Weather Course for K-12 Science Teachers

Learning Objectives

- Explain the fundamentals of extreme weather.
- Analyze how climate change and extreme weather events are related.
- Explore regional extreme weather events in the U.S.
- Design a lesson or series of lessons that include extreme weather events.

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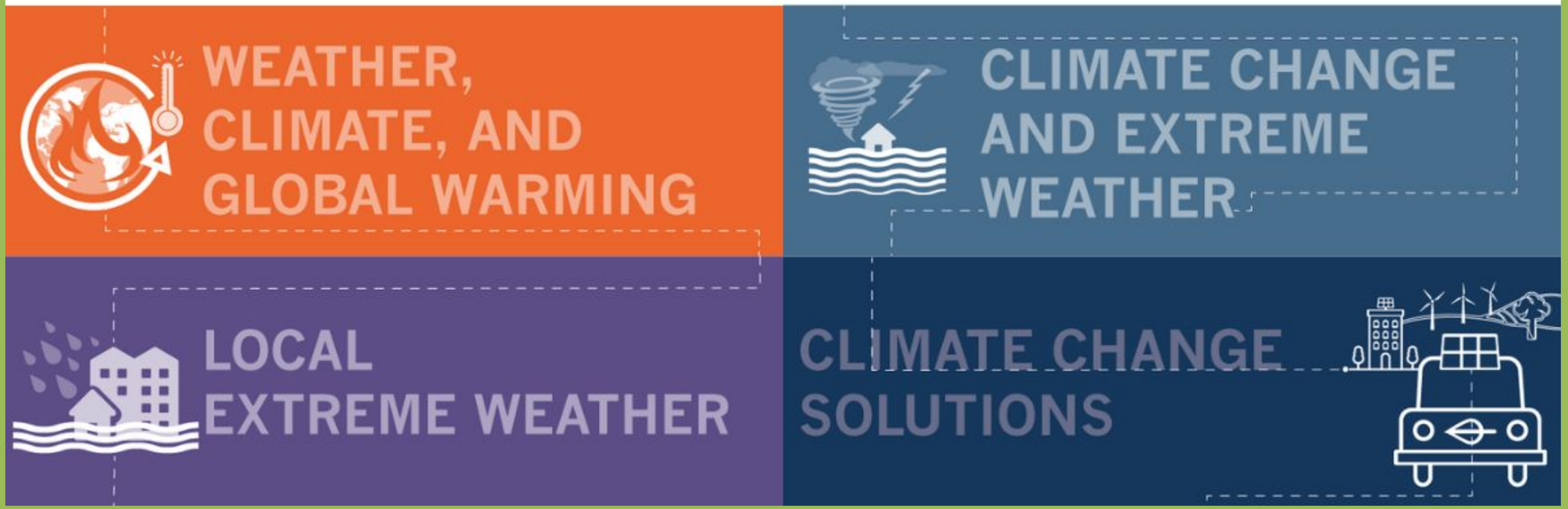
Course Structure

- Four-week online course (15 hours).
  - Four learning modules / one-per week.
- Access to concurrent course program webinars.
- Aligned to NGSS and State Standards.
- Facilitated forum for peer-to-peer collaboration.
- Comprehensive syllabus.
- Readings, video and vetted resources that can be used with students.

Teaching Extreme Weather | Course Syllabus



“

It covered a broad range of types of extreme weather in multiple contexts. It had us use 21st century technology and skills for discussion posts or to help create assignments.

”

TEACHING EXTREME WEATHER

Course Start Date

June 13, 2022

Teaching Climate Justice Course for K-12 Teachers

Learning Objectives

- Explain the fundamentals of weather and climate and the impact of global warming.
- Examine the history of the environmental and climate justice movements.
- Analyze the implications of climate change and its' disproportionate effect on marginalized communities.
- Research local climate change and environmental justice organizations, community partners and resources.

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Course Structure

- Four-week online course (15 hours).
  - Four learning modules / one-per week.
- Access to concurrent course program webinars.
- Facilitated forum for peer-to-peer collaboration.
- Comprehensive syllabus.
- Readings, video and vetted resources that can be used with students.

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Teaching Climate Justice Course Syllabus

WEATHER, CLIMATE, AND GLOBAL WARMING

CLIMATE CHANGE AND EXTREME WEATHER

LOCAL EXTREME WEATHER

CLIMATE CHANGE SOLUTIONS

Enroll for FREE Now

TEACHING CLIMATE JUSTICE

Course Start Dates

April 18, 2022

June 20, 2022

For more information or to enroll

https://k12.presidio.edu/climate-education/

Email:

k12team@presidio.edu

Based on what you're seeing in the field, what else should we know?

Any questions?