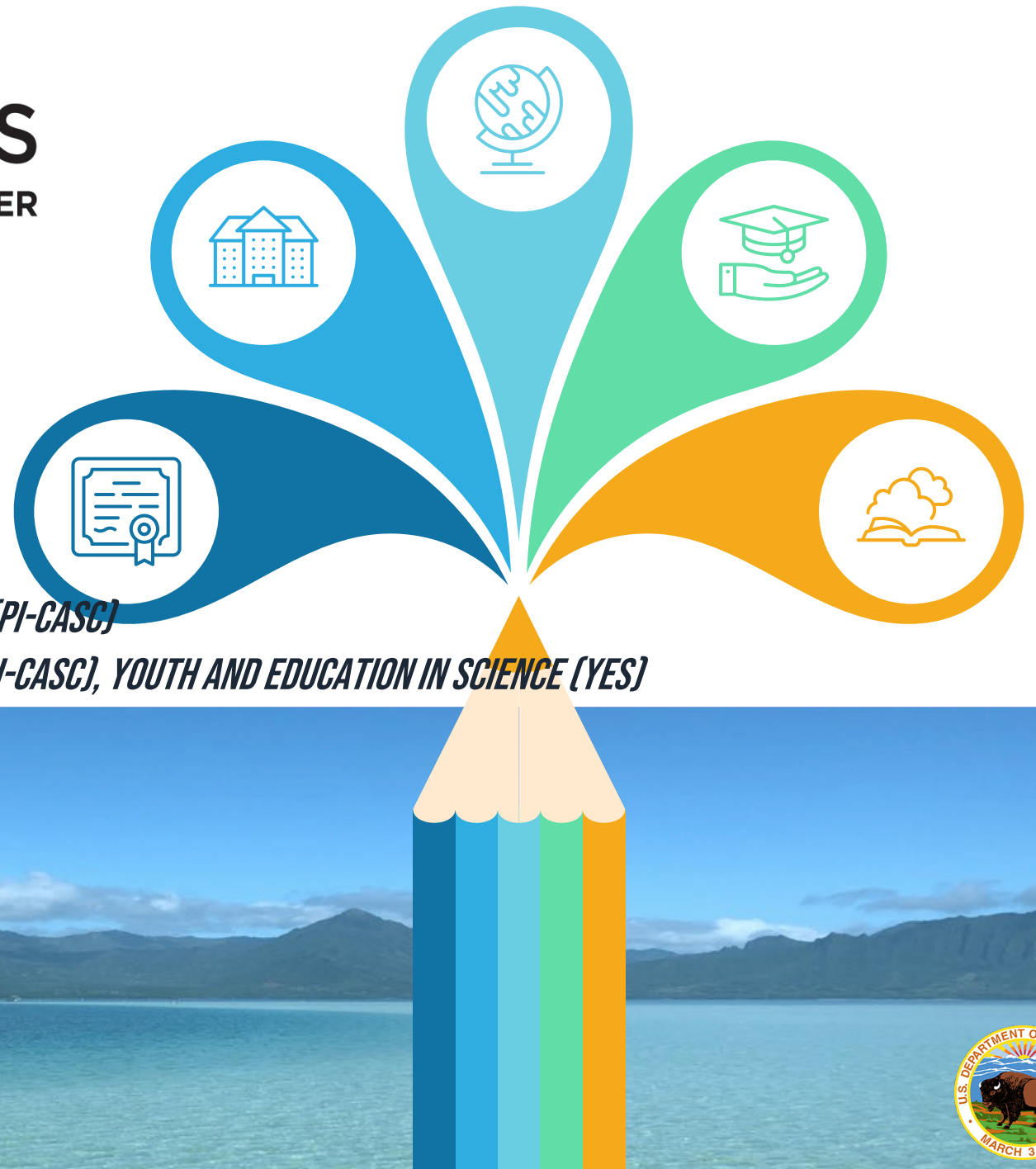




# PACIFIC ISLANDS

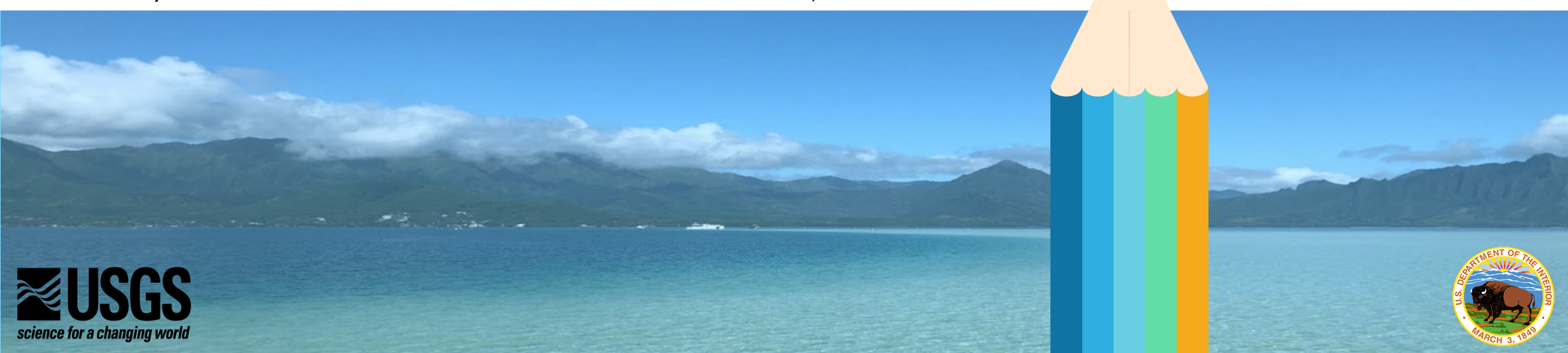
## CLIMATE ADAPTATION SCIENCE CENTER

# EDUCATION

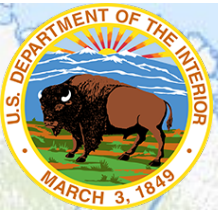


**CHERRYLE HEU, *PACIFIC ISLANDS CLIMATE ADAPTATION SCIENCE CENTER (PI-CASC)***

**EMILY SESNO, *PACIFIC ISLANDS CLIMATE ADAPTATION SCIENCE CENTER (PI-CASC), YOUTH AND EDUCATION IN SCIENCE (YES)***







Dr. Sheree Watson



Emily Sesno



**USGS**  
science for a changing world  
**Youth and  
Education in  
Science (YES)**



**PACIFIC ISLANDS**  
CLIMATE ADAPTATION SCIENCE CENTER



UNIVERSITY  
of HAWAII  
MĀNOA



UNIVERSITY  
of HAWAII  
HILO

Hawaii  
(US)



Cherrylle Heu

PACIFIC OCEAN



# **GOAL:**

**“DEVELOP, COORDINATE, AND BUILD CAPACITY  
FOR EDUCATIONAL AND COMMUNITY OUTREACH  
OPPORTUNITIES FOR PI-CASC”**





## REVIEW



## IDENTIFY AND COLLABORATE



## PLAN



## CREATE



## DISSEMINATE

- PI-CASC PROJECTS
- EXISTING K-12 CLIMATE SCIENCE MATERIALS
- NEXT GENERATION SCIENCE STANDARDS (NGSS)

- TOPICS
- PI'S AND COLLABORATORS



- PRODUCTS
- PLATFORM - ESRI HUB



- LESSON PLANS
- TOOLS AND DATA
- RESOURCES - I.E. SOP FOR RESEARCHERS

- TEACHER WORKSHOPS
- CONFERENCES
- SOCIAL MEDIA/ NEWSLETTERS
- YES OFFICE AND OTHER COLLABORATORS





Welcome to the Education hub of the Pacific Island Climate Adaptation Science Center. Explore our lesson plans, dive in to relevant data and tools, and access resources for students, teachers, and researchers on all things education.



#### Lesson Plans

Explore activities inspired by the science and research happening at the Pacific Island Climate...



#### Data and Tools

Access data and tools used to build lesson plans.



#### Resources

Find opportunities for students to get involved, materials and helpful information for teachers..





# Lesson Plans

Additional content is currently in development, check back regularly for more! Some activities are available in Story Map format - perfect for the digital learner - or as downloadable PDFs. Explore available topics below:

## Drought Explorer:

**Grade levels:** Middle and High School

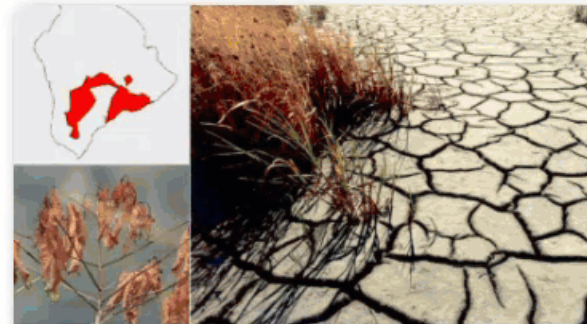
**Format:** Story Map Collection

Explore these mini-lessons to understand drought and how it has impacted the Hawai'i Volcanoes National Park (HAVO) using real data.

- Gain an understanding of the different types of drought and how they impact the environment.
- Learn how these issues relate to the HAVO.
- Connect these learnings to the greater issues from climate change.
- Think like a scientist and resource manager! Use a real information tool, the HAVO Portfolio, to answer questions about climate features in the park.

**NGSS alignment:** MS-LS1-5, MS-LS2-1, MS-LS2-4, HS-LS2-6, HS-LS4-5

**Climate Literacy Principles:** Principle 5



### Drought Explorer (Middle and High School)

How does a lack of rainfall impact different aspects of the environment and your community?

[Get Started!](#)



## A Volcano Lake Activity:

**Grade levels:** 4-5

**Format:** StoryMap Collection

Work your way through these four mini-lessons to discover the features of Kilauea Volcano!



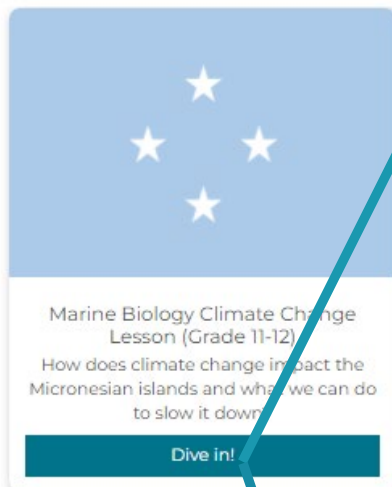
## Marine Biology Climate Change in Micronesia:

**Grade Levels:** 11-12

**Format:** PDF download

Using locally made resources from Micronesia and about Micronesia, students will explain the effects of climate change on Micronesian islands and what we can do to slow it down, with 80% accuracy.

- Compare and contrast sea-level rise effects on low-lying islands and high volcanic islands in Micronesia.
- Compare and contrast natural climate variability to anthropogenic climate change.
- Explain the differences between El Niño and La Niña.
- Explain at least five of the effects that climate change is predicted to have on the land, food, people, and ocean animals.
- Explain what will happen to shelled animals and corals due to ocean acidification with climate change.



World Geology Climate Change Lesson Plan (Grade 9)

How has climate change impacted Guam and what can we do about it?

Dig in!

## World Geology Climate Change in Guam:

**Grade Level:** 9

**Format:** PDF download

Understand climate change and its effects, not only on a global scale, but in a local perspective, with 80% accuracy.

- Compare and contrast rainy and dry seasons.
- Identify various weather phenomena that occurs on Guam.
- Understand the difference between weather and climate.
- Explain what El Niño and La Niña events are.
- Recognize El Niño and its impacts.
- Understand the changes that happen to the Pacific Ocean and atmosphere during El Niño events.
- Describe the greenhouse effect, global warming, and the causes and effects of climate change.
- Explore how humans impact the global climate and how they can reduce their contribution of greenhouse gases.
- Identify ways that Guam communities can adapt to the impacts of the climate change.
- Understand the impacts of climate change on Guam.

**Common Core Standards:** CCSS.ELA-LITERACY.RH.9-10.4, CCSS.ELA-LITERACY.RH.9-10.5

**National Geography Standards:** 7 and 15, Skill 2

# CLIMATE CHANGE LESSON PLAN

Modeled for High School Marine Biology

This lesson plan was developed and executed over a two-week period in a Marine Biology class in accordance with the GDOE curriculum map and Common Core standards. The project was funded and supported by the Pacific Islands Climate Adaptation Science Center, and will immensely benefit teaching and learning in the Guam Department of Education.

**The scope of this project is to:**

- Develop and implement climate change lessons/activities that are overtly culturally relative and location-based.
- Collect data for analysis of impact on student achievement (pre-post test) and attitudes (student survey).

## OVERVIEW

**Instructor:** Melanie M. Blas

**School:** Simon A. Sanchez High School

**Grade Level:** 11th and 12th Grade

**Duration of Intervention:** Two weeks

**Objectives:** Using locally made resources from Micronesia and about Micronesia, students will explain the effects of climate change on Micronesian islands and what we can do to slow it down, with 80% accuracy.



**Students will:**

- Compare and contrast sea-level rise effects on low-lying islands and high volcanic islands in Micronesia.
- Compare and contrast natural climate variability to anthropogenic climate change.
- Explain the differences between El Niño and La Niña.
- Explain at least five of the effects that climate change is predicted to have on the land, food, people, and ocean animals.
- Explain what will happen to shelled animals and corals due to ocean acidification with climate change.

## ACTIVITIES

**Amazing Race (Interactive Small Group Activities and Competition to Complete Challenges)**

- Questions introduced facts about climate change and Micronesia in a fun and different way, using "Mad Gab" or broken English, and students had to figure out phonetically what the message was. Some questions had students studying a chart comparing Micronesian islands by size, rainfall, number of islands, population, etc., and ordering and ranking them. Students also did physical challenges to keep their minds and bodies active.

**Double Haiku (Poems)**

- Students created double haiku poems to express what they learned about climate change from the class discussions and articles.

**Article Questions and Answers**

- Students read articles about different Micronesian islands and climate change and answered questions. Each article spoke about climate change and its predicted effects for each island.

**Jeopardy/Whiteboard Group Review**

- Students reviewed climate change's differing effects on low-lying islands vs. high islands in Micronesia.

**Amazing Race 2**

- Students answered questions to review the material covered during the climate change lessons in a fun and interactive way, using competition and physical activity to keep the mind and body active. It also helped build confidence because this was the second time using this format, but with new questions and challenges.







# Lesson Plans

Additional content is currently in development, check back regularly for more! Some activities are available in Story Map format - perfect for the digital learner - or as downloadable PDFs. Explore available topics below:

## Drought Explorer:

**Grade levels:** Middle and High School

**Format:** Story Map Collection

Explore these mini-lessons to understand drought and how it has impacted the Hawai'i Volcanoes National Park (HAVO) using real data.

- Gain an understanding of the different types of drought and how they impact the environment.
- Learn how these issues relate to the HAVO.
- Connect these learnings to the greater issues from climate change.
- Think like a scientist and resource manager! Use a real information tool, the HAVO Portfolio, to answer questions about climate features in the park.

**NGSS alignment:** MS-LS1-5, MS-LS2-1, MS-LS2-4, HS-LS2-6, HS-LS4-5

**Climate Literacy Principles:** Principle 5



### Drought Explorer (Middle and High School)

How does a lack of rainfall impact different aspects of the environment and your community?

[Get Started!](#)





Collection

# Drought Explorer

Work your way through these mini-lessons to explore how drought has impacted the Hawai'i Volcanoes National Park (HAVO) using real data. Each lesson

NGSS: MS-LS1-5, MS-LS2-1, MS-LS2-4, HS-LS2-6, HS-LS4-5



1 I. Types of Drought



2 II. Hawai'i Volcanoes National Park (HAVO) and...



3 III. Climate Change and Drought at HAVO



4 IV. HAVO Portfolio Activity



5 Drought Vocabulary



6 Teacher Guide

Get started





# I. Types of Drought

Did you know there are multiple types of drought? Follow this Story Map to learn how drought can influence your surroundings.

Last updated March, 2022







**8. How do you think hydrological drought may affect you and your community?**

**Question 1:** What does CCVD stand for?

- ☐ Climate Change and Variable Drought
- ☐ Climate Conditions Vary During Drought
- ☒ Climate Change, Climate Variability, and Drought
- ☐ Current Conditions during Volcanoes Drought

**Question 2:** What is the average elevation of HAVO?

- ☐ 13,681 feet
- ☒ 0 feet
- ☐ 5,700 feet
- ☐ 8,000 feet

**Question 3:** Use the average monthly climate table on page 10. Which month is the percent soil moisture the highest?

- ☐ January
- ☐ July
- ☒ December
- ☐ March

**Question 4:** The Standard Precipitation Index (SPI):

- ☐ Uses different timescales.
- ☐ Compares current rainfall averages over a given timescale with those from the past.
- ☐ Is an index to determine how severe a drought may be.
- ☒ All of the above

Check my answers

**Question 2:** Incorrect. Please try again.

[Try Again](#)





EDUCATIONAL RESOURCES

## Exploring hot spot volcanism and a mysterious lake at the summit of Kīlauea using models, USGS data, and Hawaiian mo‘olelo

By [Educational Resources](#)



### The Mysteries of Kilauea and the Hawaiian Islands

Follow these mini-lessons and models to explore hot spot volcanism and a mysterious lake that formed at the summit of Kīlauea. Use real USGS data to practic...

[Begin your investigation!](#)

### A Volcano Lake Activity:

**Grade levels:** 4-5

**Format:** StoryMap Collection

Work your way through these four mini-lessons to discover the features of Kīlauea Volcano!

- Model plate movement using shaving cream to learn how the Hawaiian Island chain formed,
- Create a model of groundwater to visualize how the volcano lake came to be,
- Practice your graphing skills to plot the rise in water level,
- Tap in to your creative side to illustrate the relationship between Pele and Nāmakaokaha'i.

**NGSS alignment:** 4-ESS2-2, 5-ESS2-1

in Dec. 2020



[HOME](#)

[ECOSYSTEMS](#)

[GEOGRAPHY](#)

This lesson introduces hot spot volcanism, the mysterious appearance of a lake in the summit of Kilauea, basic graphing skills using USGS data, and a STEAM component tied to native Hawaiian culture. This lesson is intended for elementary school grades 4-5, can be adapted to older grades, and is aligned to NGSS standards.





# PACIFIC ISLANDS EDUCATION

CLIMATE ADAPTATION SCIENCE CENTER

[Home](#)[About](#)[Lesson Plans](#)[Data and Tools](#)[Resources](#)[Contact Us](#)

Welcome to the Education hub of the Pacific Island Climate Adaptation Science Center. Explore our lesson plans, dive in to relevant data and tools, and access resources for students, teachers, and researchers on all things education.



Lesson Plans



Data and Tools



Resources





**PACIFIC ISLANDS EDUCATION**  
CLIMATE ADAPTATION SCIENCE CENTER

[Home](#)[About](#)[Lesson Plans](#)[Data and Tools](#)[Resources](#)[Contact Us](#)

# Data and Tools: Drought

Browse curated datasets, visualizations, and additional tools related to drought in Hawai'i.

This site is currently under development. If you would like to receive emails on our latest products and updates, sign up [here](#).

## The Pacific Drought Knowledge Exchange

The Pacific Drought Knowledge Exchange, or PDKE, is a collaborative knowledge exchange between researchers and managers to co-produce customized, site specific drought information and data products. Drought on our landscapes can influence future vegetation cover, non-native species invasions, watershed function, and fire behavior. Funded by PI-CASC, the PDKE seeks to address the critical need for scientists to produce locally relevant, timely, accessible, and actionable science products that managers can use to adapt to potentially drier and hotter climates.

PDKE Website Coming Soon

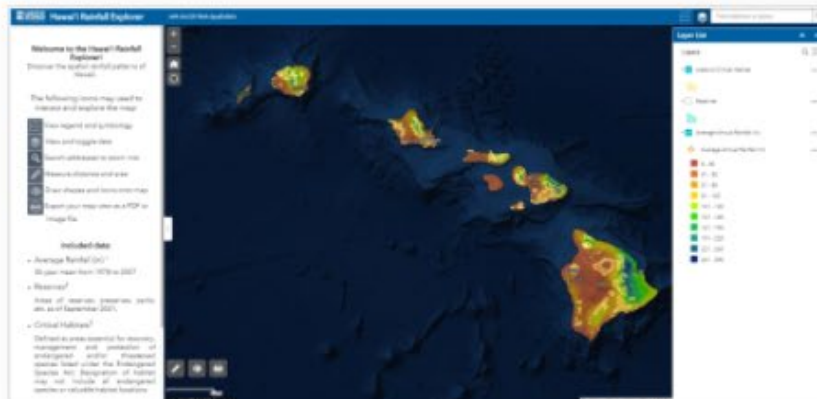






## Drought Tools

Use these tools, such as interactive maps, to learn more about topics such as drought and fire. Stay tuned for more!



### Hawai'i Rainfall Explorer

The Hawaii Rainfall Explorer is designed to explore rainfall patterns and other features across Hawaii. Use interactive layers such as drawing and measuring to observe spatial patterns and what's going on near you!

## Coming Soon: Drought Dashboards

Dashboards provide interactive data visualizations to dive deeper into the numbers of drought.





## Welcome to the Hawai'i Rainfall Explorer!

Discover the spatial rainfall patterns of Hawaii.

The following icons may be used to interact and explore the map:



View legend and symbology



View and toggle data



Search addresses to zoom into



Measure distance and area



Draw shapes and icons onto map



Export your map view as a PDF or image file

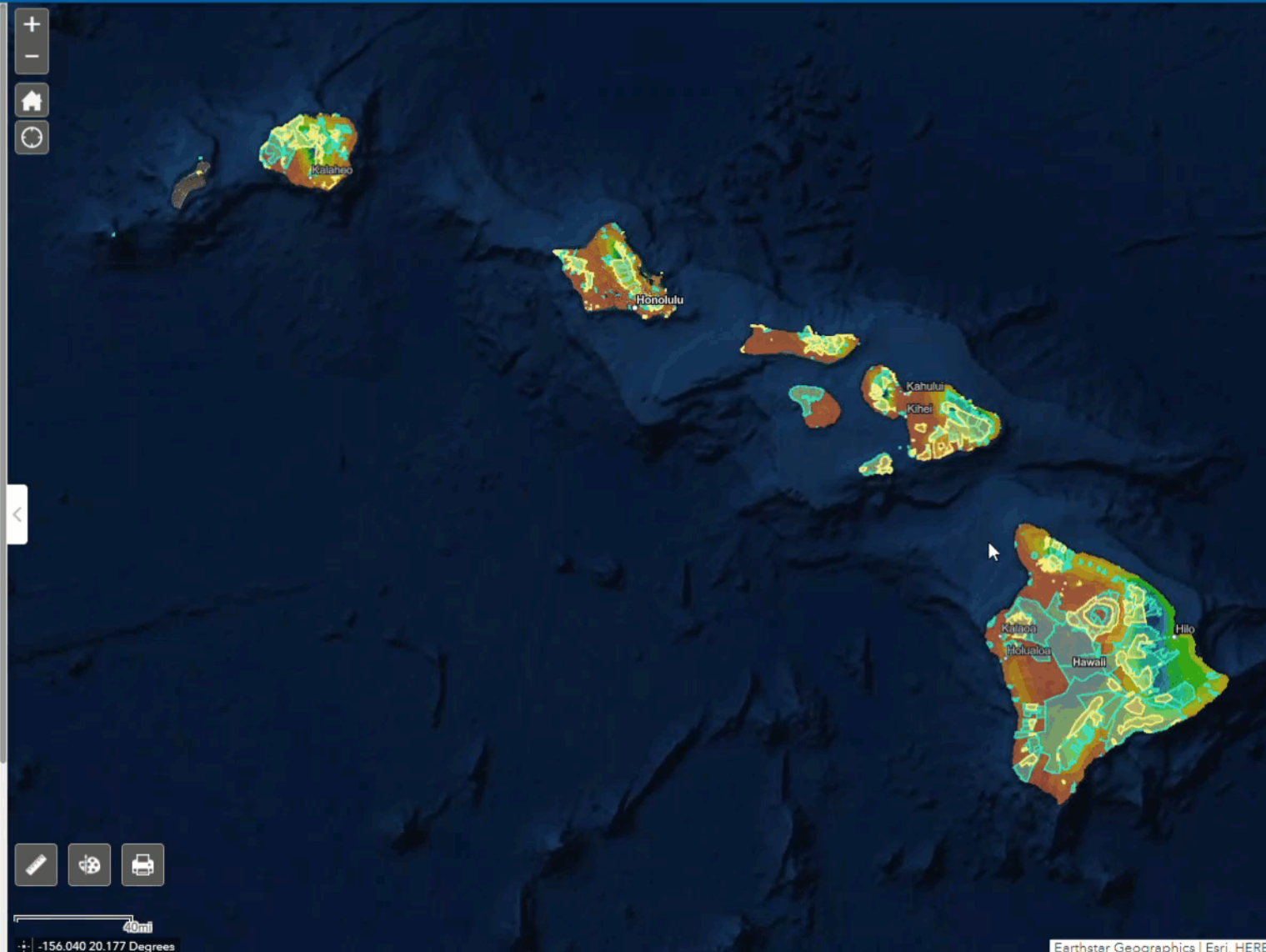
### Included data:

- Average Rainfall (in)<sup>1</sup>  
30-year mean from 1978 to 2007
- Reserves<sup>2</sup>  
Areas of reserves, preserves, parks, etc. as of September 2021.
- Critical Habitats<sup>3</sup>  
Defined as areas essential for recovery, management and protection of endangered and/or threatened species listed under the Endangered Species Act. Designation of habitat may not include all endangered species or valuable habitat locations.



40mi

-156.040 20.177 Degrees



### Layer List

#### Layers

☒ Areas of Critical Habitat



☒ Reserves



☒ Average Annual Rainfall (in)

☐ Average Annual Rainfall (in)

8 - 30

31 - 50

51 - 80

81 - 100

101 - 130

131 - 160

161 - 190

191 - 220

221 - 260

261 - 300





**The Hawai'i Rainfall Explorer is a web application designed for users to explore and create personal investigations with data.**

There are three data layers that can be toggled on and off:

- Average annual rainfall (inches)
- Areas of reserves, preserves, parks, etc.
- Critical habitats
- *Coming soon: Fire occurrences*

**Hawai'i Rainfall Explorer**

### **Guiding questions for explorers:**

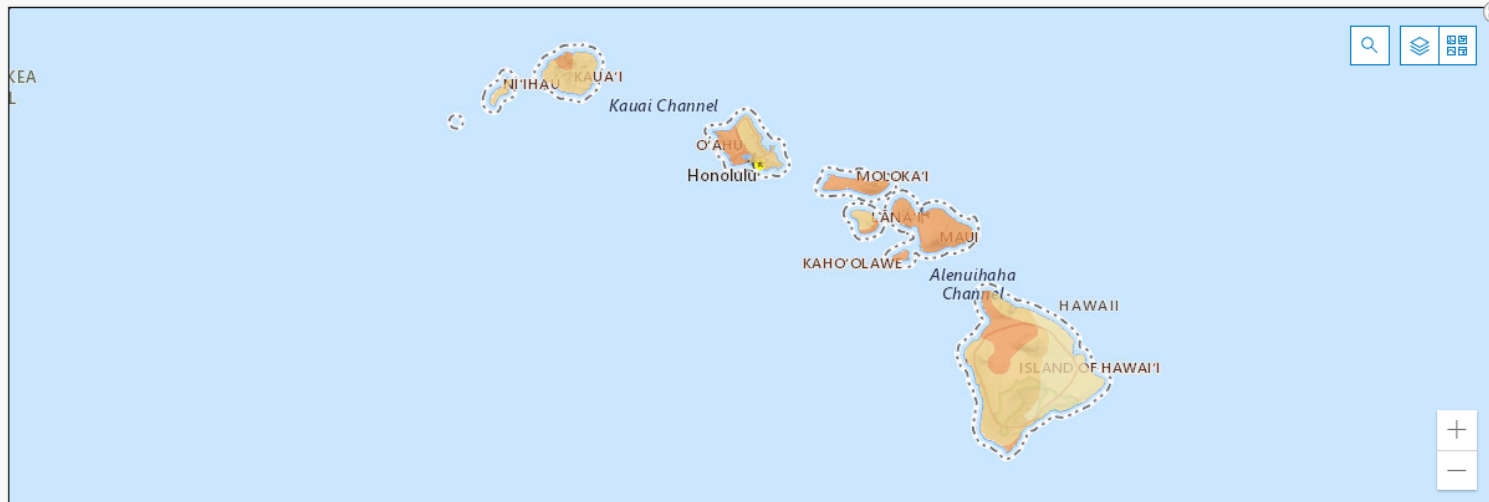
1. What is the average annual rainfall like where I live?
2. Where is the closest critical habitat from where I live? How far away is it?
3. How are the reserves located relative to the rainfall patterns?

**The Hawai'i Rainfall Explorer includes various widgets to help you explore data at any scale.**

Below are some instructions on how to utilize the widgets.



## Hawaii Drought Monitor



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Struc... Powered by Esri

### US\_Drought\_Current

#### Drought Monitor Class

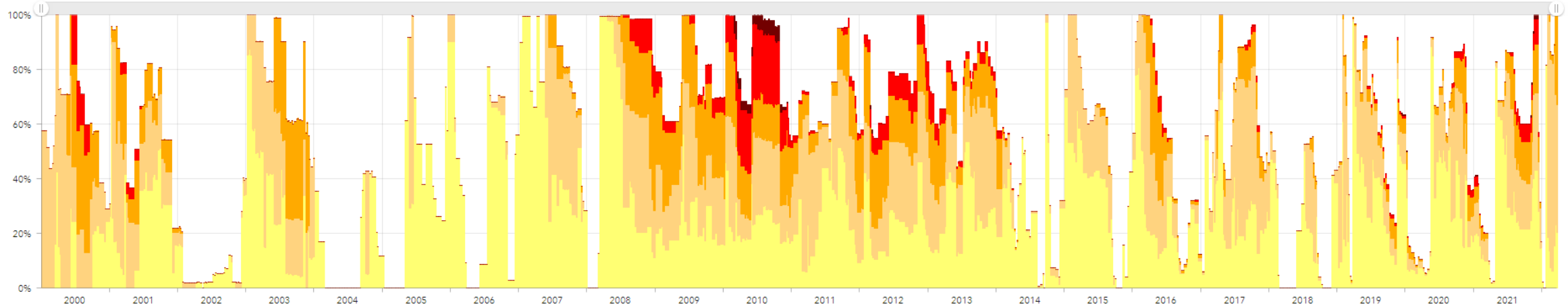
- Abnormally Dry
- Drought - Moderate
- Drought - Severe
- Drought - Extreme
- Drought - Exceptional

# 100%

Percentage of land at or above abnormally dry conditions (D0-D)

# 32.9%

Percentage of land at or above severe drought conditions (D2-D)



The U.S. Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC.





Collection

## Drought Fact Sheets and Portfolios

Explore these site and topic specific Factsheets to learn more about drought in Hawai'i. Also, check out the Climate Change, Climate Variability and Drought (CCVD) Portfolios that profile the environmental characteristics of a specific area.

Resources co-developed by the Pacific Drought Knowledge Exchange and partners.

[Get started](#)



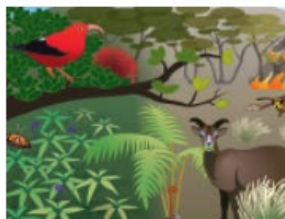
1 Factsheet: Drought and Conservation Operations



2 Factsheet: Drought & Restoration



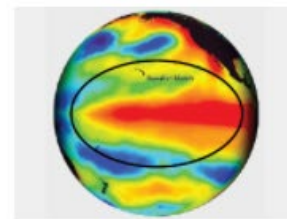
3 Factsheet: Drought & Non-Native Mammals



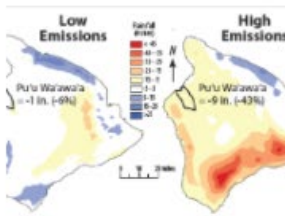
4 Factsheet: Drought at HAVO



5 Factsheet: Future Climates at HAVO



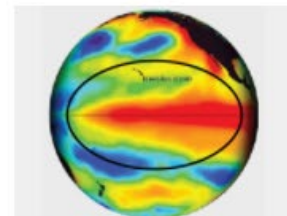
6 Factsheet: Impacts of El Niño at HAVO



7 Factsheet: Future Climates at PWW



8 Factsheet: Drought at PWW



9 Factsheet: Impacts of El Niño at PWW



10 Factsheet: Fire at PWW



11 Portfolio: Hawaii Volcanoes National Park Drought



12 Portfolio: Pu'u Wa'awa'a





Pacific Drought Knowledge Exchange

## Climate Change, Climate Variability, & Drought Portfolio

### Hawai'i Volcanoes National Park



2021-03-12

## Average Annual Climate Characteristics

### RF- Rainfall

Spatial Range: 9 to 231 in

### RH- Relative humidity

Spatial Range: 26 to 86 %

### SM- Soil moisture

Spatial Range: 0.17 to 0.77 Ratio

### Mean TA- Average temperature

Spatial Range: 38.7 to 74.7 °F

### Min TA- Average minimum temperature

Spatial Range: 31.9 to 67.7 °F

### Max TA- Average maximum temperature

Spatial Range: 47.1 to 82.5 °F

### CF- Cloud cover

Spatial Range: 0.65 to 0.65 Ratio

### S- Solar radiation

Spatial Range: 168 to 296 W/m2

### ET- Evapotranspiration

Spatial Range: 3 to 46 in

### Average Annual Climate: HAVO

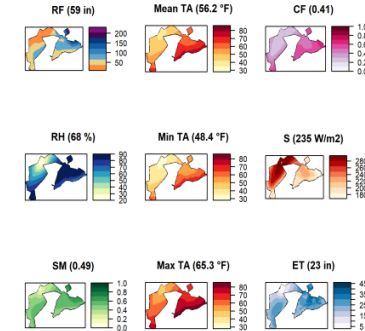


Figure 3. Mean annual climate of HAVO with area average shown in heading of each plot.

## CCVD Portfolio

The climate change, climate variability, and drought (CCVD) portfolio is a comprehensive synthesis of climate and drought information developed specifically for Hawai'i Volcanoes National Park (HAVO). This portfolio is designed to provide both research scientists and land managers with relevant climate and drought information needed to inform land management and guide future research and extension.

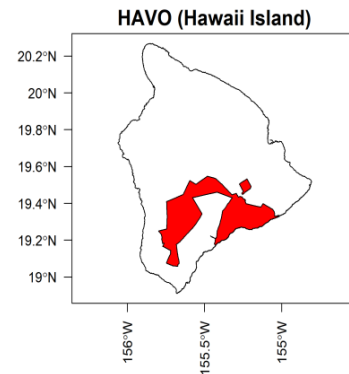


Figure 1. Map of HAVO.

## Average Monthly Climate

### Monthly Rainfall: HAVO

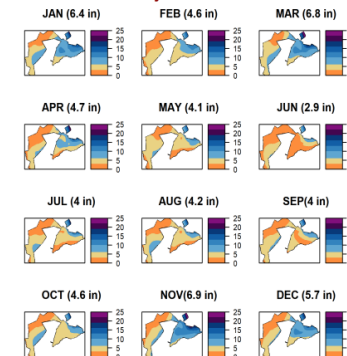


Figure 5. Mean monthly rainfall HAVO with area average shown in heading of each plot.

### Monthly Temperature: HAVO

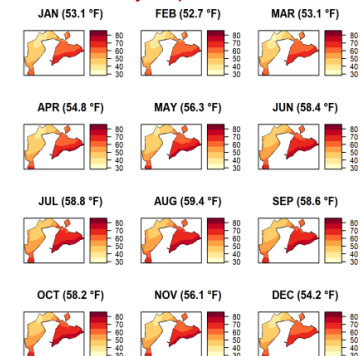


Figure 6. Mean monthly temperature at HAVO with area average shown in heading of each plot.





# Resource

Opportunities, articles, and more for students, teachers, and researchers.

[For Students](#)[For Teachers](#)[For Researchers](#)

## For Students

Explore student opportunities and programs in Hawai'i and the Pacific Islands.



## For Teachers

Resources to help teachers find related content and connect with organizations.



## For Researchers

Take your science to the next level and learn how to incorporate it into education.



# For Students

## Opportunities for K-12 Students

- Teaching Change Program - Field Courses on Hawai'i Island
- ArcGIS School Competition ([arcgis.com](http://arcgis.com)) - Learn to build your own StoryMap using ArcGIS and enter your story in for a competition!

## Place-Based Field Programs and Opportunities for K-12 students in Hawai'i and the Pacific Islands

- Project Hōkūlani - Introducing Native Hawaiian youth to the STEM fields through hands-on internships!
- OPIHI - Our Project In Hawai'i's Intertidal - a suite of science education programs that use Hawai'i's intertidal and coastal environments to immerse students in the scientific process.
- Teaching Change Program - Get inspired to be environmental stewards and to pursue post-secondary educations and careers in Hawai'i in natural resource management!
- STEMworks - to provide students and teachers resources, inspiration, and tools that empower them to improve their community and the world

## National Opportunities:

- ArcGIS School Competition ([arcgis.com](http://arcgis.com)) - Learn to build your own StoryMap using ArcGIS and enter your story in for a competition!

## Opportunities for Collegiate and Post-Collegiate Students

- Opportunities from the Pacific Island Climate Adaptation Science Center (PICASC)



### Lesson Plans

Explore activities inspired by the science and research happening at the Pacific...

Interested in learning about the topics researched in the Pacific Islands Climate Adaptation Science Center? Check out the Story Map lesson plans to conduct your own investigations!





# For Teachers

Explore this curated list to help direct you to useful resources

## Curricular Materials For Hawai'i and the Pacific Islands

- Sea, Earth, Atmosphere (SEA) for Grades 3-5 | [University of Hawai'i Sea Grant](#)
- Exploring our Fluid Earth for Grades 6-12 | [University of Hawai'i Sea Grant](#)
- Aloha 'Āina Curriculum for Grades 3-7 | [The Pacific American Foundation](#)
- Project Kahea Loko, "The Call of the Pond" Curriculum for Grades 4-12 | [Pacific American Foundation](#)
- Mālama Kaho'olawe for Grades 7-12 | [Pacific American Foundation](#)
- Reef Pulse Hawaii for Grades K-2 | [University of Hawai'i](#)
- PRISM for Grades K-8 | [University of Hawai'i Hilo](#)
- Healthy Climate Communities for Grades 6-8
- [STEMworks Home](#) | [STEMworks Hawai'i](#)

## Place-Based Field Programs For Hawai'i and the Pacific Islands

- OPIHI – Our Project In Hawai'i's Intertidal - a suite of science education programs that use Hawai'i's intertidal and coastal environments to immerse students in the scientific process.
- Teaching Change Program - aims to inspire local youth to be environmental stewards and to pursue post-secondary educations and careers in Hawai'i in natural resource management
- Māla'ai & HI School Garden Network - Māla'ai cultivates connections between people, land, culture and food in school gardens.

## Additional Educational Resources

Science, Technology, Engineering, and Math (STEM) topics:

- Youth and Education in Science (YES) | [U.S. Geological Survey \(USGS\)](#)
- Education Resource collections | [National Oceanic and Atmospheric Administration \(NOAA\)](#)
- Data in the Classroom | [NOAA](#)
- [Explore STEM Resources for K-12 Educators](#) | [NASA](#)
- SciGirls: Science Fun for Girls | [PBS](#)

Climate Science:

- Climate Kids | [National Aeronautics and Space Administration](#) | [NASA](#)
- Collection of Climate and Energy Educational Resources | [CLEAN](#)
- Resources for Educators | [US Global Change Research Program](#)
- The Essential Principles of Climate Literacy | [NOAA](#)
- K-12 Climate Action | [The Aspen Institute](#)
- How to productively reframe eco-anxiety as a science communicator or educator | [StemTeachingTools](#)
- Talking to kids about climate change | [National Geographic](#)

## Technology Tools for Teaching

- Learn ArcGIS | [esri.com](#)
- GIS for Schools | Interactive Web Maps for K-12 Subject Matter | [esri.com](#)
- Teach with GIS | [arcgis.com](#)
- Data Classroom | Get your students to engage with and visualize data.

## Science Teaching Organizations

- Hawaii Science Teachers Association (HaSTA)
- National Science Teaching Association (NSTA)
- National Marine Educators Association (NMEA)
- National Association of Geoscience Teachers (NAGT)
- National Earth Science Teachers Association (NESTA)



# For Researchers

Education and outreach is an important part of science. Explore the resources below to learn how to incorporate it into your work!



## Turn Your Science into Education!

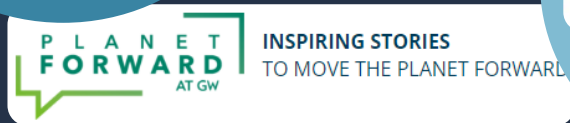
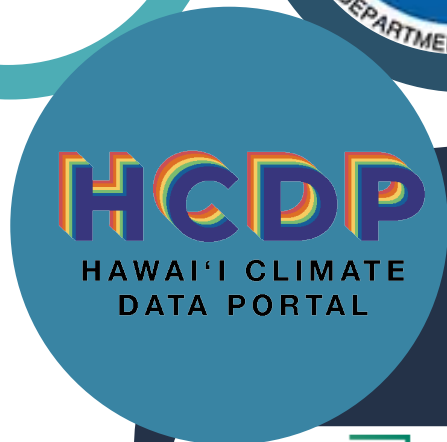
Follow these steps to align your research with Next Generation Science Standards (NGSS)\*



## Kūlana Noi'i

Kūlana Noi'i are kūlana, or standards, that reflect the most common guidelines and best practices for community-researcher partnerships.







## *Park for Every Classroom Program Expands Nationwide*

In partnership with the National Park Service, Shelburne Farms expands program to engage eight national parks in equity-centered climate change education



As part of the Park for Every Classroom program, national park staff team with community partners and educators to create professional learning opportunities for teachers. Pictured are members of the team at Saint-Gaudens National Historical Park conducting an educator workshop. (Photo: Joan Haley. Homepage photo by NPS.)





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## HOME

### Welcome to Project Hōkūlani

The overarching goal of Project Hōkūlani is to support Native Hawaiian high school students to enter into postsecondary science, technology, engineering, and math (STEM) fields through a culturally responsive, strength- and work-based enrichment program.

### What We Do

Serve Native Hawaiian youth and their families throughout Hawai'i, including the islands of Hawai'i, Kaua'i Lāna'i, Moloka'i, and O'ahu.

- High School Students: Throughout the academic year, we provide bi-monthly student sessions focused on science exploration within Native Hawaiian culture and hands-on activities; college preparation and dual credit opportunities; paid internships; and mentoring.
- 'Ohana: Throughout the academic year, we provide monthly 'ohana gatherings that prepare high school parents and families with college tips and resources; strategies to help children learn science at home; and other culture-based science activities.

### Key Dates

April 5 and 7: Student  
Weekday Virtual Class

April 9: Student  
Saturday In-Person or

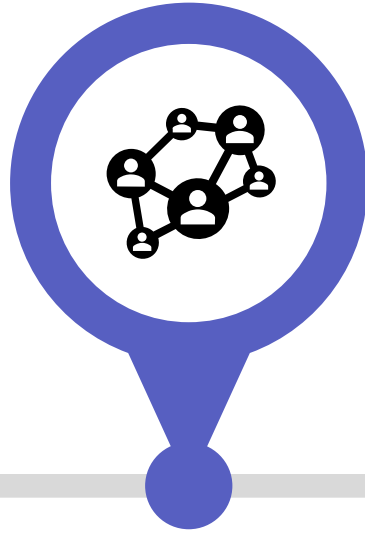


# WHAT'S NEXT?



## PRODUCTS

- TRANSLATED MATERIALS
  - SEA LEVEL RISE LESSONS
  - PROGRAMMING LESSONS
- AND MORE!



## COLLABORATE

- PARKS FOR EVERY CLASSROOM
  - PROJECT HŌKŪLANI
  - YES OFFICE
- AND MORE!



## FUTURE PROGRAMS

- OUTDOOR PROGRAMS
- AND MORE!



## EXPAND!

- GRADUATE STUDENTS
  - RESEARCHERS
  - CONTRACTORS
- AND MORE!



