OVERVIEW:

HEAT RISK EDUCATION

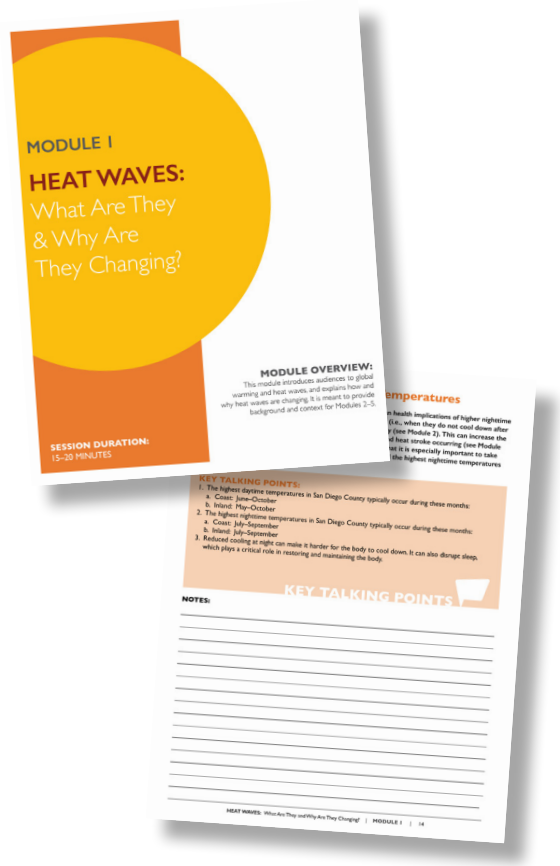
Curriculum Content & Use

HEAT RISK

This heat risk education curriculum was developed for use by nonprofit and community-based organizations, peer-trainers, health outreach and engagement specialists, schools, religious leaders, and community and resident leaders among other trusted messengers in San Diego County. Anyone, however, can download and teach the curriculum, including those with little or no background in climate change, heat risk, or public health.

The curriculum contains five teaching modules and one background module for facilitators. Each module contains a set of learning objectives, conversation starters, and in some cases, activities. The total six modules are summarized in the table below:

TYPE	TITLE	CONTENT
TEACHING MODULES	**Module 1:** Heat Waves: What Are They & Why Are They Changing?	Introduces global warming and heat waves and explains how and why heat waves are changing. Provides background and context for Teaching Modules 2–5.
	Module 2: Heat Illnesses: What Are They & How Do You Treat Them?	Introduces three types of heat illnesses (heat cramps, heat exhaustion, and heat stroke), why they occur, how to recognize symptoms, and how to treat each illness.
	Module 3: Heat Illnesses: Who Is at Risk & Why?	Introduces different groups of community members that are more at risk for heat illnesses and explains why they are more at risk.
	Module 4: Heat Illnesses: How to Prevent Them	Introduces three keys to preventing heat illnesses: staying informed, staying hydrated, and staying cool. Examples are provided for how to do each one.
	Module 5: Heat Risk: How to Take Action in Your Community	Introduces some of the ways in which community design can influence heat risk and presents steps for taking action at the community level to reduce it.
BACKGROUND MODULE	Communicating About Global Warming & Heat Risk: Challenges & Strategies	Introduces strategies for communicating about global warming and heat risk in order to motivate behavior change, particularly with skeptical audiences.



Each module is fully customizable, meaning that facilitators can teach some or all of the material and can add, omit, or rearrange slides to best meet audience needs. Though designed for use in San Diego County, the curriculum is adaptable to other California counties and/or heat-prone regions across the US.

There is also a facilitation guide for each module. The facilitation guides include one page dedicated to each individual slide within that module, with information on the purpose of the slide, a list of key talking points, and in some cases, additional (optional) information and answers to frequently asked audience questions.

Learner handouts are also available for Modules 1–5. Each learner handout contains a summary of the information contained in that module for easy reference. Modules 1–5 and the associated learner handouts are available in English, Spanish, and Vietnamese.

Background: Curriculum Development Process

The idea to develop the curriculum came from discussions during four focus groups, conducted in San Diego County in 2021, that sought to identify ways to increase heat risk education specifically in heat-vulnerable communities. Focus group participants included 43 community members. There was consensus across the focus groups that one key strategy for increasing heat risk education was to diversify communication channels. This meant including not only more traditional messengers of heat risk education like the National Weather Service (NWS) Weather Forecast Office San Diego, county and local government agencies (e.g., County of San Diego Health and Human Services and Partner Relay Network), television, radio, and other news and social media, but also the types of trusted organizations and individuals like those listed on page 1 and for which this curriculum was developed. Focus group participants explained that the high levels of social capital, cultural and linguistic competence, and extensive reach that trusted organizations and individuals have with local communities makes them especially well-positioned to facilitate the delivery of heat risk education to the communities they serve.

The curriculum was then co-developed in 2022–2023 through a participatory process involving the following individuals and organizations: Kristin VanderMolen and Yeongkwon Son (Desert Research Institute), Terri Foster and Ariel Hamburger (County of San Diego), Alex Tardy (NWS Weather Forecast Office San Diego), Anita López (SoyLópez Consulting), Carol Lewis (El Cajon Collaborative), Deysi Merino (Vista Community Clinic), Kevin Renac (Bayside Community Center), and Patricia Lomeli (SBCS). In June 2023, a one-day workshop was held at the County of San Diego Operations Center for the purpose of training ten peer-trainers, representing eight different local organizations, on the content and use of the curriculum. During the workshop, facilitators also elicited feedback from those ten peer-trainers for improvement of the curriculum materials. Following the workshop, between August and September 2023, six of the ten peer-trainers went on to give seven community presentations to a combined 127 audience members across San Diego County. The effectiveness of the curriculum in educating community audiences around heat risk and in supporting behavior change was affirmed through immediate and longer-term evaluation of presentation outcomes.

Acknowledgments:
The project team offers its sincere thanks to Bayside Community Center, County of San Diego Aging & Independent Services, Escondido Education COMPACT, and Groundwork San Diego for helping to pilot the curriculum, and to faculty at Scripps Institution of Oceanography for their input on select initial materials. This project was supported by the NOAA Collaborative Science, Technology, and Applied Research (CSTAR) Program (NA22NWS4680005).

Contacts:
For general questions about the curriculum content and its development:
Kristin VanderMolen (DRI): Kristin.VanderMolen@dri.edu
Terri Foster (County of San Diego): Terri.Foster@sdcounty.ca.gov / terrifost45@gmail.com
Kevin Renac (Bayside Community Center): krenac@baysidecc.org

For questions about facilitation or for facilitation assistance:
Anita López (SoyLópez Consulting): soylopezconsulting@gmail.com
Deysi Merino (Vista Community Clinic): Deysi.Merino@vcc.org
(English and Spanish)
Patricia Lomeli (SBCS): plomeli@csbcs.org (English and Spanish)
Kevin Renac (Bayside Community Center): krenac@baysidecc.org
(English with Spanish and Vietnamese potentially available upon request)

For workshops on the curriculum/topic of heat risk:
Carol Lewis (El Cajon Collaborative): carol.lewis@elcajoncollaborative.org
(English, Arabic, Farsi, and Dari)