

Teaching Climate Change Through Art

CLEAN Presentation
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(she/her)

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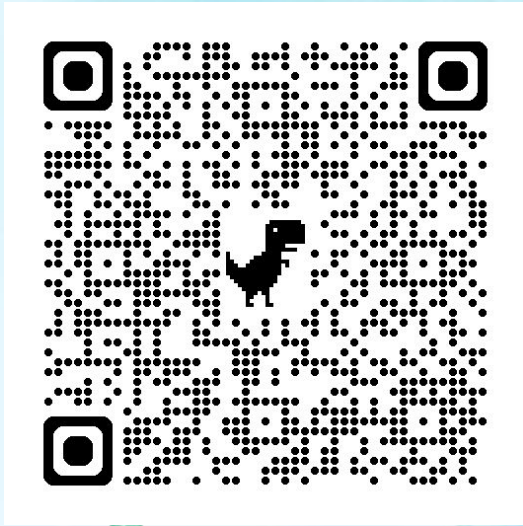


A watercolor illustration of the Earth, showing continents in green and oceans in blue. Two wind turbines are positioned on the top of the globe, and two solar panels are on the bottom. Green leaves are visible on the left and right sides of the globe. The background is a light blue sky with soft, white clouds.

Why teach climate change through art?

- increase climate literacy
- nurture biophilia
- express emotions
- develop empathy & justice
- take action

If you'd like to learn more...



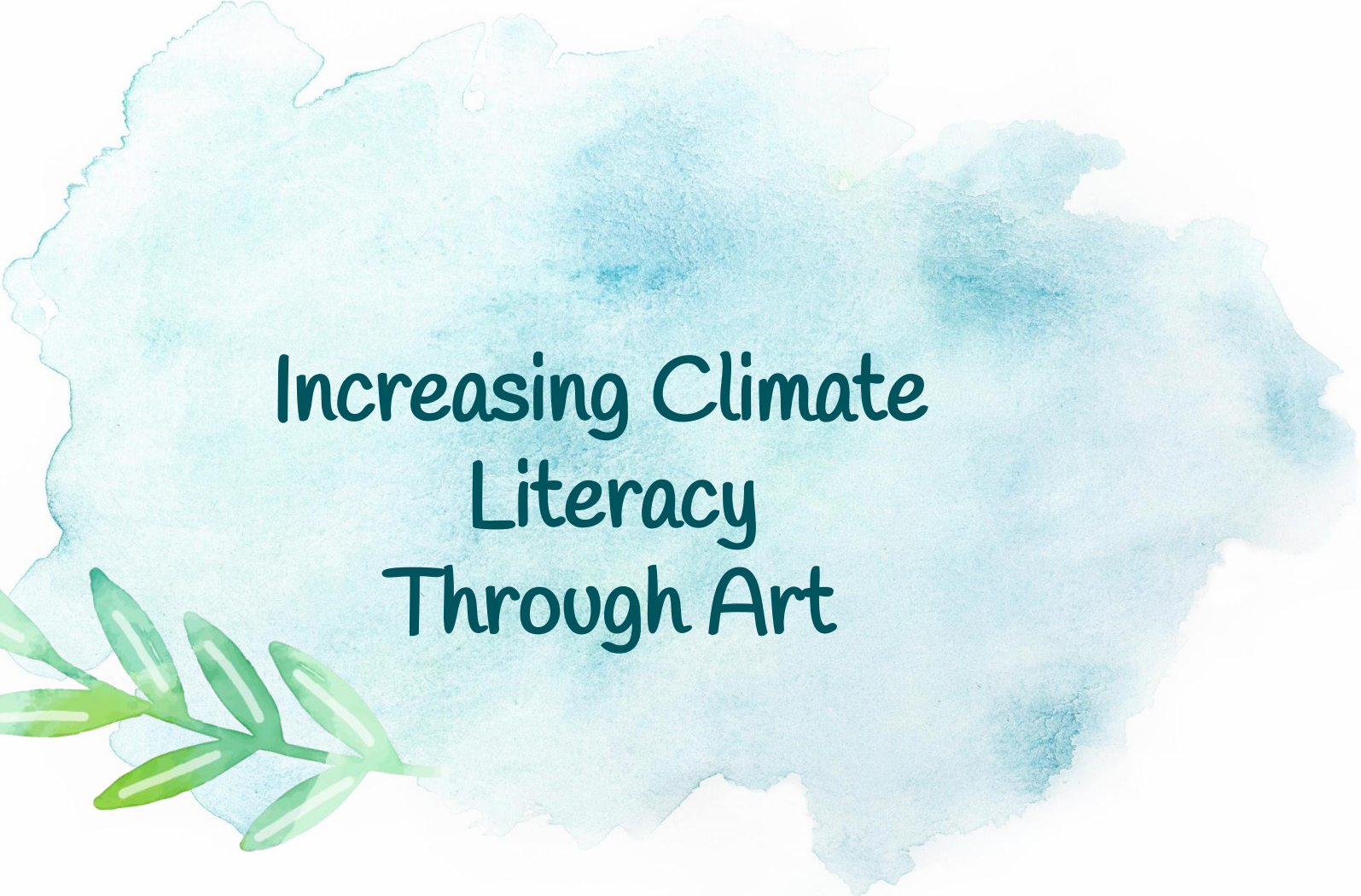
CLIMATE CHANGE EDUCATION

ACROSS DISCIPLINES K-12



NEW
JERSEY
AND
BEYOND

EDITED BY
**LAUREN
MADDEN**

A large, irregular watercolor splash in shades of light blue and teal, serving as a background for the text.

Increasing Climate
Literacy
Through Art





New Jersey:
Protect What
You Love

An introduction to climate change in New Jersey



TRANSPORTATION AND CLIMATE



OCEAN ACIDIFICATION



HOW TO ADAPT TO CLIMATE CHANGE



THE NATIONAL FLOOD INSURANCE PROGRAM AND NEW JERSEY







CLIMATE-SMART GARDENING



HOW TO REDUCE YOUR GREENHOUSE GAS EMISSIONS



Rutgers Climate Resource Center Climate Change 101

Home  Climate Science  Curbing Our Emissions  Preparing for Climate Impacts  Resources  All Topics

Contact

IT'S A FACT




HEAT-RELATED ILLNESS

led to ~10k emergency department visits by NJ residents from 2013-2022.

[Know your heat risk](#)

IT'S A FACT




SEA-LEVELS

in NJ are rising at about twice the global average.

[Help climate change research on coastal tides and weather](#)

IT'S A FACT



As STORMS

get more extreme, so will the size and frequency of flooding.

[See a map of flood risk areas](#)

Back

NJDEP Climate Change





NJ Audubon How Climate Change Will Affect Birds in New Jersey

How will the American Goldfinch's range be affected in New Jersey?

Rising temperatures and shifting weather patterns affect birds' ability to find food and reproduce, which over time impacts local populations, and ultimately continent-wide populations, too. Some species may even go extinct in your state if they cannot find the conditions they need to survive and raise their young.

Select a warming scenario to see how this species' range will change under increased global temperatures.



American Goldfinch

With their brilliant colors, bouncy flight, and musical call notes, American Goldfinches are summer favorites in open habitats, but they could disappear from two-thirds of their present breeding range if temperatures go up by 3 degrees. If warming is limited to 1.5 degrees, losses would be more modest at about one-third of the range.

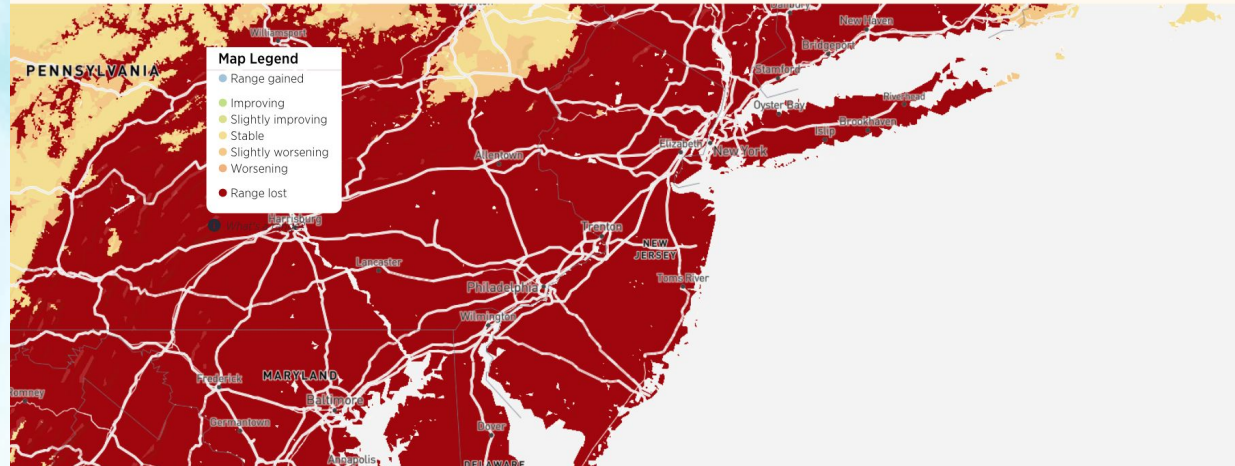
[View this bird >](#)

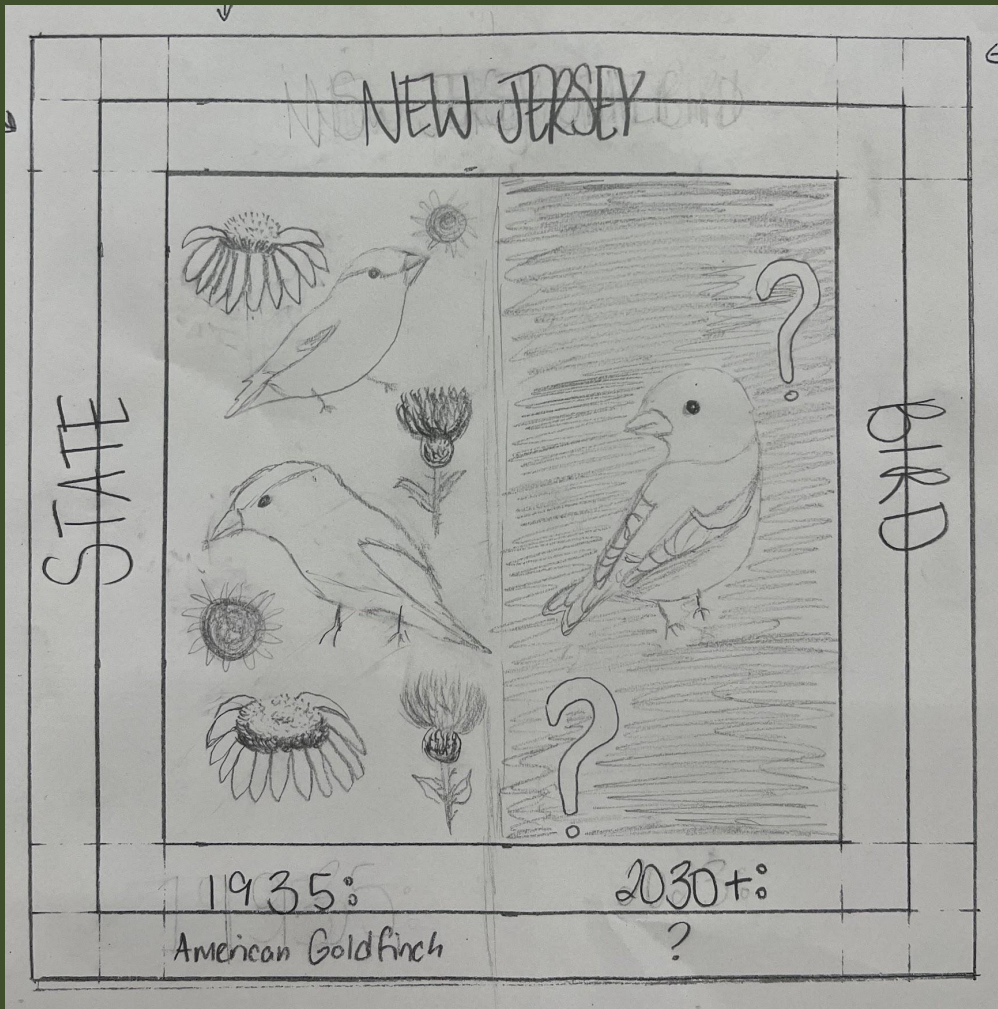
Warming scenario:

Why these temperatures?

Season:
Summer

What is a season?





NEW JERSEY

STATE



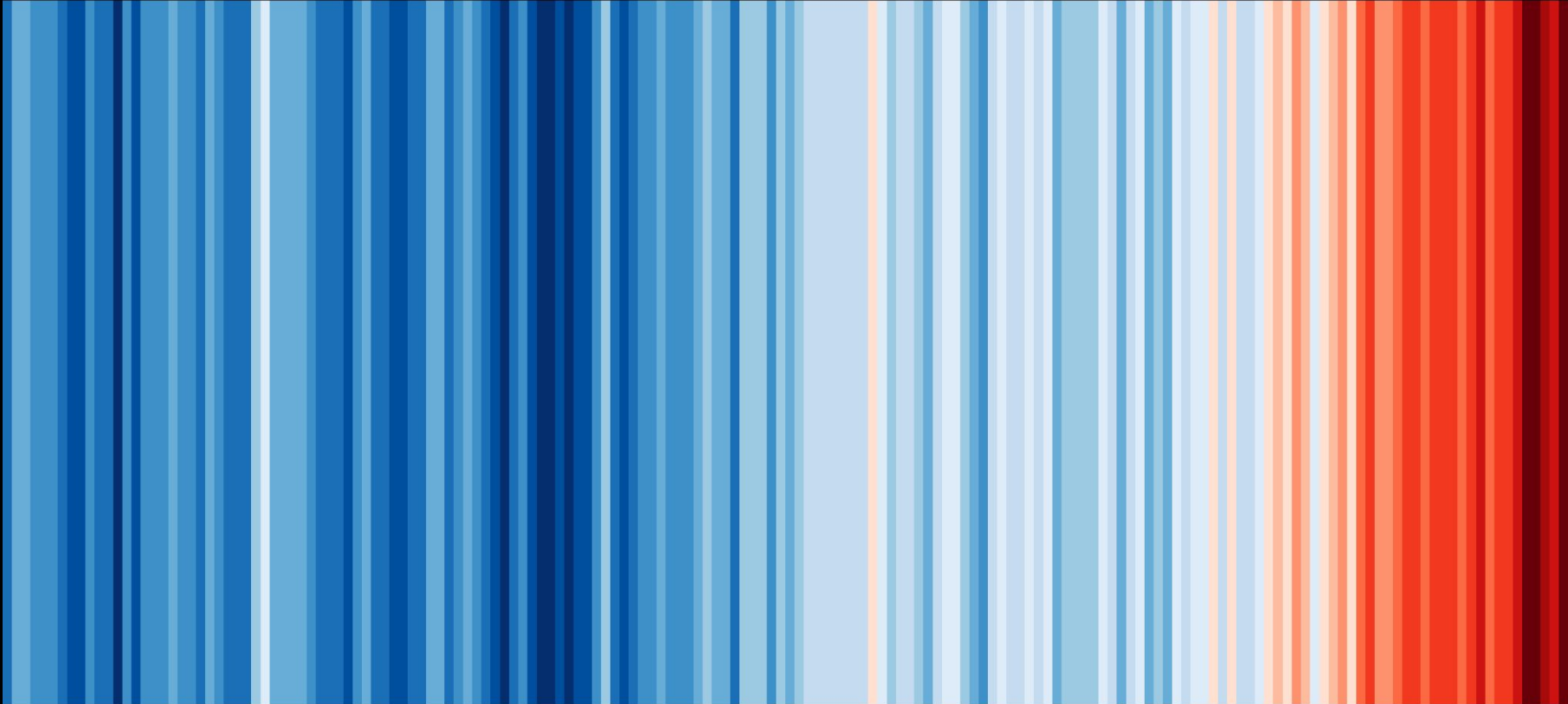
1935:
American Goldfinch



2030:
?

BIRD

Global temperature change (1850-2019)



1860

1890

1920

1950

1980

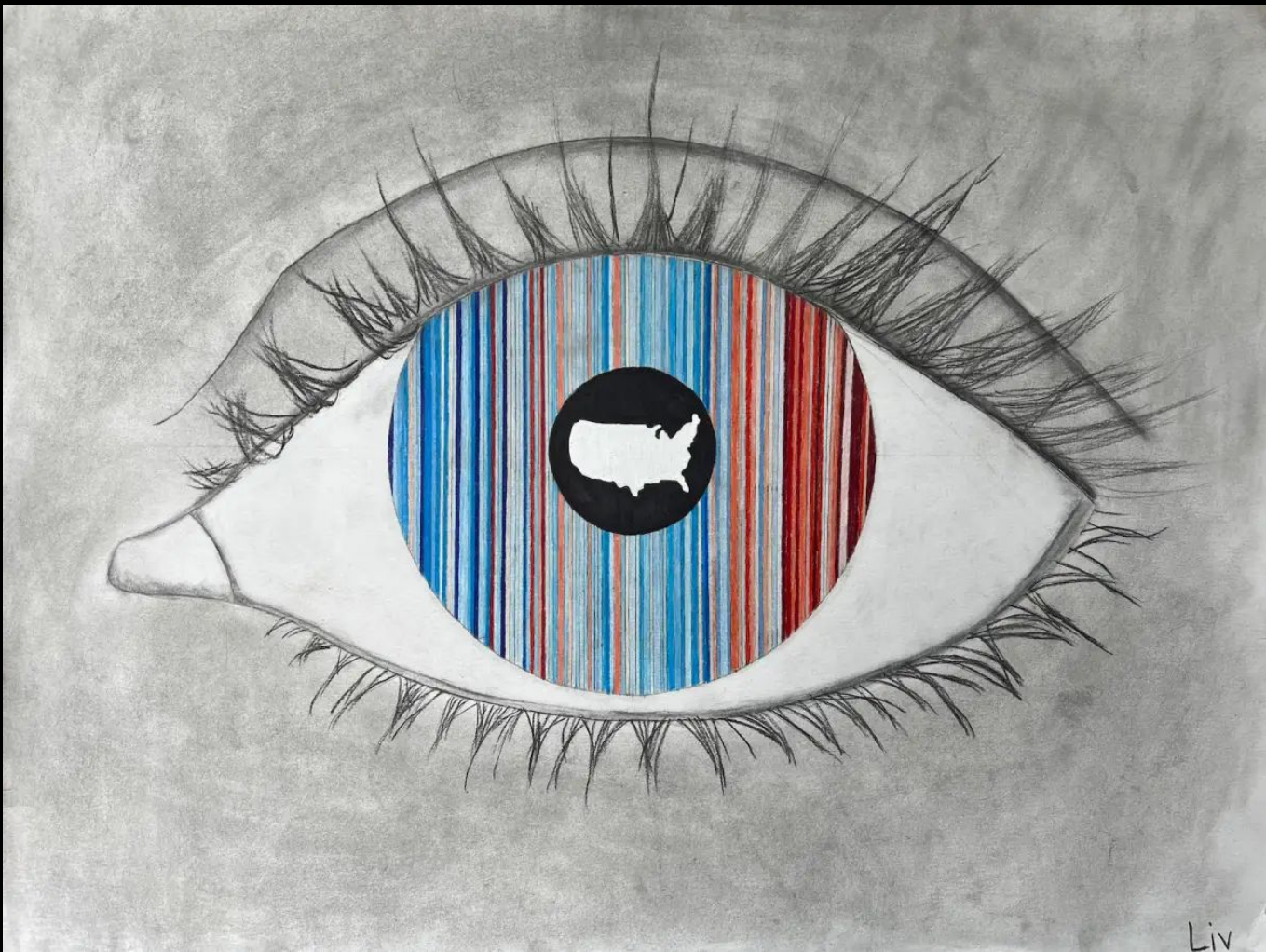
2010



L to R

Leipzig,
Germany

COP 22
Glasgow,
Scotland



A large, irregular watercolor splash in shades of light blue and teal, serving as a background for the text. The splash has a soft, textured appearance with varying intensities of color.

Nurturing Biophilia

(love of/connection to nature)



Art provides a wonderful path to exploring the natural world.

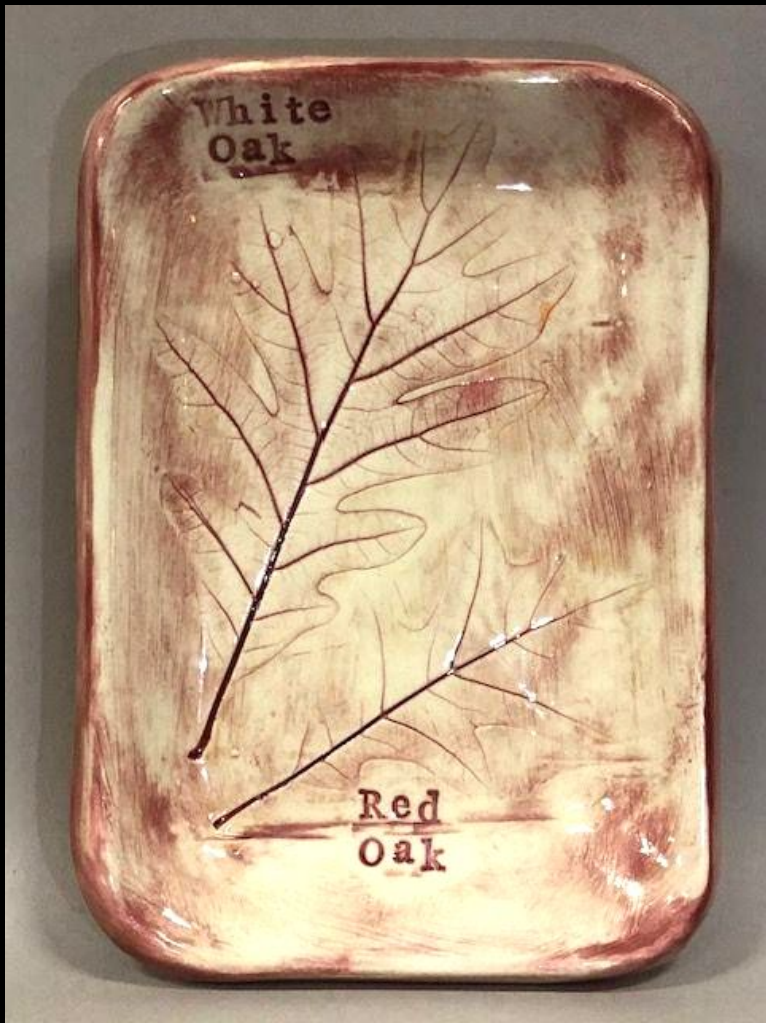




WHITE OAK







Maya Lin, “Ghost Forest”
Madison Square Park,
New York, 2021



Ghost forests are large patches of dead trees and wetlands.

- Climate change is increasing the risk of more ghost forests appearing
- Salt water from rising sea levels is affecting the soil in many forests around NJ, which is harming the trees in those forests
- White cedar forests are the most affected
 - These forests have been turning from green to white due to the salt in the soil



How systemic racism shaped the ecosystems of U.S. cities

- Researchers have noticed how the more affluent areas of cities tended to have more canopy cover from trees and a higher diversity of birds, known as the “luxury affect”



- The lower-income areas tended to have more “man-made surfaces” and heat absorbers like asphalt and concrete
- The lack of trees and mixed with the increase of asphalt and concrete leads to a phenomenon known as an “urban heat island”
- These communities are also more likely to be near sources of air pollution, such as interstates

- Researchers found that an example of systemic racism shaping our build environment is United States residential segregation.

- From 1933-1968 the Federal Government limited access to homeownership for Black Americans in a process called redlining

- Neighborhoods were given grades based on how risky it would be to give a mortgage in the area, the grades ranged from A, which were typically full of wealthy businessmen, to D, the neighborhoods that were bad quality, close to industrial factories, or close to people of color and people who were born in another country.

- Because Black people couldn't buy homes in these neighborhoods meant that many types of investments were abandoned

- Public maintenance, like transportation, and park maintenance weren't prioritized, which have left long lasting environmental impacts



Shinrin-Yoku (Forest Bathing)

- Shinrin-Yoku which is known as forest bathing is when someone goes into a forest to relax. Being in a nice forest can help calm and relax your body. It is believed that the amount of trees helps with fresh air which allows you to breathe fresh and clean air which can also help. Being in a calm environment is also what helps relax your body.



Shinrin-yoku

*Japanese (n):
a visit to the forest for relaxation
and to improve one's health*



Who Is Nemonte Nenquimo?

- Waorani Woman in the Amazonian area of Ecuador
- Mother of a 4 year-old daughter
- Leader in the Waorani community
- Believes that the forest is an important part of native people's lives
- Being involved with the forest is important to native people because it is something that they didn't lose to colonizers



Expressing Emotions Through Art

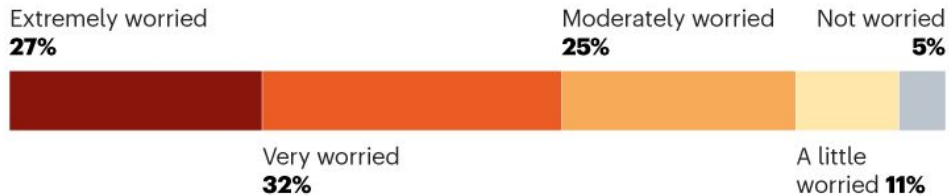




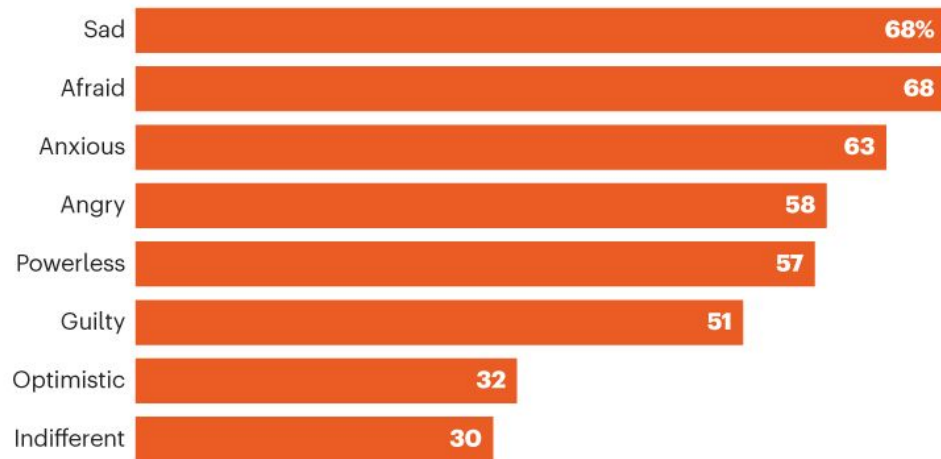
CLIMATE ANXIETY

A survey of 10,000 young people shows that negative feelings about climate change can cause psychological distress.

How worried are you about climate change?

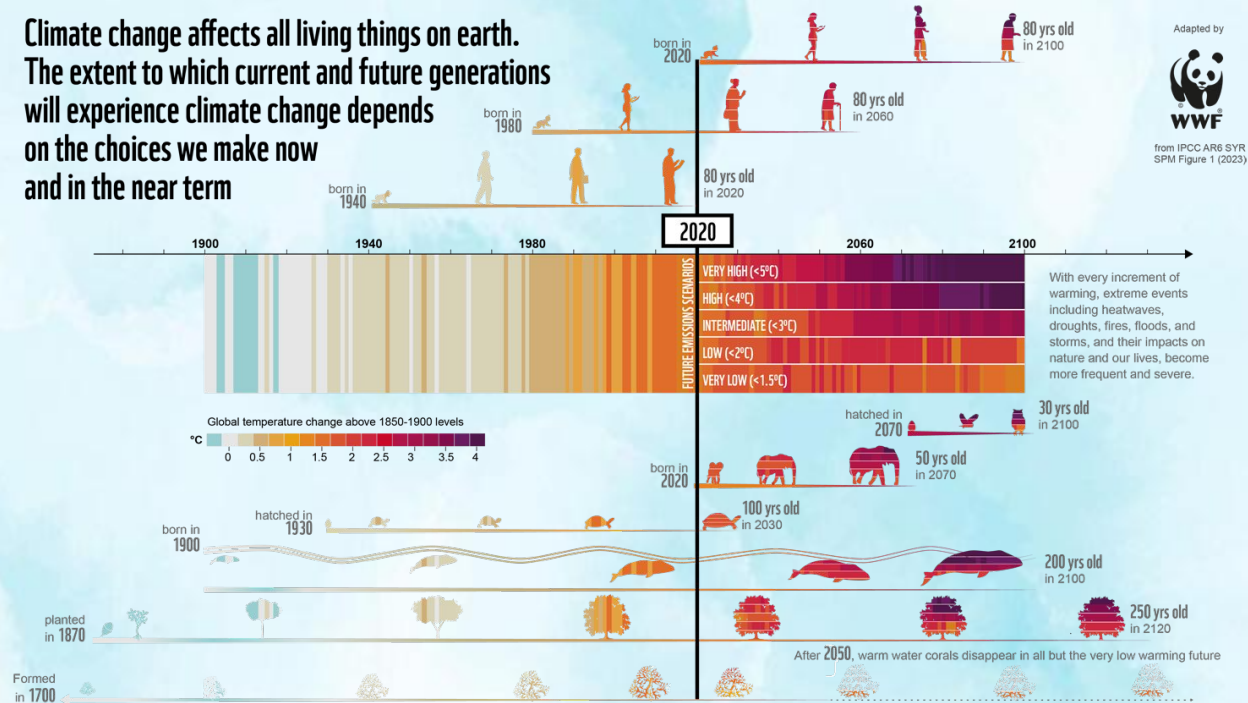


Climate change makes me feel...



Adults' experiences of climate change may vary significantly from children and young adults. Younger people's whole futures will be impacted by varying severities of climate impacts, whereas adults may have experienced periods of more climate stability.

Climate change affects all living things on earth. The extent to which current and future generations will experience climate change depends on the choices we make now and in the near term



What can teachers do?

- Recognize common climate emotions.
- Understand disproportionate impacts.
- Create space for climate feelings.
- Let students know others care.
- Channel emotions into action.
- Integrate Indigenous perspectives.
- Care for ourselves and each other.



An Educator's Guide to Climate Emotions



Climate Psychology Alliance of North America
Educators and School Counselors Committee



What is eco-anxiety?

"the chronic fear of environmental doom"



Fear

Frustration

Powerlessness

Anger

Motivation

Guilt

No words

Climate

Hope

Emotions

Loneliness

Overwhelm

Optimism

“Solastalgia”

Grief

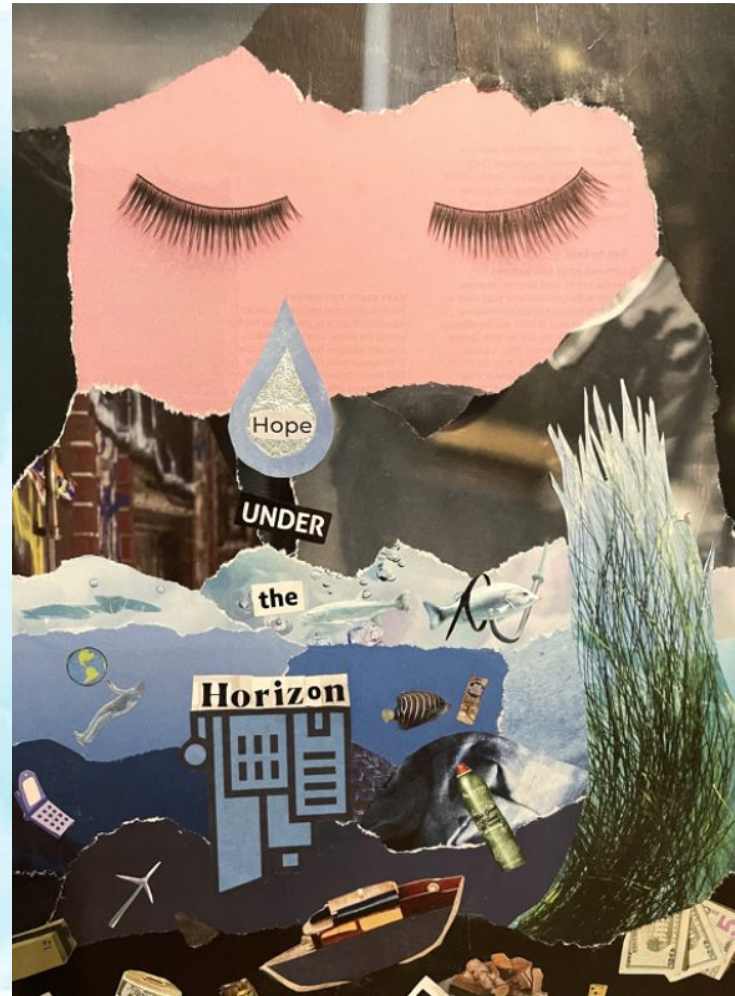
“Most of the time, climate change is something that leaves me scared about the future of the planet as well as my generation and humanity itself.”



“It's frustrating to see people in positions of power not doing anything to try and solve the climate crisis.”



“My feelings regarding the climate crisis are a sense of fear paired with a sense of hope.”



Climate Emotions Wheel



To help students better understand and identify their emotions, a tool such as a **climate emotions wheel** can be helpful. Students can create their own wheel using a blank template.

Other options include:

- collaborative word clouds
- post-its
- artwork
- writing prompts
- small group discussion



ClimateMentalHealth.Net





Take a few minutes think about
your own feelings about climate
change.

What are the top 3-5 feelings
that arise for you?

What colors are your feelings?



What shapes are they?



What sizes are they?







**New Earth
Series**

by
Daniela
Molnar

Why explore students' climate feelings as part of teaching about climate change?

- the emotional weight of a future changed by global warming is a lot for students to handle
- many students have no other outlet or opportunity to explore their reactions to climate change
- social/emotional learning is already part of what teachers do, especially in the arts!
- emotions are very powerful motivators and have been shown by research to be strong predictors of climate action



Developing Empathy & Justice





The people who are suffering the most right now from climate change are those who are already **most vulnerable** and who have **contributed the least**. Climate education needs to also include conversations about climate justice.

Pacific Island representatives at COP 26

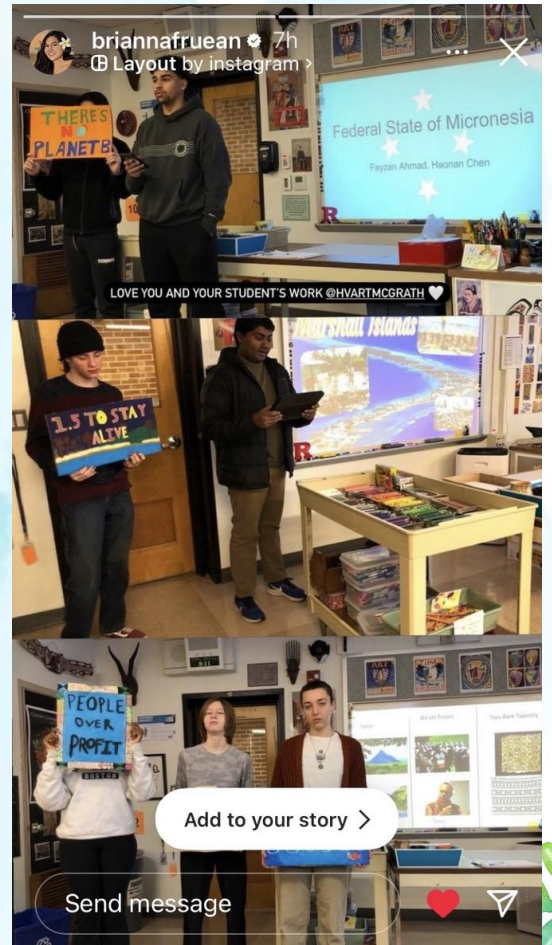


Samoan Climate Activist
Brianna Fruean



Tuvalu Foreign Minister
Simon Kofe







Art can be a way
for students to
open up to others
whose
experiences of
climate change
are not like their
own, to develop
greater empathy
and justice.



American climate activist
Daphne Frias



Guillaume Kalonji, Biologist & Climate Activist, Democratic Republic of the Congo



Autumn Peltier, Wiikwemkoong First Nation, Canada



Ugandan youth climate activist
Nyombi Morris

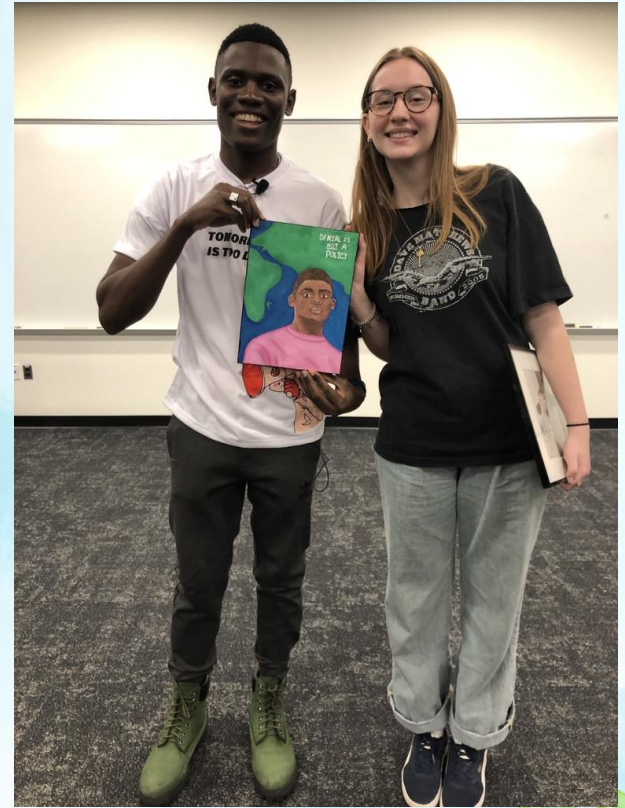
IDEAS • CLIMATE CHANGE

I Lost My Home to Climate Change. I'm Fighting So Others Won't

6 MINUTE READ



Nyombi Morris leads a protest against the 'East African Crude Oil Pipeline' project on March 25, 2022 at Mutundwe Young Christian Secondary School in Kirinyabigo, Kampala Uganda. Courtesy of Nyombi Morris



Exploring Solutions



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BIOGAS FOR COOKING



BIOMASS POWER



BIOPLASTICS



BUILDING
AUTOMATION SYSTEMS



BUILDING
RETROFITTING



CARPPOOLING



CLEAN COOKING



COASTAL WETLAND
PROTECTION



COASTAL WETLAND
RESTORATION



COMPOSTING



CONCENTRATED
SOLAR POWER



CONSERVATION
AGRICULTURE



DISTRIBUTED ENERGY
STORAGE



DISTRIBUTED SOLAR
PHOTOVOLTAICS



NEW YORK

'Ecological City' uses the arts to inspire environmental action in New York City

"The key component is that it's through the arts that you can build an emotional connection to the natural world," founder Felicia Young said.

By Nikki M. Mascali Published : May 10, 2018 | Updated : May 11, 2018

f t in v u m





Artist Hannah Rothstein









Questions?

