Climate Action Project

Teacher Welcome

Dear Global Changemakers!

The moment has arrived! As we kick off the Climate Action Project, we want to start by thanking you for joining us in this work to take action for the planet and environment. Over the next six weeks, you and your students will join thousands of other classrooms from around the world to examine climate change by exploring causes, solutions, actions, and special interactions. We will be welcoming incredible guests, including experts from WWF, LEGO, NASA, the UN, and more.

Information to bookmark:

- Climate Action Project website: https://www.climate-action.info
- Official hashtag: #ClimateActionEdu
- Twitter accounts: @ClimateActionP, @TakeActionEdu
- Instagram account: @TakeActionEdu
- YouTube account: Take Action Global
- Project coordinators: Koen Timmers and Jennifer Williams
- Project dates: September 26 - November 6
- Digital Media Kit: HERE
- Weekly Emails: HERE
- Weekly Spanish Emails: HERE

We welcome you!
Koen and Jen

Climate Action Project Overview

The Climate Action Project is designed to guide students in grades PreK-12 (age 5-18) through a 6-week inquiry experience moving topics of causes, effects, solutions, and action. The project will conclude with **Global Student Climate Action Day** on Thursday, November 3 from 8am - 1pm ET where we will join in an online global celebration to showcase projects, work, and ACTIONS!

To help guide the way, we have enlisted some of the best minds and thought leaders in science and sustainability. Classrooms and teachers will also be invited to participate in expert webinars, social media conversations, class-to-class video exchange discussions, and community outreach through action.

As with all of our Take Action Global work, the projects are designed for flexibility and customization! We recognize that our participating international schools have different schedules, different demands, and different needs. Therefore, please make the Climate Action Project your own!

Activities for each week are designed to align to your current curriculum with hopes that the lessons and resources are not an add-on but instead an amplifier of the work you are already doing in your class. You can complete activities in as little as 1-3 hours per week, but many will choose to go deeper devoting more time to the project and the topics.

Meet your Group and your Facilitator

We believe in the power of connection and collective action. One of the best parts of the Climate Action Project is always participation in our educator groups. We invite you to select and join one of our Project Groups.

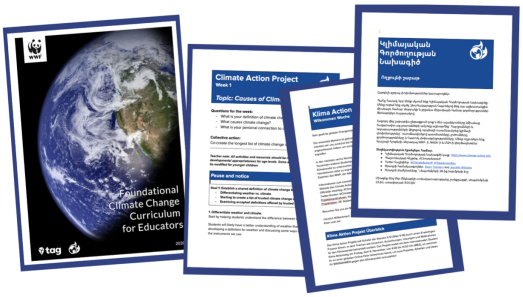
1. Select a group. We have 5 English groups and 9 world language groups. We are excited to give you the choice to make your own selection. All groups are facilitated in WhatsApp. Select to join one group from this list:

English 1	https://chat.whatsapp.com/L81HtErPhVvKVM7wxh7STi
English 2	https://chat.whatsapp.com/K4NYaLB3QPjHV6WyJlwlHh
English 3	https://chat.whatsapp.com/FbSpap1Npxh8l6xQgbwiSK
English 4	https://chat.whatsapp.com/DCxi11JsQvBLF9ndRlOwnY
English 5	https://chat.whatsapp.com/GbKK0DAfNASC5P4Q2VIT2f
Arabic	https://chat.whatsapp.com/FhcC19Sy86Z8COkzooCSOr
Hindi	https://chat.whatsapp.com/HuNxzv7nEPiL6Eau0uTkoq
Turkish	https://chat.whatsapp.com/IQXhnOeWXxh9LIvGZGvvtm
Spanish	https://chat.whatsapp.com/J0CQPtajD4E4IexNRjMKox
Portuguese	https://chat.whatsapp.com/BODV47F0jCj9O4Q1nsqinp
Ukrainian	https://chat.whatsapp.com/CeoHi83X9HX38gurr5oOaS

French	https://chat.whatsapp.com/IBQSAtLkE558Dd0oNePRxr
Romanian	https://chat.whatsapp.com/DeCXHHjpv1y81h0BQ73qx7
Italian	https://chat.whatsapp.com/DS45VtqNQvs14Dj3Fu6wqH

2. Each group is facilitated by a team of Group Facilitators. Facilitators are there to provide information, answer questions, and drive engagement for climate education! Facilitators will also monitor groups to ensure that topics center on climate and education and that all participants follow our Group Guidelines of contributing to kind, productive conversations among educators.

3. Once you arrive in the WhatsApp group, please introduce yourself by sharing your name, your country, and something about yourself.



Language Translations

The Climate Action Project is available in 15 languages. Click here to download in your preferred language.

English Spanish Hindi Arabic Portuguese Portuguese (Brazilian) Chinese Romanian Ukrainian Russian French French (Canadian) Turkish Italian German Hebrew

Weekly Activities

There are six weekly lessons. Each lesson follows a format including activities of:

- **Pause and notice:**
  This is a time for intentional pausing, reflecting, and noticing. Here students can examine current conditions, beliefs, perspectives, and biases.
- **Explore possibilities**
  Here students will explore all ideas and seek out inspiration. Activities include research, interviews, and requesting feedback.
- **Design with optimism**

Each week, students will build on ideas through designing for action.

- **Collective action**
  Each weekly lesson includes a collective action. Here students will work to increase access to ideas, information, and opportunities through connection, collaboration, innovative sharing, virtual exchange, webinars, and an online student conference.

Icons:

	Class Climate Action Box/ Digital Board	Each week, students will add to a visual representation of learning: In person learning: Students should create a physical Class Climate Action Box. To do this, get a large box and plan to add to each of the four sides: Side 1: Week 1 Causes Side 2: Week 2 Effects Side 3: Week 3 Global Connections Side 4: Week 4 Solutions Distance learning: Students should add to a Digital Board. Ideas to create a digital board: (1) Google Slide Deck, (2) Jamboard, (3) Powerpoint Slides. Slide 1: Week 1 Causes Slide 2: Week 2 Effects Slide 3: Week 3 Global Connections Slide 4: Week 4 Solutions
	In-person learning	Each weekly lesson includes options for in-person learning and distance learning. Classes can move in and out of blended learning formats as needed. The Climate Action Project is designed for flexibility to meet the needs of all classes.
	Distance learning	Each weekly lesson includes options for in-person learning and distance learning. Classes can move in and out of blended learning formats as needed. The Climate Action Project is designed for flexibility to meet the needs of all classes.

Climate Action Project 2022 Schedule

Week	Dates	Level	Collective Action
1	9/26-10/2	Causes	The Ultimate List of Causes of Climate Change
2	10/3-10/9	Effects	Global Map of Climate Change Effects
3	10/10-10/16	Local to Global	Class-to-Class Virtual Exchange
4	10/17-10/23	Solutions	The Ultimate List of Solutions for Climate Change
5	10/24-10/30	Build through Interactions	Mentor Week
6	1031-11/6	Actions	Global Boxes of Action Climate Action Day

Weekly Action Videos

The Climate Action Project aims to change mindsets of students across the world. Part of this student-centered approach is connecting students from different countries and continents, so their learning process becomes global. Each week, classes will create videos to be published at the website www.climate-action.info.

With these videos, students are able to share their findings and learn directly and asynchronously from peers. This is important because the impacts of Climate Change may be very different in other parts of the world.

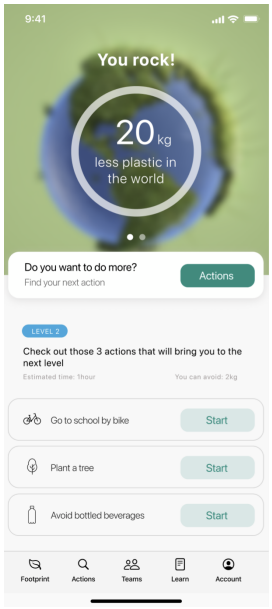
EarthProject App

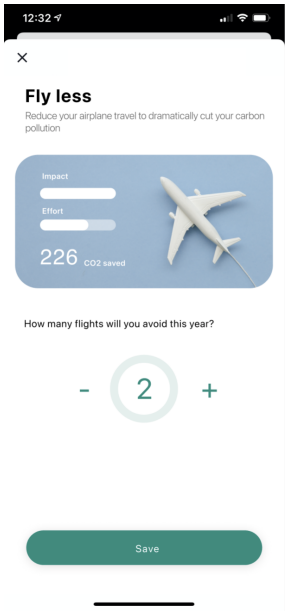
Climate Change requires a change of behavior. How to know which small actions may lead to action? What is it you can do?

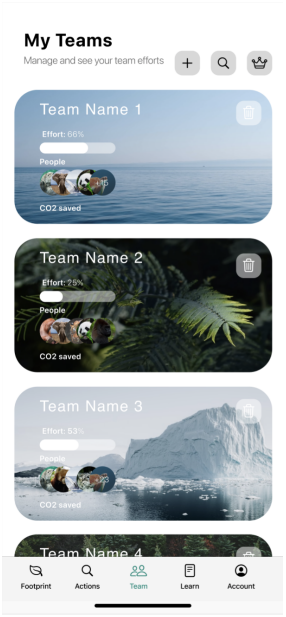
We developed an app which allows you to record small actions and demonstrate immediate impact, such as how many kg of carbon are avoided in your action. You can even create your team and take action with other people globally. The app can be used by students, teachers, and parents, and teachers can also record their students' actions.

Download for free: http://earthproject.org for iOS or Android.









Climate Action Project Partners

Climate Action Project participating classrooms will have exclusive opportunities to join for special experiences with our Project Partners. Project Partners represent industry experts and global leaders in climate science and innovation in education. Stay tuned each week as we share ways to get involved.

Communications

- The www.climate-action.info website will be our project homebase. All information will be documented there for easy access.
- Weekly email with resources, lesson ideas, and more!
- Social media sharing on Twitter, Instagram, and Facebook with #ClimateActionEdu hashtag
- Class-to-class virtual exchanges
- Be sure to meet our amazing team of Facilitators, Ambassadors, and Fellows.

Let's kick things off...together!

In celebration of the start of the Climate Action Project, we invite you to share your participation with the world! We are proud to issue you this participant digital badge.

Please feel free to add to your email signature line, your own professional website, and on social media (e.g. Twitter, Facebook, Instagram). Here is a suggested post for social media or a school newsletter:

Ready for ACTION! My class is participating in the 2022 Climate Action Project! Excited to join with 1,000s of classrooms from nearly 150 countries to take action for the planet!

Join us: https://www.climate-action.info!
#ClimateActionEdu #TakeActionEdu @ClimateActionED @TakeActionEdu



Climate Action Project

Week 1

Topic: Causes of Climate Change

Questions for the week:

- What is your definition of climate change?
- What causes climate change?
- What is your personal connection to climate change?

Collective action:

Co-create the longest list of climate change causes

Teacher note: All activities and resources should be reviewed for content and developmental appropriateness for age levels. Some activities/resources may need to be modified for younger children.

Pause and notice

Goal 1: Establish a shared definition of climate change by:

- **Differentiating weather vs. climate**
- **Starting to create a list of trusted climate change experts**
- **Examining accepted definitions offered by trusted experts**

1. Differentiate weather and climate.

Start by helping students understand the difference between weather and climate.

Students will likely have a better understanding of weather than they will climate. Start by developing a definition for weather and discussing some ways we measure weather and the instruments we use.

Contrast weather with climate. Climate involves trends over long periods of time, and it changes much more slowly than weather (centuries/ decades/ years rather than days/ hours).

- Illustrated TEDTalk: Is weather actually becoming more extreme?
- NOAA: What's the Difference between Climate and Weather?
- NASA: What's the Difference between Weather and Climate?
- Climate Institute: Climate vs. Weather
- Generation Genius: Learn about Weather and Climate for Kids

Weather vs. Climate: Questions to check for understanding



In person learning: Write questions on notecards, place in the Climate Action Project box, and pull one card out at a time for discussion.



Distance learning: Use a tool like Picker Wheel to share questions online with students.

Can the weather change during the same day?	Yes.
Will the weather tomorrow definitely be the same as it is today?	No. Weather changes quickly.
How would we know if the weather has changed?	Look outside the window, check the temperature, etc.
If we have one cold summer, does that mean that our climate has changed?	Not necessarily. Climate takes decades to measure, so one season is not enough data to make this claim.

Can the climate change each day?	No. Weather can change daily, but climate takes decades or more to measure.
How could we measure if the climate was changing?	Look at the average weather measurements for the past few decades, such as temperature and precipitation, and look for trends that show that things have changed.
How would we know if the climate has changed?	Places where it was cold might get warmer each year; places where it was rainy/ snowy might get drier each year; there might be more extreme weather in some areas, etc.

2. Start to create a list of trusted climate change experts.

Trusted experts are individuals or people within an organization who we deem credible, reliable, and relevant (when working with younger students, you can modify terms to focus on “trusted” and “expert”). Consider other skills or qualities exhibited by a trusted expert. Discuss bias and the critical importance of reliable sources in science and research.

Create a ***List of Skills/Qualities of Trusted Experts***

Invite your students to share an example of a trusted expert related to an area of interest (e.g. soccer coach = trusted expert).

Work together to research trusted climate change experts. These can be people or organizations. Narrow as a class to 3-5 who you all agree on. Keep this list handy.

3. Examine accepted definitions offered by trusted climate change experts.

Now that you and your students understand the difference between weather and climate and have a handy list of trusted climate change experts, it is time to come up with your own definition of climate change. There are many definitions out there. You can have your students look at a few, evaluate them, and select one they believe is relevant and accepted.

Here are few we look to with areas for others you and your students find:

	According to NASA, climate change is a change in the usual weather found in a place. This could be a change in how much rain a place usually gets in a year. Or it could be a change in a place's usual temperature for a month or season. Climate change is also a change in Earth's climate. This could be a change in Earth's usual temperature. Or it could be a change in where rain and snow usually fall on Earth. Weather can change in just a few hours. Climate takes hundreds or even millions of years to change.
	According to National Geographic, climate change (or global warming), is the process of our planet heating up. The Earth has warmed by an average of 1°C above pre- industrial level and although that might not sound like much, it means big things for people and wildlife around the world. Unfortunately, rising temperatures don't just mean that we'll get nice warm weather – The changing climate will actually make our weather more *extreme* and *unpredictable*.
	According to the UN, "climate change" means a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

Be sure to add your list of trusted experts and your shared definition of climate change to your **Class Climate Action Box (Side 1) or Digital Board (Section 1).**

Explore possibilities

Goal 2: Better understand the causes of climate change.

Scientists have been recording data on Earth's climate since thermometers and other measurement instruments were invented. They have also been able to take measurements of temperatures and precipitation and what was in Earth's atmosphere during times before people were on the planet. Here is information on how scientists know the climate history of the Earth:

- https://www.climate.gov/maps-data/primer/past-climate
- https://www.ncdc.noaa.gov/news/how-do-scientists-study-ancient-climates
- https://www.smithsonianmag.com/blogs/national-museum-of-natural-history/2018/03/23/heres-how-scientists-reconstruct-earths-past-climates/

Now it is time for us to consider the question: *Is the Earth's climate changing?* Guide your students through a process to help them discover answers to this question.

1. Define the problem to be explored: Is the Earth's climate changing?

2. Develop a hypothesis/prediction. Invite your students to select a hypothesis:

- The Earth's climate is changing.
- The Earth's climate is not changing.

3. Research and collect data. It is important for students to understand that they must look at data objectively. It is common for people to want their prediction to be correct, leading them to only collect data that support their hypothesis. Stress the importance of looking at data with a neutral mindset "like a scientist." Have them note supporting evidence and negating evidence related to their prediction.

If you have younger students, you may want to do this together as a class.

Students can look to resources offered by their trusted experts. Additionally, here are sources of climate data for review:

- NASA Climate Data and Information
- US Environmental Protection Agency Climate Change Indicators
- World Bank Climate Change Knowledge Portal

- Australian Government Climate Data Online

4. Analyze the data and draw conclusions. Scientists cannot publish guesses or opinions. They can only publish what they can prove with data.

Ask students:

- Are some of these data we looked at more relevant to our question than others?
- Is there any other data that you wish you had?
- Which prediction does the data support?
- How can we use data to show people outside our class that the Earth's climate is changing?



Add your general findings (including supporting evidence) to your **Class Climate Action Box (Side 1) or Digital Board (Section 1).**

Design with optimism

Goal 3: What is your personal connection to climate change?

1. Before we can begin to make personal connections to the problem of climate change, it will be important for students to understand **what human activities are most responsible for climate change**. Guide students to understand that they will need to learn what causes climate change, how those causes are measured, and whether humans are contributing to those causes.

Watch Episode 12 of *Cosmos: A Spacetime Odyssey:* "A World Set Free." This episode gives an overview of research and data regarding human activity and climate.

Other sources of data and information on climate change causes:

- NASA: Causes of Climate Change
- Climate Change in Australia: Global Climate Change
- The Royal Society: The Basics of Climate Change
- US Environmental Protection Agency: Causes of Climate Change
- UN Sustainable Development Goals: Climate Change

2. Now that students have an understanding of the ways humans contribute to the problem of climate change, it is time to start making connections. In this final activity of the week, students will create connections on two levels: local and personal.

Local connections to climate change
Explore how the climate is changing in your country/area and the local activities that are contributing to climate change. Invite students to work in pairs or teams to collect and present data to the class. How does your local community compare to the country and to the world? Encourage students to visually display findings to support their research efforts.

Personal connections to climate change
Invite students to each select one of the major industries contributing to climate change. They should select one they have a personal connection to, for example fashion, transportation, agriculture, deforestation, or energy.

Next, ask each student to create a list of as many human activities related to that industry as possible. Encourage them to aim for at least 20 human activities.

Extension activity for older students or students ready for a challenge: Invite students to report on the effects each activity has on climate.



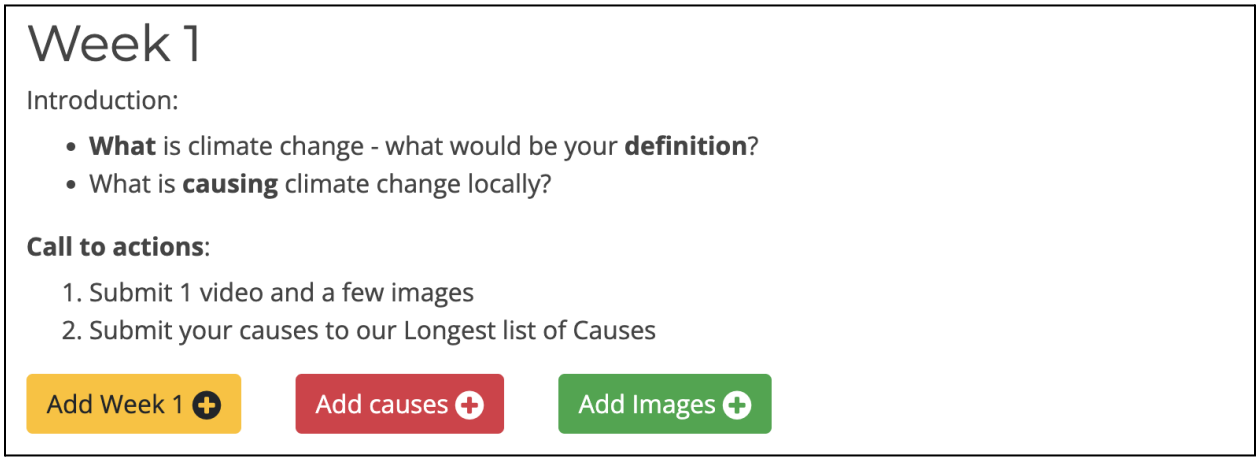
Have students create their own Causes of Climate Change Class List and add it to the **Class Climate Action Box (Side 1) or Digital Board (Section 1).**

Collective action

Let's connect ideas, information, and opportunities! All students participating in the Climate Action Project are invited to add to the **The Ultimate List of Causes of Climate Change** as shown below**.** Add in human activities as identified by your students and

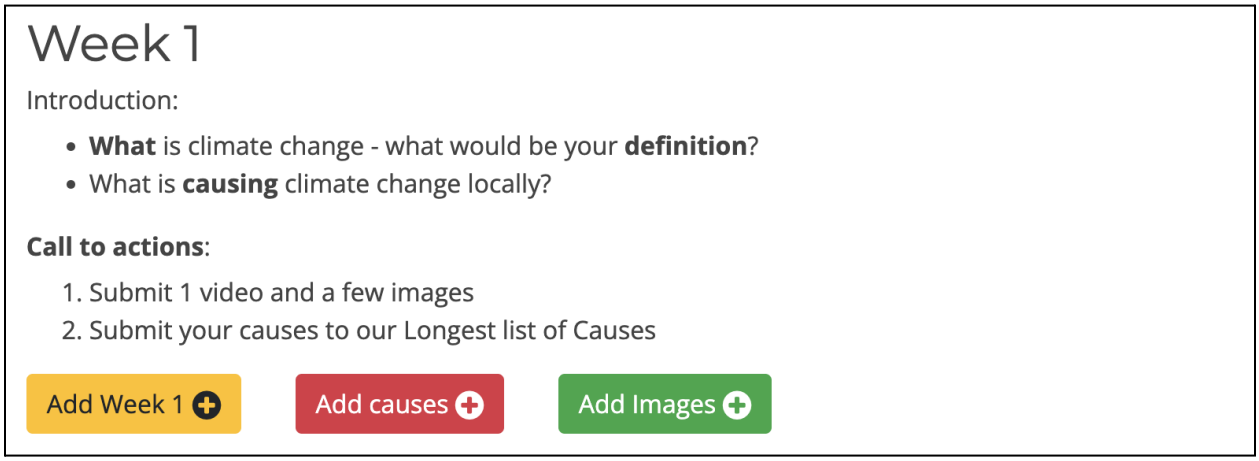
watch with your students as the list grows and grows. Let's make this the longest list EVER...and, created by YOUTH!

Add your contribution to www.climate-action.info/user (red button).



Climate Action Project Week 1 Actions Video

Add your Week 1 Actions video to www.climate-action.info/user (yellow button).



Extensions

Extension activities for the classroom:

- Have students research and/or model the carbon cycle and photosynthesis.
- Invite a guest scientist into your classroom to share their climate research.

Share out via social media:

- Be sure to share on Twitter, Facebook, and Instagram using the hashtag #ClimateActionEdu tagging in @ClimateActionED and @TakeActionEdu.

Looking ahead

Prepare for Week 2, Topic: Effects of Climate Change. Students will be examining effects at local levels through research and through an intergenerational interview. Invite students to start thinking of a family member of a different generation to interview next week.