Climate Change - Online

6th-12th Grade

View the 7 part series at https://www.youtube.com/user/OregonMetroGov/playlists under "Climate Change". For a worksheet with questions and post-activities, visit https://www.oregonmetro.gov/tools-partners/education-resources/resource-conservation-and-recycling-education and click on "Distance Learning". Tier 1 is a standard level worksheet and Tier 2 is more advanced.

After watching these videos, students will be able to:

- Explain how human-generated greenhouse gas emissions trap heat and warm our climate.
- Understand how the production, use, and disposal of stuff impacts people and the climate.
- Identify, analyze, and participate in a variety of climate-justice focused solutions involving energy systems, food production, education, policy, and direct action.

Climate Change Part 1: Climate basics (12:39 minutes)

Join Lake from Metro's outreach team to explore the basics of climate change using graphs and observations to understand how human activity is altering our planet.

Climate Change Part 2: Living with stuff (9:05 minutes)

Join Ken and a panel of youth interns from Metro's outreach team to explore the connections between our stuff, consumer culture, fossil fuel use, and global climate disruption.

Climate Change Part 3: Making a t-shirt (19:24 minutes)

Ken will show a series of short videos that follow the making of a t-shirt. You'll see the world behind our clothes and learn where the most carbon dioxide is produced in the process.

Climate Change Part 4: Earthrise (7:38 minutes)

Lake will share a poem by Youth Poet Laureate Amanda Gorman. You'll have time to reflect and consider your personal reasons for wanting to see climate action.

Climate Change Part 5: Climate Justice (5:21 minutes)

Join Lake to explore the concept of climate justice and learn about 13 climate justice advocates making a difference in their communities.

Climate Change Part 6: Drawdown (13:10 minutes)

Ken will guide you through Project Drawdown to analyze some impactful ways to reduce greenhouse gas emissions at home and in your community.

Climate Change Part 7: The time is now – taking action! (9:43 minutes)

Lake and Ken team up to help you brainstorm opportunities to make real difference, take a pledge for climate action, and learn about local organizations connecting youth to activism.

Next Generation Science Standards

- MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.
- MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.
- MS-ESS3-5. Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.
- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS3-1. Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

Oregon Social Studies Standards

- Geography 6.16 – Explain how technological developments, societal decisions, and personal practices influence sustainability.
- Geography 7.16 – Explain how changes in transportation and communication technology affects the spatial connections among human settlements and the diffusion of ideas and cultural practices.
- Geography 8.21 – Explain how historical technological developments (such as cotton gin, roads, railroads, canals, etc.), societal decisions, and personal practices interact with the physical environment in the United States (e.g., sustainability, economics ecosystems).
- Geography HS.26 – Explain how current globalization trends and policies affect economic growth, labor markets, rights of citizens, the environment, and resource and income distribution in different nations.
- Geography HS.50 – Determine the influence of long-term climate change and variability on human migration, settlement patterns, resource use, and land uses at local-to-global scales.

National Education for Sustainability K-12 Students Learning Standards

- 2.1 Interconnectedness - Cradle-to-grave design: Students explain the continuous cycling of biological and technical nutrients for a cradle-to-cradle designed product or system. Interdependency: Students explain how natural and built communities are part of larger systems and the inter-relationships that exist among those systems. Systems Thinking: Students identify an unsustainable system (e.g.: apartheid, colonization. fossil fuel energy) and redesign it using systems thinking principles (e.g. long-term, interconnectedness, leverage points).
- 2.2 Ecological Systems - Natural Resources: (renewable & non-renewable) Students investigate the natural systems in their local region and explore how humans have impacted those systems, both positively and negatively.
- 3.1 Personal Action - Personal Responsibility: Students know the difference between actions that they can take themselves and those that require the involvement of other people, organizations, and government. They identify and carry out a personal action that will enhance quality of life in environmental, social/cultural, or economic sectors.