

CLASSROOM ACTIVITY

Sustainable Action Campaign

OBJECTIVES

Students will be able to

- **Generate** a list of ways that cities are incorporating eco-friendly alternatives into city infrastructure.
- **Produce** a 60-second social media video that **describes** the importance of sustainability.

OVERVIEW

This Earth Day activity provides students with an opportunity to enhance their critical and creative thinking skills by transforming them into film directors. Students will create videos explaining the importance of designing sustainable cities that improve human lives and protect the environment. In their videos, students will choose a topic to research and describe ways cities around the world have successfully developed solutions to decrease their net footprint for a more sustainable world. Possible topics may include public transportation, walkable and bikeable neighborhoods, vehicle charging stations, solar farms, green buildings, food production, accessible public resources, water conservation, public green spaces, and waste management.

NATIONAL STANDARDS

Next Generation Science Standards

- **HS-ESS 3-1 Human Sustainability**
Construct an explanation based on evidence for how the availability of natural resources, the occurrence of natural hazards, and changes in climate have influenced human activity.
- **MS-ESS 3-4 Human Impacts**
Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Common Core English Language Arts

- **Integration of Knowledge and Ideas:**
Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

Background

By the year 2050, eighty percent of the world's population will live in urban cities, representing a twenty-five percent increase from today. Due to their high concentration of people, infrastructure, housing, and economic activities, cities are particularly vulnerable to the impact of climate change and natural disasters. As populations around the world increase, growth must be managed in sustainable ways by incorporating modern technology. The challenges cities face can be overcome in ways that allow them to continue to thrive and grow while improving resource use and reducing pollution and poverty. Innovative power grids, real-time water monitoring, and widescale adoption of renewable energy technologies are only a few of the possibilities that will help us invest in the future of our planet.

Key Vocabulary

- Sustainable
- Carbon footprint
- Climate change
- Greenhouse gases
- Hydropower
- Renewable energy
- Solar energy
- Wastewater
- Urban sprawl
- Smart growth

Materials

- Video—[The Renewable Energies of the Future](#)
- Video—[Creating Sustainable Cities](#)
- Article—[6 Traits of a Sustainable City \(With Examples\)](#)
- Article—[Sustainable Cities](#)
- Article—[Sustainable Urban Energy Is the Future | United Nations](#)
- Student resource *Twenty-Five Things*
- Student resource *Building an Argument*

Teacher Preparation

- Copies of student resources for each student
- Access to technology for groups with video media
- Articles printed for each group member

PROCEDURE

1. To begin the lesson, ask students what they have done in the past to celebrate Earth Day. Share that Earth Day was first held on April 22nd, 1970, and the theme for 2023 is “Invest in Our Planet.” Explain to students that they will be producing 60-second videos that will raise awareness for the need to invest in sustainable cities in the future.
2. Students will gather ideas to showcase in their videos by working to develop a collaborative list of sustainable practices. Explain to students that they will be collaborating and creating a “Twenty-Five Things You Didn’t Know” list about what they have learned about sustainable cities.
3. Divide students into five groups and assign each group one of the topics below.
 - a. [The renewable energies of the future](#)
 - b. [6 Traits of a Sustainable City \(With Examples\)](#)
 - c. [Sustainable Cities](#)
 - d. [Sustainable Urban Energy Is the Future | United Nations](#)
 - e. [Creating Sustainable Cities](#)
4. Provide each group with a graphic organizer. Have student groups collaborate to review their media selection and create a list of five new facts they have learned about their assigned topic. Emphasize that the facts must be new learning.
5. Have each group share their five facts and evidence for why the facts are important to know. Combine the lists of five to create a class list of “Twenty-Five Things You Didn’t Know.”
6. Have students select one of the 25 ideas from the class list that they will feature in their 60-second videos. Give each student a copy of the “Building an Argument” graphic organizer. Students will complete this graphic organizer to help them focus on the main ideas they would like to address in 60 seconds.
7. Students can use online platforms like [Canva](#), [Powtoon](#), or [Animoto](#) to create their videos. All the information from the graphic organizer must be included.
8. To close the activity, provide students with access to each video produced. Invite students to watch at least three videos. As an exit ticket, have students write a note to a peer describing what they learned from their videos.

EXTENSION

As an extension of this activity, students can create a poster of possible careers related to their 60-second videos.

SOURCES

- [Earth Day 2023—Earth Day](#)
- [Smart Cities | Itron](#)
- [Cities—United Nations Sustainable Development Action 2015](#)
- [Sustainable Cities](#)
- [6 Traits of a Sustainable City \(With Examples\)](#)

My Group List

Main Idea	
What is sustainability? Why is it important?	Image
One Example	
Describe the sustainable practice you identified.	Image
3 Reasons	
How does this practice help people and protect the environment?	Image(s)
Strong Finishing Statement	
Wrap up your main points with an emotional appeal.	<p>Sentence Starters</p> <p>After careful consideration...</p> <p>The time has come...</p> <p>It is clear that...</p> <p>Clearly...</p>