



Academic Resources for Teachers & Students

Wasatch Back Student
Art Show WBSAS

In The Year 3000

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9-12

kimballartcenter



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Lesson Overview

Lesson Plans

Designed to extend and enhance the learning experience of our exhibits while linking to core curriculum subject matter.

Lesson Objectives

- To recognize current technological advances in contemporary American Society.
- To imagine what technological advances may occur by the year 3000 based on current systems.
- To learn about some functions and dysfunctions of various urban systems.
- Envision what future technology may look like to create sustainable systems.

Core Curriculum Tie-Ins: Sixth through Eighth Grades: Visual Art, Social Studies, Geography and Science

Lesson Overview

Students will discuss various systems of a city: food production, transportation, wastemanagement, communication/information exchange, housing, power generation, etc. Students will choose one system and research how this system sustainably functions in an array of cities. They will choose one unsustainable issue with this system and draft a 'widget': a technological development or invention that solves this issue. They will draw and describe its function and purpose, make a powerpoint presentation, and present it to the class.

Length Of Lesson: Two to Four Class Sessions

Supplies

- Drawing Paper
- Access to computers, internet and powerpoint capabilities
- Access to printing capabilities
- Pencils, markers

About Wasatch Back Student Art Show

Wasatch Back Student Art Show (WBSAS) was created to showcase the artwork of aspiring young artists living in Wasatch and Summit Counties. It is a one-of-a-kind forum where student artwork is presented in a professional setting and promoted as such. This treasured and much anticipated yearly event operates under a theme decided in advance by Kimball Art Center staff. All submitted artwork is created with the theme in mind - In The Year 3000- and the diversity of responses to the theme is part of the appeal and delight of this exhibition. In addition to an open call for students to submit work, our own Young Artists Academy (YAA) participates with their artistic renditions.

Lesson Plan

1. Explain the definition of technology and provide contemporary examples of significant technological advances that affect daily life: cell phones, the internet, solar panels/wind turbines, robots, waste incinerators, electric cars. Talk about significant impacts of these and how they have greatly altered the culture and lifestyle and contemporary society. Show video of 8 breakthrough technologies.
2. Discuss systems within a city, and how technology helps every system function properly. Show waste management video as an example and ask: What are the benefits of this design? What parts of the system have changed and stayed the same? (the visual parts of the system have changed, but the trash is still transported to the landfill and recycling facilities) What are the downfalls of this design? (i.e. paradigm issues with waste 'disappearing', underground infrastructure would disrupt previously constructed buildings above ground, pipes may get clogged).
3. Have students get into groups of 2-3 and decide on a system they want to focus on i.e. (food production, housing, transportation, waste management, harvesting/producing energy, 'cleaning up' air/water/land pollution, communication). Research the various ways technology has helped advance these systems.
4. Each group researches various cities and how they have designed and applied a system within their infrastructure. (ex: the various ways waste is managed in Salt Lake City, UT; Curitiba, BR; Amsterdam, Netherlands)
5. Encourage students to think of the problems within their chosen system within each city as they research, and then brainstorm a design and function of a widget that will fix that certain problem within the system. Each group works to identify a problem with the designs of the system and then conceive a solution such as what problems happen with landfills in the waste management system that needs to be addressed and what kind of technology can be created to address the problem.

Lesson Plan Continued

6. Each group will draft the design of a widget that solves this problem, influenced and inspired by their research. One draft will show the dimensions and breakdown of the widget itself (ex: a bus with a green roof that grows edible plants). One draft will include the widget/technology functioning in the system (ex: the bus at the bus stop in the city delivering plants).

7. Each group will create a powerpoint that includes 1. An explanation of their chosen system 2. A description of how cities have applied this system sustainably 3. Issues with current forms of this system 4. Their drafts of the widget that provide a solution to the problem.

8. Students present their powerpoint to the class.

Resources

Waste management as an example of an urban system

<http://www.conserveenergyfuture.com/wastemanagementandwastedisposalmethods.php>

Video shows a contemporary waste management design

<https://www.youtube.com/watch?v=l1AbFUOle1g>

A video on what it takes to make a city sustainable

<https://www.youtube.com/watch?v=fcDDUSUbq9A>

8 breakthrough technologies in 2016

<https://www.youtube.com/watch?v=vylBxbLimlc>

Vocabulary

Technology

The branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society, and the environment, drawing upon such subjects as industrial arts, engineering, applied science, and pure science. 2.the application of this knowledge for practical ends.

Function

An activity or purpose natural to or intended for a person or thing.

Purpose

The reason why something exists.

Design

A plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is built or made

Net-Zero

The total amount of energy used by the building, vehicle, or city on an annual basis is roughly equal to the amount of renewable energy created on the site.

Infrastructure

The basic physical and organizational structures and facilities (e.g., buildings, roads, and power supplies) needed for the operation of a society or enterprise.

Sustainability

The ability to continue a behavior or system indefinitely. The combination of social (people), environmental (planet), and economic (profit) factors that exist in a mutually beneficial way.

System

A set of connected things or parts forming a complex whole, in particular. A set of principles or procedures according to which something is done; an organized scheme or method.

Widget

A mechanic or technological device, especially whose name is unknown or unspecified.