



### OVERVIEW

Students will learn about the history of how trash has been collected and dealt with over time. They will then identify important events in trash collection history to construct their own timelines.

### Learning Targets

- Timelines can be used as tools to organize important events through time
- Trash has been around as long as people have been on Earth
- People can get sick when trash is not disposed of properly
- You can bury trash, recycle trash, reuse trash, burn trash and dump trash

### GLEs

See attachment

### Materials Needed

- Poster board for each group
- Pencils and markers
- Magazines to cut pictures from for timeline
- Glue/glue sticks
- Copies of the trash timeline

### Background Information

Since the beginning of mankind, our world has had to deal with trash. Early man often just dumped trash anywhere he wanted. Over time, as people began to develop communities, we learned that we had to find a special place for trash. Without a plan to handle trash, people began to get sick. For example, fleas living on rats that were attracted to trash carried the bubonic plague that killed nearly half of the people in Europe. Students may be more familiar with roaches or ants that are attracted to the trash in their homes. Public policy began to dictate ways to regulate trash in our communities. Today, communities have created many ways of dealing with trash.

### Terms

- **LANDFILL:** More correctly termed “sanitary landfill,” a land site where waste is deposited, compacted and covered with soil.
- **RECYCLING:** A resource recovery method involving the collection and treatment of a waste product for use as a raw material in the manufacture of the same or another product (i.e., ground glass can be used to make new glass jars).
- **INCINERATION:** To burn solid waste; used in energy recovery processes.
- **COMPOSTING:** The controlled biological decomposition of organic solid waste under aerobic (in the presence of oxygen) conditions; organic waste materials are transferred into soil amendments such as humus or mulch. Compost is a mixture of decomposing organic matter (food waste, leaves, grass clippings) used to improve the physical properties of the soil.

### ACTIVITY (Suggested for grades 1 to 4)

#### Part I

1. Briefly discuss trash with students, asking them what they already know. Questions should be centered on eliciting previous knowledge about what counts as trash, how people deal with it, how people in the past may have dealt with it, and what are some problems if we don't deal with it in the right ways.
2. Explain to students that they will be constructing a trash timeline. Explain what a timeline is and how it helps people record events over long spans of time. Students may make a timeline of their own lives as a way to practice this objective.
3. Arrange students into groups. Each group will receive one poster board and the trash timeline.
4. In each group, students use the trash timeline, and/or the outside resource timelines given below to research the history of garbage collection. Younger students may receive pieces of paper with trash timeline events already copied on them.
5. Students work within their groups to select several (five to ten) events that they feel are significant in the history of trash collection. Encourage group discussion on why certain events are more important.
6. Each group will then construct their trash collection timeline. Students use magazine clippings or markers to cut or draw pictures that match the trash events on their timeline.

#### Part II

1. As a class or in groups, discuss what trash timeline moment students think is most important?
2. What would have happened if we didn't have garbage service?
3. Look at the trash timeline, are we creating more or less trash today than we have in the past?
4. What ways do we dispose of trash at home? At school?

#### Extension

1. Research the trash timeline in your own community. Have students ask their parents, grandparents, great-grandparents and other older adults what they threw out in the past. Why did they discard these items? Where/how did they dispose of them? How does garbage from that time differ from today's trash? Would some of the things they threw out be treated differently today? When did garbage service begin, and when did recycling begin, if offered? Students create a personal trash timeline using this information.
2. Students select outside resources and conduct research that can compare and contrast past and present viewpoints on trash and trash collection, and explain the significance of notable events on the trash collection timeline.

### CALL TO ACTION

1. Invite a local governmental official to talk to the students about trash collection procedures in your community.
2. Have student groups continue to develop their trash timelines into the future. What important events do they think will happen, or do they want to happen? When will they happen? Students present this to local government and/or trash officials as their wish for the future.

### OTHER RESOURCES

- **Digital Timeline Creator** <http://timeglider.com/>
- **Additional timelines and background info may be found at:**
  - <https://www.timeline.com/stories/trash-dump-landfill-worldwide>
  - <http://environmentalchemistry.com/yogi/environmental/wastehistory.html>
  - <http://beginwiththebin.org/resources/for-education>
  - <http://www.ewp.rpi.edu/hartford/~ernesto/S2014/SHWPCE/Papers/SHW-Introduction/Crowell-HistoryofWaste.pdf>
- **Keep Louisiana Beautiful Website** <http://keeplouisianabeautiful.org/>
- **Keep America Beautiful Website** <https://www.kab.org/>

### A BRIEF TRASH TIMELINE (Suggested for K to 2nd grade)

- **6500 B.C.** Native Americans in what is now Colorado produced more than five pounds of trash a day. Most of the waste was in the form of buffalo bones.
- **1500 B.C.** Citizens of Troy, Greece, dumped their waste on the floors and street. It has been calculated that the city rose 4.7 feet per century above the previous foundation due to the accumulation of debris on the ground.
- **500 B.C.** Citizens of Athens, Greece, designed a dump for trash and created a law that said trash had to be dumped at least one mile beyond the city walls.
- **1350** In a five-year period, the Black Death kills nearly half of the people in Europe. The Black Death, was caused by diseases spread by filthy conditions that attracted rats and contaminated the water supply.
- **1388** Waterways in England became so clogged with garbage that officials banned waste disposal in public waterways and ditches so boats wouldn't get stuck.
- **1400** Garbage outside of Paris, France, piled up so high that enemy soldiers climbed the massive garbage piles to get into the city.
- **1600** Colonial Americans used corralled pigs to eat garbage. The pigs left their own form of waste to deal with.
- **1690** The Rittenhouse Mill, the first paper mill established in America, makes paper from recycled cotton and linen as well as used paper.
- **1700** People start businesses collecting trash. They are called "Rubbish Carters."
- **1842** Edwin Chadwick, an advocate for sanitation, writes a report that links disease to dirty environmental conditions. Communities begin to improve the ways they handle waste. This is when the "Age of Sanitation" begins.
- **1895** "Apostle of Cleanliness" Colonel George E. Waring, Jr. organizes the first public garbage management in America in New York City. He orders his 2,000 employees to wear all-white uniforms, earning them the nickname "White Wings."
- **1897** New York City trash was delivered to a "picking yard," where it was separated into paper, metal, carpet, bagging, twine, rubber and horsehair. Modern recycling facilities still separate materials, but don't look for horsehair.
- **1902** 128 of the 161 U.S. cities had regular garbage collection.

- **1904** Chicago, Illinois, and Cleveland, Ohio, began large scale aluminum recycling.
- **1911** People in New York City produced 4.6 pounds of trash a day. There were approximately 4.7 million people living in New York City, at the time, who produced almost 22 million pounds of garbage each day.
- **1929** Garbage truck hoppers were invented to compact collected trash, enabling garbage to be transported more efficiently.
- **1939** During World War II, recycling was essential to the war efforts so tanks, ships, guns, ammunition and clothing could be made. Recycling lists included stockings, rags, scrap tires, raincoats, garden hoses, lard, dead animals and old phonograph records.
- **1953** Keep America Beautiful was founded. This nonprofit organization's mission is to help communities improve recycling, reduce litter and beautify cities.
- **1970** The Resource Recovery Act was passed to give money to help construct waste disposal facilities and to encourage recycling.
- **1970** The first Earth Day was celebrated by more than 22 million Americans on April 22, 1970. The event inspired people to care for the Earth. Today, more than a billion people celebrate Earth Day across the world.
- **1986** Rhode Island became the first state in the nation to issue a mandatory recycling law for newspaper, glass, plastic, aluminum and tin.
- **1988** Laws were created to ban the dumping of trash in the oceans.
- **1997** Keep America Beautiful began its America Recycles Day initiative. Initiative events encourage hundreds of thousands across America to recycle.
- **2007** San Francisco, California, is the first U.S. city to ban plastic grocery bags. This means less trash for the city!
- **2015** Americans create an average of four pounds of trash per day.

### A BRIEF TRASH TIMELINE (Suggested for grades 3 to 5)

- **6500 B.C.** Archeological studies show that individuals from a northwest tribe of Native Americans in what is now Colorado produced about 5.3 pounds of trash a day. Most of the waste was in the form of buffalo bones.
- **1500 B.C.** Citizens of Troy, Greece, dumped their waste on the floors and street. It has been calculated that the city rose 4.7 feet per century above the previous foundation due to the accumulation of debris on the ground.
- **500 B.C.** Citizens of Athens, Greece, designed a dump for trash and mandated that trash had to be dumped at least one mile beyond the city walls.
- **1350** In a five-year period, the Black Death kills approximately 25 million people in Europe, — about 30 to 60 percent of the population. This epidemic of bubonic plague, along with cholera and typhoid fever, was spread by filthy conditions that attracted rats and contaminated water supplies.
- **1388** Waterways in England became so clogged with garbage that Parliament banned waste disposal in public waterways and ditches so boats could navigate water channels.
- **1400** Garbage outside of Paris, France, piled up so high that it interfered with the city's defense during the 100 Years War with the British. Accounts tell of enemy soldiers clambering up the massive garbage piles to storm medieval city walls. It made life, let alone the fight, unbearable. This was back when Paris was not known as the "City of Lights" but the "City of Flies."
- **1600** Colonial Americans used corralled pigs to eat garbage. The pigs left their own form of waste to deal with.
- **1690** The Rittenhouse Mill, the first paper mill established in America, in Philadelphia, Pennsylvania, makes paper from recycled cotton and linen as well as used paper.
- **1700** New businesses develop around trash hauling. This is the beginning of the "Rubbish Carters."
- **1842** Edwin Chadwick, an advocate for sanitation, writes a report that links disease to filthy environmental conditions. Communities begin to improve the ways they handle waste. This is when the "Age of Sanitation" begins.
- **1895** "Apostle of Cleanliness" Colonel George E. Waring, Jr. organizes the first U.S. comprehensive system of public sector garbage management in New York City. He orders his 2,000 employees to wear all-white uniforms, earning them the nickname "White Wings."
- **1897** New York City trash was delivered to a "picking yard," where it was separated into paper, metal, carpet, bagging, twine, rubber and horsehair. Modern recycling facilities still separate materials, but don't look for horsehair.

- **1902** 128 of the 161 U.S. cities had regular garbage collection.
- **1904** Chicago, Illinois, and Cleveland, Ohio, began large scale aluminum recycling.
- **1911** New York City citizens were producing 4.6 pounds of trash a day. There were approximately 4.7 million people living in New York City, at the time, who produced almost 22 million pounds of garbage daily.
- **1929** Garbage truck hoppers were invented to compact collected trash, enabling garbage to be transported more efficiently.
- **1939** During World War II, recycling was essential to the war efforts so tanks, ships, guns, ammunition and clothing could be made. Recycling lists included nylon and synthetic stockings, rags, scrap tires, raincoats, garden hoses, lard, dead animals and old phonograph records.
- **1953** Keep America Beautiful was founded. This nonprofit organization's mission is to help communities improve recycling, reduce litter and beautify cities.
- **1970** The Resource Recovery Act was passed to give money to help construct waste disposal facilities and to encourage recycling.
- **1970** The first Earth Day was celebrated by more than 22 million Americans on April 22, 1970. The event brought environmental issues to the attention of lawmakers, and led to the creation of numerous environmental and natural resource protection agencies, and the passage of environmental legislation. Today, it is celebrated by more than a billion people internationally.
- **1986** Rhode Island became the first state in the nation to issue a mandatory recycling law for newspaper, glass, plastic, aluminum and tin.
- **1988** Legislation banned the dumping of trash in the oceans.
- **1997** Keep America Beautiful began its America Recycles Day initiative. Initiative events encourage hundreds of thousands across America to recycle.
- **2007** San Francisco, California, is the first U.S. city to ban plastic grocery bags. Many more have since followed suit, resulting in less litter and energy consumption.
- **2015** Americans create an average of four pounds of trash per day.