



THE HISTORY OF MUNICIPAL SOLID WASTE

Handout 1
Activity M.c

Name: _____

Past Methods of Solid Waste Disposal

“There was no ways of dealing with it that haven’t been known for thousands of years. These ways are essentially four: dumping it, burning it, converting it into something that can be used again, and minimizing the volume of material goods – future garbage – that is produced in the first place,” wrote William Rathje, a noted solid waste expert, about solid waste.

Of these four methods, dumping has been the most popular means of disposing of garbage from prehistory to the present. In the Bronze Age, inhabitants of Troy (approximately 3000 to 1100 BC) simply covered trash in their homes with layers of dirt or clay. This meant that doors and roofs actually had to be adjusted upward! Ultimately, new cities were built upon previous ones – the rate of upward lift due to debris has been calculated to have been 4.7 feet per century.

Even in Ancient Troy, not all trash was kept indoors. A great deal of garbage was thrown into the streets. As more and more people began to live in cities, the problem of waste disposal grew acute. By the Middle Ages, streets and alleys were often filled with garbage, and rain would turn them into open sewers where disease could flourish.

Farm Life, City Life, and Solid Waste

When our country was founded, most people did not live in cities. Even as recently as 60 years ago, 30% of Americans still lived on farms. Today, however, only 2% of our total population live on farms. This dramatic shift in population has had a tremendous effect not only on how we live our lives, but also on the garbage we produce.

Solid waste disposal was less of a problem during our nation’s rural past. Because of the wide availability of unused land, trash was usually discarded in open dumps. Often each farm had its own trash heap. Furthermore, the type of trash generated then was significantly different from trash today.

For example, many of the conveniences of life that modern Americans take for granted either didn’t exist, like soft drinks or television, or had to be made at home, like soap or most clothing. Today, when people go from place to place it’s most often by car. Our great-grandparents, however, used horses. Toys and games were simple and made of materials like wood that were easily found nearby. Video games did not exist. People generally had fewer items of clothing. And when something was worn out it often had a second life – for example, as a quilt. Paper was difficult to make and used less often than now. Pots and pans were also fewer in number and many kitchen appliances had not been invented at all. Because life in the past was both simpler and more difficult, a much greater amount of time was spent producing a lesser amount and variety of items. Let’s take a closer look at food as an example.

The Role of Food

Early in our history, most families depended for their meals on the foods they raised. These foods were perishable and had to be consumed immediately. Otherwise, food was preserved through canning, salting, smoking, or drying. This meant that people had many fewer kinds of food to eat. In addition, a great deal of food spoiled and had to be thrown out.

Those families who did not live on farms depended on their country neighbors for food. Because transportation for distributing food and food preservation were primitive, diet was dependent on food produced near the local marketplace.

Now, however, a very small number of us are able to feed more than 250 million Americans a year – and millions more people in other countries. American store shelves are stocked with the widest array of quality food and consumer goods in the world and Americans enjoy the world's highest standard of living. Reasons for this tremendous success include mechanization, efficient transportation systems and the invention of modern packaging.

Packaging and Transportation of Food

This packaging enables products of all types to be safely transported long distances and it prevents food spoilage and waste. Less than 3% of the total volume of packaged food in the United States spoils, and spoilage is a significant cause of food waste.

By contrast, a recent study of food waste generated by households in Mexico City showed that on average each household discards 40% more food waste a day than the average household in the United States. Food waste results from a lack of modern food packaging, refrigeration and an efficient transportation system.

Of course, population growth has had the largest impact on the solid waste stream. Since 1865, when the total U.S. population was 35 million, the number of people living in the United States has grown to 250 million. As the number of people grew, so did the total amount of trash produced – even while modern advances have reduced the amount of some types of garbage generated per person.

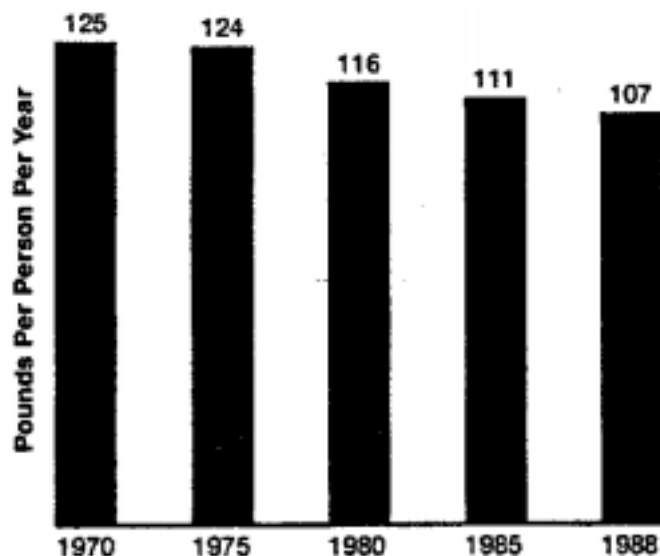
In addition, modern food packaging itself has decreased. Between 1972 and 1987, the amount of food packaging decreased 5% per person.

Food Waste Per Capita

Modern food packaging has helped reduce per capita food waste. Source: Franklin Associates, Ltd.

Modern Municipal Solid Waste Management Methods

Even now, there are still only four ways of dealing with garbage: minimizing the quantity of what we produce, converting it into something that can be used again, burning it, or dumping it. However, we have come a long way from the earliest methods



of disposing of our trash.

When we minimize the amount of waste we produce, we do so in a way that enables us to maintain the quality of products and food we enjoy. When we recycle products, we have modern technologies that can make old paper, glass, plastic, aluminum, and steel into new products.

When we burn garbage today we don't do it in an open pit; we use waste-to-energy incinerators where the combustion process is carefully controlled and the energy produced is captured and turned into electricity. When we properly dispose of our garbage now, it is into carefully designed landfill sites – locations called “sanitary landfills” because they are designed to be sealed systems.

TRASH DISPOSAL: PAST AND PRESENT

Handout 2

Name: _____

Using Handout 1 and your own ideas, identify items in each of the categories below that were used and disposed of differently in the past and now. The first category is filled in for you as an example:

Food

Past *In the past, lots of food was thrown away.*

Present *Modern food packaging methods preserve food and prevent spoilage.*

Clothing

Past

Present

Transportation

Past

Present

Cookware and Kitchen Appliances

Past

Present

Entertainment

Past

Present

Toys

Past

Present

Other

Past

Present

TRASH DISPOSAL: FUTURE

Handout 3

Name: _____

Using Handout 2 and your own ideas, identify items in each of the categories below and explain how they would be used and disposed of differently in the future. The first category is filled in for you as an example.

Food

Future In the next century, much of our food will be packaged in ways that will further reduce spoilage.

Clothing

Future

Transportation

Future

Cookware and Kitchen Appliances

Future

Entertainment

Future

Toys

Future

Other

Future