we produce A LOT of trash

Background

All of us make solid waste – commonly known as trash or garbage. The waste we make is managed for us. How? What we don't reuse or recycle is burned or sent to a landfill.

What is a landfill?

A landfill is a large, outdoor site designed for the disposal of waste. There are different kinds of landfills that accept different material. Generally, the trash and garbage that we throw away every day – also known as municipal solid waste (MSW) – is disposed of in a Class 3 landfill.

Landfills are not just holes in the ground. Modern landfills are well-engineered facilities that must meet strict U.S. Environmental Protection Agency and S.C. Department of Health and Environmental Control (DHEC) regulations that were established to protect human health and the environment. Class 3 landfills must be built in suitable geological areas away from faults, wetlands, flood plains and other restricted areas. The design of landfills includes plastic liners and other materials like clay to prevent groundwater contamination. Monitoring also is required to test groundwater quality. Daily operation of landfills includes crushing and covering waste with several inches of cover material to reduce odor, litter and control rodents and pests. Closed landfills must have a final cover that includes a synthetic cap and a soil layer. Landfill operators must set aside funding to provide environmental protection during and after the closing of a landfill.

Landfills in South Carolina

In South Carolina, there were 23 permitted Class 3 landfills operating in fiscal year 2012 (July 1, 2011 to June 30, 2012). Landfills are much bigger today than they were in the past. As such, they have a much longer lifespan and accept waste from a larger geographical area. For now, like them or not, there is a need for landfills. But each of us should do our part to reduce, reuse, recycle and compost whenever possible to save landfill space.

The Myth of Biodegradation

Most of us assume that when we throw something away, it will eventually break down or decompose in the landfill. Well, not necessarily. One of the most recognized research efforts on decomposition – also called biodegradation – has been the work done as part of the Garbage Project at the University of Arizona. Researchers mined local landfills and found that garbage does not break down in landfills.

Air and water are necessary for biodegradation. Under normal landfill conditions the only garbage that truly decomposes are certain types of food scraps and yard trimmings and even that takes a long time. Hot dogs and pastries, buried as long as 15 years before the project took place, were still recognizable. The bottom line is this: throwing something away is a lifetime decision in more ways than one.

Class Discussion

Discuss why we throw things away. Show the class a bag of garbage and talk about what's in it. Why were the items purchased? Why were they thrown away? What could we do to reduce the amount of trash we throw away?

Talk about where your garbage goes. Why do we need landfills? What happens to trash at a landfill?

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Focus

Solid waste

Video Length

2:36 minutes

Related Lessons

- Garbage Snooping
- Population & Garbage
- Where does garbage go?

Additional Resources

For more information about landfills, visit the following DHEC web pages.

- **www.scdhec.gov/HomeAndEnvironment/Land/Landfills/LandfillsOverview**
- **www.scdhec.gov/HomeAndEnvironment/Land/Landfills/HowLandfillsWork**

D H E C

PROMOTE PROTECT PROSPER

www.scdhec.gov/recycle

RECYCLE IT – *Don't Waste It*

What is recycling?

Recycling is a three-step process.

1. **The first step is collection.** That's when you put your recyclables into the bin or take them to a drop-off center.
2. **The second step is manufacturing.** That's when the recyclables are processed into raw materials that are then manufactured into new products.
3. **The third step is buying recycled.** You are not really recycling unless you are buying recycled-content products.

The three arrows in the recycling symbol represent steps that complete the recycling loop.

Resource Recovery

Natural resources used for the first time are considered virgin resources, and their extraction, processing and use require a great deal of energy and can create pollution. Resource recovery is a practice that conserves natural resources by extracting material (e.g., paper, glass, aluminum and steel) from the waste stream and recycling it into other materials or using it to produce energy. Many steel mills, for example, use a manufacturing process that uses virtually 100 percent recovered steel as the raw material.

A company can create plastic from oil, a virgin natural resource, or it can use recovered plastic from recycling programs. If a company uses recovered plastic, it is recycling material that would otherwise become waste, helping prevent the depletion of natural resources, conserving energy and preventing pollution that would have been created in the extraction and processing of oil from the ground.

Recycling in South Carolina

Recycling is not mandatory in South Carolina – it's voluntary. Local governments design and run the programs that need your participation to be successful. South Carolina has about 87 curbside recycling programs and 641 recycling drop-off centers. There are recycling opportunities in each of the state's 46 counties.

Most programs accept traditional recyclables such as aluminum cans, plastic bottles (soft drink, detergent, shampoo and other similar bottles), newspapers and inserts, cardboard, steel cans (e.g., fruit, vegetable, soup) and glass bottles. Programs also accept many other items such as magazines, office paper and unwanted mail.

Class Discussion

Discuss the three steps in recycling. Look at items that are recyclable or are made from recycled material. Discuss why we should recycle items instead of throwing them away.

Talk about what's recyclable in your community. What can be recycled? Where can you recycle? How should material be prepared for recycling?

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Focus
Recycling

Video Length
4:01 minutes

Related Lessons

- Recycle It!
- Recycling: A Valuable Lesson
- My Bag

Additional Resources

The following DHEC web pages include more about the topics discussed in this video.

- **www.scdhec.gov/HomeAndEnvironment/Recycling/WheretoRecycleLocally**
- **www.scdhec.gov/HomeAndEnvironment/Recycling/HardtoManageItems**
- **www.scdhec.gov/HomeAndEnvironment/Docs/recycling_guide.pdf**

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www.scdhec.gov/recycle