

Solid Waste and Recycling Curriculum
Lesson 18

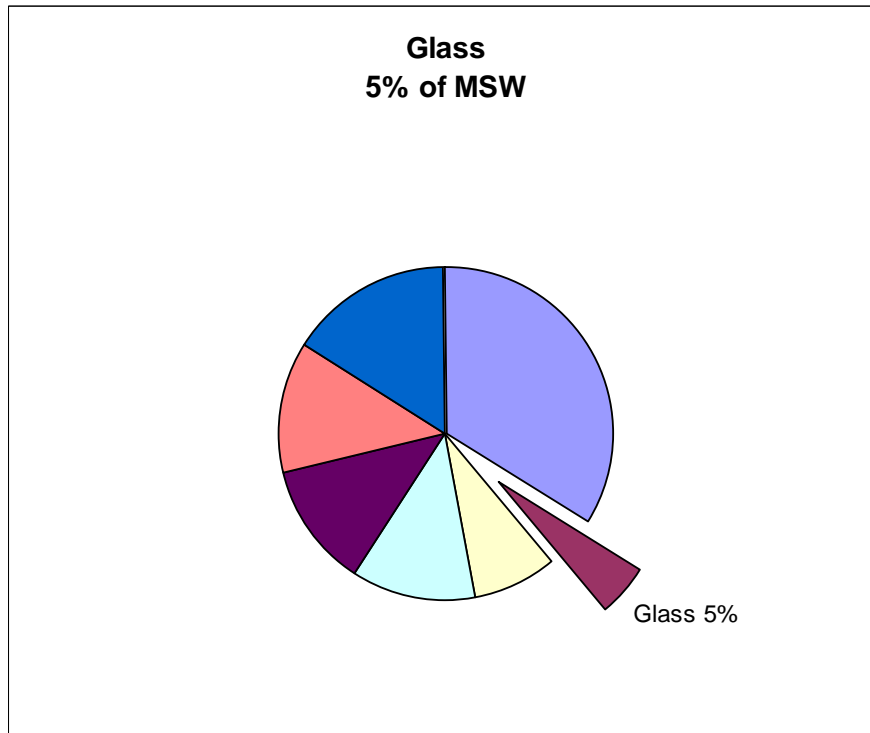
Glass Recycling and Mercury Exposure

Objectives:

- I will examine facts about glass recycling.**
- I will understand proper mercury disposal.**
- I will translate text into test questions**

Standards:

- E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and nonrenewable sources. E/S**
- N.12.B.4 Students know scientific knowledge builds on previous information. E/S**
- N.12.B Students understand the impacts of science and technology in terms of costs and benefits to society.**



SAMPLE RESPONSES

Vocabulary:

- 1. Raw Material:** *a crude or processed material that can be converted by manufacture, processing, or combination into a new and useful product.*
- 2. Cullet:** *furnace ready scrap glass*
- 3. Mercury:** *an element and a metal. Mercury is the only liquid metal at room temperature. It is toxic to the central nervous system.*
- 4. Amalgam:** *an alloy of mercury with another metal that is solid or liquid at room temperature according to the proportion of mercury present. It is used especially as a dental cavity filling material.*

Questions:

Write 2 test questions concerning the “Recyclability” and “Environmental Choice” of glass:

- 1.** *How quickly can recycled glass return to the shelf? As little as 30 days*
- 2.** *What is glass made out of? Silica, sand, soda ash, and limestone*

Write 2 test questions from “How Jars are Made”, “Manufacturing” or “Why is More Needed?”:

- 1.** *How hot is glass heated before being molded into desired shape? 2600-2800 degrees Fahrenheit*
- 2.** *How do manufacturers benefit from recycling? It reduces emissions and consumption of raw materials, extends the life of plant equipment, such as furnaces, and saves energy.*

Write 2 test questions regarding “What Types of Glass Can be Recycled? Or “Is There a Way to Reuse Glass?”

- 1.** *What types of glass cannot be recycled? Why? Windows, ovenware, Pyrex, crystal are manufactures through a different process. They can cause production problems and create defective containers.*
- 2.** *What can we do with glass that manufacturers can't accept? It is used for tile, filtration, sand blasting, decorative items and parking lots.*

Write 2 test questions and answers concerning mercury spills.

1. *What should you do if you have a mercury spill? Do not touch, open windows, remove children, call hotline*

2. *What are the hotline phone numbers? 888-331-6637 or 800-597-5865*

Write 2 test questions and answers about “Mercury Containing Products”

1. *What were some of the historical uses for mercury? Pesticides, felt hat manufacturing, and pigments for some paint*

2. *What are some products that contain mercury? Button batteries, thermostats, thermometers, dental fillings, and CFLs*

Notes from discussion with partner. Write 1 good test question and answer from your partner’s list.

What type of fillings could you use, if you did not want to use mercury? Gold, porcelain, ceramic or plastics