

Lesson Time:
40 minutes

Vocabulary:

Municipal Solid Waste (revisit from lesson 2)

Waste Characterization Study

Environmental Protection Agency

Organic Compounds

Decompose

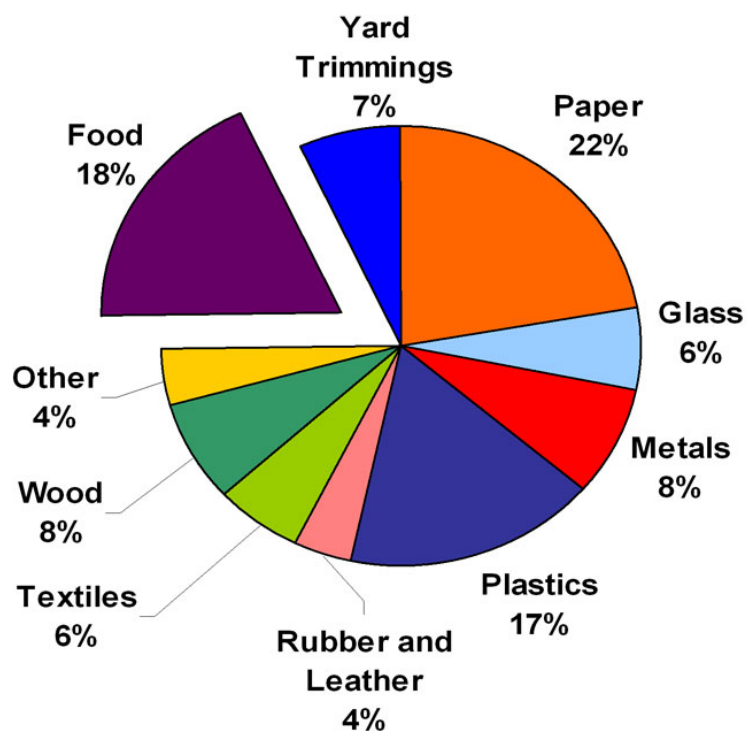
Biodegrade

Compost

Waste Characterization

Introduction to Composting

Municipal Solid Waste Sent to Landfill, 2007



<http://www.epa.gov/region09/waste/features/foodtoenergy/food-waste.html>

Objectives

Students will understand that studies have been conducted to determine what makes up municipal solid waste.

Students will be able to identify which of the categories of MSW generated can be recycled.

Students will be able to identify what types of materials can be composted and what cannot.

Students will recognize that for efficient composting, there must be a balance of materials.

Standards

E.12.C.4 Students know processes of obtaining, using, and recycling of renewable and nonrenewable sources. E/S

N.12.A.1 Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations. E/S

N.12.A.2 Students know scientists maintain a record of procedures, data, analyses, decisions, and understanding of scientific investigations. I/S

N.12.B.2 Students know consumption patterns, conservations efforts, and cultural or social practices in countries have varying environmental impacts. E/S

N.12.B.4 Students know scientific knowledge builds on previous information.

Materials Needed

30	Handouts or an overhead
6	Dry erase markers
1	Whiteboard

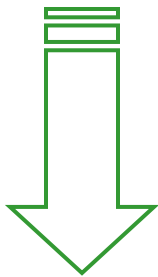
Anticipatory Set

Write the lesson objectives and/or standards on the whiteboard. Discuss with the students what the objectives and/or standards of the lessons are.

Objective: You will understand that studies have been conducted to determine what makes up municipal solid waste.

Objective: You will be able to identify which of the categories of MSW generated can be recycled.

Distribute handouts or prepare overhead.



Introduction:

“Let’s take a quick look at the types of things people throw away and in what amounts.”

Modeling / Guided Practice

1. Give out handouts or prepare overhead.
2. Ask the students if they know what a characterization study is. Explain.
3. Draw the chart (included—mention the info is from the EPA) on the board.
4. As you write the information on the board, have the students copy the information into their notebooks.
5. Explain that you can also write the info from the chart in a pie graph.
6. Draw the pie graph on board.
7. Have the students copy the pie graph into their notebook.
8. Be dynamic as you write important bits of information on the board, discuss.
9. Point out the materials that will be discussed in the rest of the program. Identify recyclable materials.
10. Focus now on combining the yard waste and food scraps. They are all organic compounds. Generally, organic compounds can be composted.
11. Ask students to define compost. Write it on the board.
12. Ask the students to tell you the kinds of items that go into a compost pile.
13. Write some answers on the board. Have the students copy the answers.
14. Ask the students to tell you the kinds of items that should not go into a compost pile. Write some answers on the board.
15. Why can't these items go into the compost pile? Write some answers on the board. Have the students copy them into their notebooks.
16. Explain that all organic matter decomposes.
17. Explain the need for balance to get the best decomposition rate.
18. Write down the formula that you will use for the compost column that will be constructed.

Closure:

Ask Students what they have learned.

Independent Practice

Not applicable for this lesson.