

FACILITATOR GUIDE: How Long Does That Trash Last?

GRADE: 6th – 8th

CONCEPTS & SKILLS:

Social Studies

Behavioral Sciences

SS.6-8.BS.3 Understand the influences on individual and group behavior and group decision making.

- Understand that various factors affect decisions that individuals make.

Science

Science as Inquiry

Identify and generate questions that can be answered through scientific investigations.

- Students should develop the ability to refine and refocus broad and ill-defined questions. An important aspect of this ability consists of clarifying questions and inquiries and directing them toward objects and phenomena that can be described, explained, or predicted by scientific investigations.

MATERIALS & RESOURCES:

Have students bring these items from home—

- Aluminum can (soda pop can)
- Banana
- Cigarette butt
- Cotton rag
- Glass bottle
- Paper bag
- Plastic 6-pack rings
- Plastic jug
- Styrofoam cup
- Tin can (soup or vegetable can)
- Wool or cotton sock
- Additional litter items found around schoolyard, playground, etc.
- Paper and pencils
- Access to [Education World-](http://www.educationworld.com/a_lesson/03/lp308-04.shtml)
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PRESENTATION:

This lesson is adapted from Education World (see link in material list) to help students understand the impact of trash on the earth. Use your own questions and these to lead a discussion about waste and trash.

Intro: *When you throw things in the garbage, it is carried away by the trash collector and becomes 'out of sight, out of mind'.*

- What happens to it?
- What about the trash you see around your school, parks, neighborhood, along streets, highways, and in rivers?
- Some of what you see decomposes, but does it all?
- How quickly do different materials decompose and become part of the soil?

This activity will help us find out how long different kinds of trash lasts.

DIRECTIONS:

1. Have students arrange the things they've brought on a table that everyone can stand around. Have the students explore the materials and predict how long they are designed to last.
2. Divide students into small groups.
3. Have students discuss these questions in their groups and report to the class. (See additional discussion questions in the original lesson plan, see link)
 - *What do you see here that you have at home?*
 - *Have you ever thrown any of these things away*
 - *Have you ever seen them on the road, at the park or by a river?*
 - *Have you ever wondered what happens to them if they end up in a landfill?*
4. If you want students to learn to create and use tables in a word processing program, do this part of the activity on computers or in the computer lab.
 - Have each student list the materials in one column on a piece of paper of a table. If you're working with pencil and paper, have them use pencil so they can rearrange their list after Step 2.
 - In the second column have them predict what will happen to the materials in a landfill (decompose, degrade, or last forever).
 - Now have them rearrange the list in the first column according to how long they think each item would last in a landfill (shortest time in landfill to longest time spent in landfill). They should use their second column predictions to predict the longevity of the materials.
 - Have students make a third column that they will use later for the results of the experiment.

5. After the students have created their own predictions, students return to their small groups.
6. Discuss how and why they placed items in the order they did. Have each group create a comprehensive list together. This will require some discussion and negotiation. The *Assertion Jar* activity may help with this discussion.
7. Have one student from each group write the list on a board where all students can see each other's list.
8. Another student from each group presents the group's list and discuss their conclusions.
 - *Why is one item above another?*
 - *Why is the last item at the end of the list?*
9. When the students have ordered the items correctly, ask the groups to decide how long each item will take to degrade.
 - *Knowing how long these items last, how long do you think your trash sits in a landfill?*
 - *How much do YOU contribute to landfills?*
 - *What does this information tell you about landfills?*
 - *What would you expect landfills to look like in 10 years? 50? 100?*
10. List alternatives to throwing trash away for each of the items on the material list.
 - *What is the importance of recycling? How much can recycling solve our trash problems? How much can reducing our consumption impact the trash problem? What about re-use? Other ideas?*
11. Have the students wrap up by writing about their experience from this lesson. They should include if and how their habits might change after this lesson, how they think this information affects people's decisions concerning trash.

TIME:**60 min.**