



OVERVIEW

Students explore their homes and school grounds in order to define and then distinguish between trash and litter. Students then create maps of their school grounds, neighborhood, park, etc., to prepare for a litter walk. Students will sort and then create graphs to answer questions about litter in their communities.

Learning Targets

- Students will define what trash and litter are, and be able to distinguish between the two.
- Students will use observation, aerial photography and/or mental mapping to create a map of their school/neighborhood in order to pinpoint the location of litter during a litter walk.
- Students will categorize, sort and graph their data from the litter walk in order to identify the most common types of litter at their school/neighborhood.

GLEs

See attachment

Materials Needed

- Recycled plastic bags
- Gloves
- Poster paper
- Crayons/markers

Background Information

What is litter and where does it come from? Litter is any type of waste that is discarded in inappropriate ways. Litter is anything that is thrown on the ground or that flies out of cars or trucks. Even gum is considered litter if it is thrown on the sidewalk. Litter can be along our streets, on our school grounds and even in our rivers and streams. No matter where litter comes from it creates a harmful environment for all living creatures, including humans. In our state, littering is illegal and you can be given a ticket if a policeman sees you litter.

The three reasons that Keep America Beautiful has determined that people choose to litter are:

- They feel no sense of ownership of the property
- Someone else will pick up after them
- Trash has already accumulated in the area they are littering

According to Keep America Beautiful, the average American produces up to four pounds of trash a day!

ACTIVITY (Suggested for Grades K to 4)

Part I – Engage

1. The day before this lesson is taught, ask your students to go through several garbage cans at their homes (send a note home with younger students to request adult assistance). Students should record the items that were found in their garbage cans.
2. Students return to class the next day ready to share what items they found. Record their observations on the board.
3. Ask your students why their parents were throwing all of these items out. This discussion will later be used to define trash, so a good consensus answer might be: They were throwing them out because they didn't want them anymore.
4. Now ask your students what they might call this list of items on the board. Answers may be trash or garbage.
5. Students now have a working definition of trash. Write this on the board. Ex. "Trash: things we throw away because we don't want them anymore."
6. Ask students what they would call these items if they were scattered all over their playground. From this students create a definition of litter to be written on the board. Ex. "Litter: trash that is not in the right place."
7. Americans create an average of four pounds of trash a day. If everyone in the class produces four pounds per day, how much does the whole class together produce per day? What about in your whole grade? Is that a lot of trash?
 - a. Have the kids hold a bag containing four pounds of apples. Let them take turns holding it and discussing how heavy four pounds actually feels.
 - b. What would happen if every student had a four-pound bag of apples, and let just one apple become litter? Would that be a lot of litter? Use this discussion about litter as a segue into the next part of the lesson.

Part II – Get Active

1. Now that students have defined litter, explain to the students that they will be participating in a study to find out where litter is most commonly found. Explain that they will do this by taking a litter walk around the campus (or in a location within close proximity to the school) and record their observations.
2. Students will now create a map of the area where they will do their litter walk. They may do this from mental memory, or using an aerial photograph from an Internet source such as Google Earth or MapQuest. Map details and features can be modified for grade level appropriateness, and provide an opportunity to instruct students on metric vs. English systems of measurement.
3. Have students create a hypothesis of where they believe they will find the most litter. Students may also develop an explanation for why they believe that location will have the most litter.
4. Also, have students hypothesize what are the most common types of litter they expect to find, and provide an explanation why. How much do they expect to find?
5. Before beginning the litter walk, explain proper safety procedures to students. It is often undesirable for younger students to handle broken glass or other sharp objects.
6. Using the plastic bags and gloves, have the students pick up any litter they find during the walk. Students should make a mark on their map each time they locate a piece of litter.

Part III

1. Back in the classroom, students begin to analyze their trash.
2. Using a bar scale or other device, determine the mass of the trash. Does this match the hypothesis created in Part II?
3. Sort the trash into four categories. The class can decide what the four categories will be (for example: soft drink cans, plastic, paper, other).
4. Have the students make a bar or picture graph of the amounts of trash in each category on their poster paper. Analyze these graphs to determine the most common type of litter found. Does the data match their hypothesis? Why or why not?
5. Have students analyze their maps. Did students find litter in the places they expected? Why or why not?

Part IV – Digging Deeper

1. Students will analyze the litter they collected one more time.
2. First, identify the most commonly littered item. (For example, students may find that, while plastic was the most common category, plastic straw wrappers were the most commonly found item.) Where did this trash come from? What would be some strategies to reduce the amount of trash? (For example, if straw wrappers were the most commonly found item, students may suggest the school purchase straws without wrappers.)
3. Second, have the students analyze the litter for reusable or recyclable items. Have students separate these items into a second pile from the non-reusable or recyclable items. Have students compare the size of the two piles and discuss why these items may have been littered when they could have been reused or recycled.
4. Third, discuss with kids how seeing trash on the ground at school or their neighborhood makes them feel. Who is responsible for dealing with this litter? (They are!) This is the beginning of the call to action.

CALL TO ACTION

Identify and implement changes that can be made to keep people from littering on your school grounds. Some examples may include increasing the number of trash cans on campus, focusing on higher traffic areas or having the cafeteria purchase straws without individual wrappers.

OTHER RESOURCES:

- **Digital Litter Mapper** <http://www.letsdoitworld.org/mapthewaste>
- **Tiny World Videos, Cleaning London's Streets** <http://thekidshouldseethis.com/post/80162019534>
- **Animals Save the Planet Video, Leopards Hate Litter** https://www.youtube.com/watch?v=VvFsMe8_NIM
- **Sesame Street - Don't Throw That Trash On The Ground** <https://www.youtube.com/watch?v=a9BUgRtH6vY>
- **Jill Hickey. Pattie Pitter She Hates Litter! The Canada Council for the Arts , 2001.**
- **"The Wartville Wizard"** (TeacherTube link: <http://www.teachertube.com/video/the-wartville-wizard-49860>)
Discuss the book with the class. Ask them why the Wizard was so angry? What did he do about it?
- **Disney Trash Can Study to Reduce Litter**
<http://www.buzzfeed.com/awesomer/things-you-probably-didnt-know-about-disney-parks#.tu3WBaqNq>
- **Keep Louisiana Beautiful Website** <http://keeplouisianabeautiful.org/>
- **Keep America Beautiful Website** <https://www.kab.org/>