



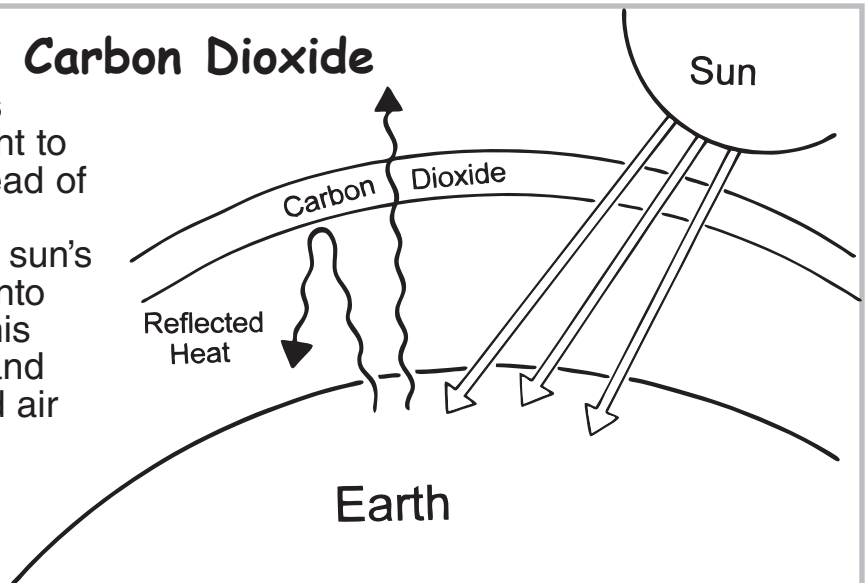
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Carbon Dioxide and Carbon Footprints

Greenhouse gases, such as carbon dioxide, allow sunlight to enter the atmosphere. Instead of reflecting off Earth back into space, these gases trap the sun's rays and reflect them back into the atmosphere as heat. This trapped heat warms Earth and has an effect on climate and air quality.



Carbon Footprints

Reduce your carbon footprint!

1. Use resources efficiently.
 - Turn off and unplug electrical appliances when not in use.
 - Use exactly the water needed.
 - Close the refrigerator door.
 - Avoid plastic.
2. Buy products grown or manufactured locally.
 - Use less transportation and fuel.
3. Be thoughtful about your transportation.
 - Carpool when possible.
 - Walk when possible.
 - Ride a bike.
4. Consider the Rs with products you use or buy.
 - Carry reusable shopping bags.
 - Reuse products.
 - Reduce waste.
 - Refuse products with excessive packaging.





Why Reduce Garbage?



Objective: Given an interactive, read-aloud experience, the students will participate and respond by suggesting alternate choices.

Vocabulary

- biodegradable
- break down / breakdown
- decompose
- landfill

Materials

- Healthy Environment vocabulary cards on page 40
- The "Breakdown on Landfills" story on page 41
- Biodegradable Breakdown Cards on pages 42–45
- overhead projector or interactive whiteboard and appropriate markers
- 3 sheets of cardstock for each pair of students



"Something is rotten."

Preparation

1. Read the story prior to sharing it with the students to become familiar with student sounds and actions.
2. Copy the Healthy Environment vocabulary cards and prepare them for use for a group presentation. Make additional copies as needed for student activities.
3. Copy the Biodegradable Breakdown Cards onto cardstock. Cut the cards apart to create game cards for each pair of students.

Opening

1. Refer to the Healthy Environment cards to write words and definitions randomly on the overhead or whiteboard.
2. Invite the students to match each word to its correct definition.
3. Explain that the students will learn how these words relate to keeping our environment healthy.

Part 1

1. Introduce hand motions and sound effects for the read-aloud story as indicated in "The Breakdown on Landfills" story.
2. Read the story aloud and model the hand motions.
3. Reread the story and have the students participate with hand motions at appropriate times in the story.



Recycle

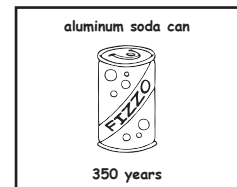
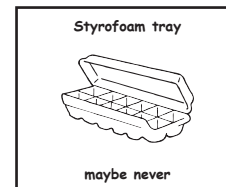
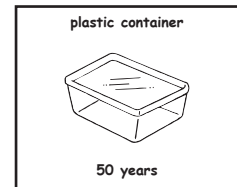
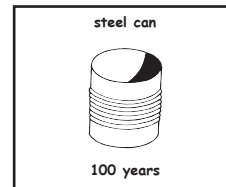


Why Reduce Garbage? (cont.)



Part 2

1. Review “The Breakdown on Landfills” story. Remind the students that some items take longer to break down than others.
2. Pair each student with a partner. Tell the students that they are going to play a game similar to War.
 - Each pair will have a stack of game cards with estimated breakdowns.
 - Players should split the deck in half so each person has half the cards.
 - Each player turns over one card at a time.
 - The first player should read the card aloud, “A _____ takes at least _____ to break down.”
 - The player whose card shows an item that breaks down faster than the other person’s item takes both cards. If the breakdown times are the same, those cards are put in the “landfill,” a pile in the middle that the players don’t get to keep.
 - When the players have gone through their stack of cards, they take the cards they have “won” and play through the deck again.
 - Play continues until one player has captured all the cards.



Closing

1. Ask the students what they can do with items that take a long time to biodegrade.
2. Have them suggest alternate ways to keep these items out of the landfill. (recycle, use things made from biodegradable materials, reuse, etc.)

Extension

If possible, arrange to take the class on a field trip to a landfill. Have the students view how trash is sorted and how much land is required for a landfill. Poll the students later for reactions and ideas for further reducing garbage.

ELL Tip

Slowly read the “The Breakdown on Landfills” story again with a small group. Consider recording the story for students to listen to again.

Ask the students to describe differences in trash: what they throw away, how they reduce trash, and how else they might use items they throw away. Encourage them to incorporate at least one vocabulary word (*decompose, landfill, biodegradable, break down, breakdown* into the discussion.)

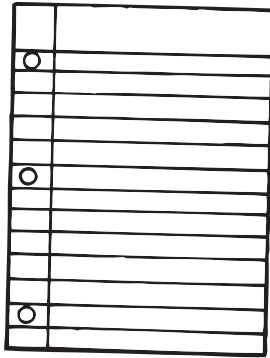


Why Reduce Garbage? (cont.)



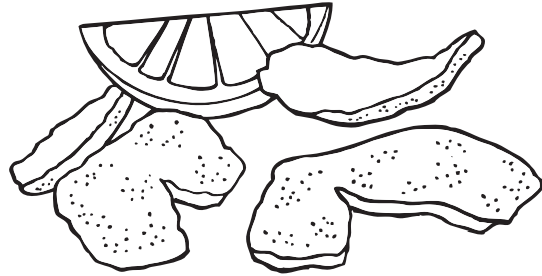
Biodegradable Breakdown Cards

paper



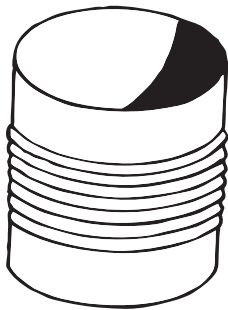
3 months

orange peel



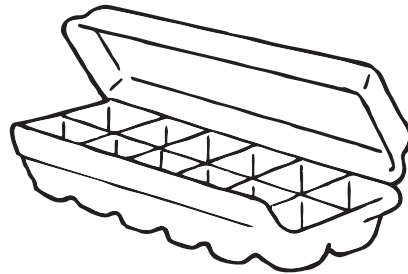
6 months

steel can



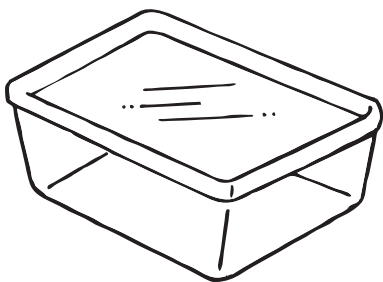
100 years

Styrofoam tray



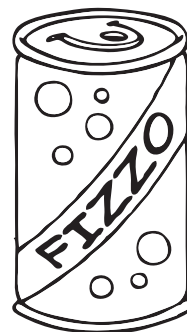
maybe never

plastic container



50 years

aluminum soda can



350 years