

# Too Good To Throw Away!

City of Tucson  
Recycling Education Program



**Pre- & Post-Visit Activity Booklet**  
**Grades 3-5**

## Dear Teacher,

Welcome to **Too Good To Throw Away!**, the City of Tucson's NEW recycling education program. Do you know that every day the average Tucsonan produces over four pounds of trash? Do you also know that almost half of that could be recycled or composted?

**Too Good To Throw Away!** offers students an opportunity to learn about and practice the 3Rs: reduce, reuse, and recycle—and to have FUN in the process. These activities provide practical knowledge and skills that will help your students make intelligent decisions now and in the future.

### This three-part program includes:

- One pre-visit activity (60 minutes) to introduce students to the waste situation in Tucson and the 3Rs! (Doing this activity ensures that students get the most out of the visit from the classroom presenter.)
- A 45-minute visit from a specially trained presenter.
- Two post-visit activities to help students practice applying what they learned from their special guest.

### To prepare for the presenter's visit, please:

- Reserve a room large enough to accommodate all of your students standing in a circle.
- Have a table (or two desks pushed together) cleared for presentation materials.
- Have a TV/VCR in the room.
- Review the Teacher Background Information and the enclosed brochures.
- Consider conducting Activity #1 to ensure that the students get the most out of the visit from the classroom presenter.

If you have any questions about what is recyclable in your area, check the "What Can We Recycle?" section of the Teacher Background Information. Or contact us at: [recycle@ci.tucson.az.us](mailto:recycle@ci.tucson.az.us) or (520) 791-5000. If you have any questions regarding this or other outreach programs, please call us at (520) 791-3175. TUSD teachers interested in helping to start commingled recycling at your school, contact the Natural Resources Manager, TUSD at (520) 225-4673. All other teachers (Sunnyside USD, Tanque Verde USD, Flowing Wells USD, etc.) please contact City of Tucson Environmental Services.

Thank you for teaching **Too Good To Throw Away!**

Waste Reduction Staff  
City of Tucson  
Environmental Services  
[www.tucsonrecycles.org](http://www.tucsonrecycles.org)

Sponsored by:  
Arizona Department of Environmental Quality  
Recycling Program and  
City of Tucson Environmental Services



For more information or additional copies of this packet, please contact:  
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# Too Good To Throw Away!

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### Pre-Visit Activity #1:\*

#### Carlo's Day at the Landfill . . . . . Page 11

- 👉 After a trip to the landfill, Carlo learns to reduce, reuse, and recycle the contents of his lunch. Students listen to a story and solve a puzzle using recycling vocabulary.

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### Post-Visit Activity #2:\*\*

#### Recycle Scavenger Hunt . . . . . Page 24

- 👉 Students identify different recyclables in their home and share findings in class.

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### Post-Visit Activity #3:\*\*

#### What a Load of Garbage!. . . . . Page 27

- 👉 Students focus on waste generated in the classroom and use mathematical calculations to estimate the amount produced by their school and by all schools in Arizona.

\*This activity works best BEFORE the special visit from the classroom presenter.

\*\*These two activities reinforce and expand learning following the classroom visit by the presenter.

## Teacher Background Information

### A World of Waste

**W**hat is **solid waste**? Also referred to as trash, rubbish, refuse, or garbage, solid waste means waste material that is not liquid or gas. These lessons focus on municipal solid waste (MSW), which includes household, commercial and institutional waste, but not wastes from mining, agriculture, silviculture, demolition debris, and a variety of sludges. The term “waste” has interesting connotations. It can refer to something leftover or something not used wisely. Much that is considered waste could actually be used wisely.

Solid waste is a serious issue in the United States. The U.S. leads the world in the production of municipal solid waste. Even compared to other wealthy industrialized nations such as Japan or countries in Europe, we generate twice as much solid waste per capita. The average American produces about 4.4 pounds of garbage each day! In 1960, that figure was 2.6 pounds. This is expected to increase to 4.8 pounds per person per day by the year 2010.

Recycling has been growing steadily for over 20 years. From 1980 to 1990, the U.S. almost doubled its recycling rate from 9 percent to 17 percent. In 1995, our country’s average recycling rate was over 25 percent, and by 2000, it was 30 percent. Tucson is way below average. At Tucson’s Los Reales landfill, more than 1,500 tons of garbage arrive every day, much of it recyclable. The City of Tucson spends money to bury material it could be selling to recycling companies. The good news is that the *Tucson Recycles* program (once-a-week trash and recycling collection) diverts more of our waste from the landfill. Eligible households have a 60 or 90 gallon blue barrel for recycling, the types of recyclables accepted

has increased, and all recyclables are collected together, then sorted at a local facility. Tucson’s recycling rate has increased from 9% to 23% since the *Tucson Recycles* program was implemented in 2002. Recycling is much more than an alternate means of waste disposal. Recycling is about conserving natural resources, reducing our use of energy and materials, minimizing pollution, and more.

### What are the “Three Rs”?

**I**n a waste reduction context, the “Three Rs” refer to **reduce, reuse, and recycle**. These are the three most basic, important ways to reduce waste, conserve natural resources, and decrease our impacts on the natural world. Reducing, reusing, and recycling often save money, too.

It is important to recognize that the order cited—reduce, reuse, recycle—is *not* arbitrary. Some people tend to think of recycling as a central focus and of

reducing and reusing as less important, but this is not a correct understanding. Reducing is actually the most efficient way to conserve resources. Reusing is second in efficiency. Recycling is important, but is not as efficient as reducing and reusing.

Recycling of course involves a cycle. For recycling to be successful, we need to complete the cycle, or “close the loop,” by buying recycled goods. Although confusing, it’s important to learn to distinguish between the “made from recycled” symbol, which is a trio of light chasing arrows on a dark circle background, from the “recyclable” symbol, which is a simple trio of chasing arrows, with no dark background. A “made from recycled” product is actually made from materials that have been used before.



## REDUCE

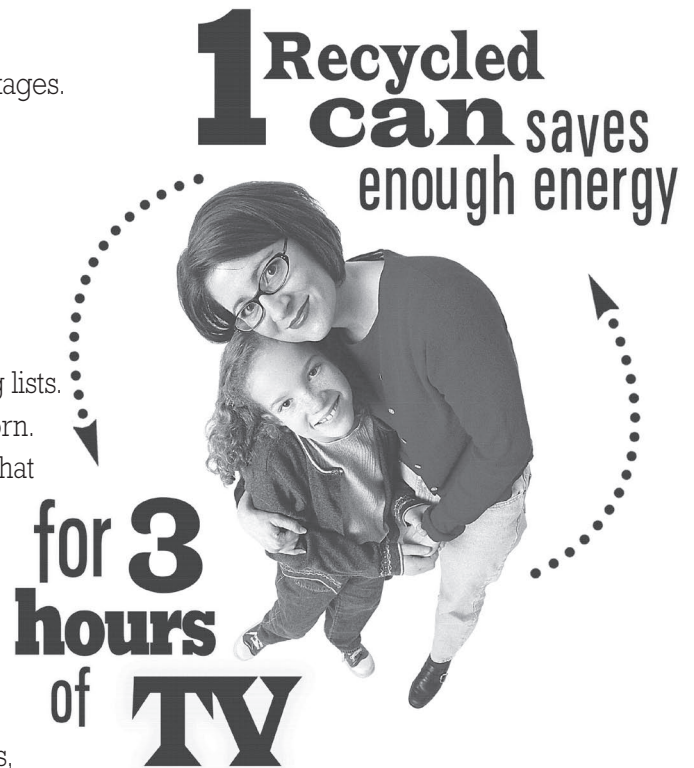
- Prevent waste; buy only what you really need.
- Purchase products you use regularly in large packages.
- Purchase products in less packaging.
- Purchase concentrates and bulk goods.
- Buy products in refillable packaging.
- Borrow, loan, rent, lease, or share when possible (books, tools, etc.).
- Use both sides of paper.
- Take action to get your name deleted from mailing lists.
- Repair instead of replace something broken or worn.
- Buy good quality, durable products fabricated so that they can be repaired.
- Take good care of your things so that they last.

## REUSE

- Choose reusable rather than disposable goods (napkins, mugs, razors, sponges, etc.).
- Purchase used goods (furniture, books, music, toys, clothes, etc.).
- Sell or give away goods you no longer want or need.
- Use the back of old paper as scratch paper.
- Use glass jars, plastic tubs, water bottles, lunch bags, etc. again and again.
- Use leftover materials to make something different (scrap lumber to build a bat house or doll house).

## RECYCLE

- Recycle as much as possible through community collection programs, either curbside or at drop-off locations.
- Adjust your purchasing habits to buy items in packages that are recyclable in your area.
- Keep an eye out for other special recycling programs, such as opportunities to recycle copier or computer printer cartridges through an office supply, Christmas tree collection programs, and so on.
- Remember to buy recycled! Look for products and packaging with recycled content.
- Help “nature’s recycling” by composting kitchen and yard waste.

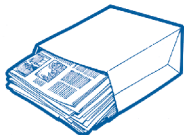
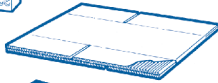
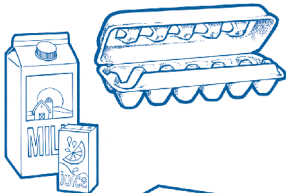
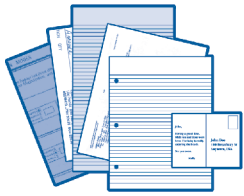


## What Can We Recycle?

The *Tucson Recycles* program means that we can recycle a lot in Tucson!  
See the list below.

### Detailed Blue Barrel Recyclables List:

All these items also accepted at City's 16 neighborhood recycling centers.



- **Paper:** (no need to remove staples or labels)
  - White and colored (no neon bright colors), coated and non-coated paper
  - Open mail (with non-paper items removed; window envelopes and labels OK)
  - Adding machine tape, accounting ledgers, tabulating and time cards
  - Pamphlets, brochures, advertising flyers, posters
  - Booklets and magazines and catalogs (less than 1/2" thick)
  - Carbonless multi-forms (i.e., NCR paper)
  - Paper from legal, steno, note and message pads; sticky (Post-It) notes
  - Fax and telex sheets, computer and copy paper
  - Manila or pastel file folders (no brown, dark green or neon)
  - Shredded paper in a secured, clear plastic bag (please put white paper in a separate bag if possible; this is the only time plastic bags should go in the recycling container).

#### ■ Paperboard/chipboard

(like cereal or stationery boxes. Exception: no paperboard with metallic and wax coating)

#### ■ Phonebooks

#### ■ Fiberboard

(like paper egg cartons and some packing material)

#### ■ Milk and juice cartons and drink boxes

(coating is OK because these are very high quality paper)

#### ■ Newspaper and brown bags

#### ■ Corrugated cardboard

(flatten and cut as needed to fit in container)

#### ■ #1 and #2 plastic bottles & jugs

with necks or screw-on lids (no tubs, pails or other plastics)

#### ■ Steel and tin cans

(including non-hazardous product aerosol cans)

#### ■ Aluminum cans

#### ■ Glass food and beverage containers

#### Reminder:

If it is **not on the list**, or if it takes **too much water to clean**, it goes in the garbage!

**The success of *Tucson Recycles* depends on two factors:**

- **Quality** of the recycled materials, and
- **Efficiency** of the collection.

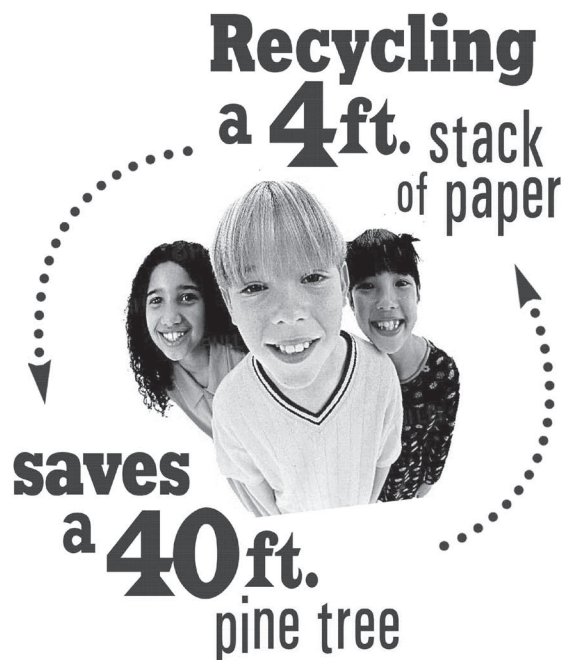
It is the responsibility of each homeowner to follow these recommendations which allow for the best separation and eventual use of the recycled materials.

**Tips:**

- Make sure materials are clean, empty and dry and have no food or beverage residue.
- Lightly rinse—throw very dirty items in the garbage.
- All recycling goes into container together—no sorting.
- Do not flatten cans, jugs or bottles; leave labels on.
- Bottle caps can be recycled on or off.
- Put items in container individually, not inside of boxes, plastic bags, etc.
- Please do not overfill container (there is no charge for a second blue recycling barrel).
- Set out the Blue Barrel for collection when it is more than half full. Having the truck stop for nearly-empty containers increases fuel consumption and air pollution.

**Do NOT Recycle:**

- tissue paper; paper towels; carbon paper; photographic paper; paper plates and cups; paper ream wrappers; blueprints; glued binders
- plastic bags or packaging; plastic chairs, blinds, gutters, toys, etc.
- newspapers with twine, straps or rubber bands
- electronics, computers, rechargeable batteries
- auto parts
- light bulbs, window glass, mirrors, ceramics or crystal
- medical supplies or containers
- construction and finishing materials and products
- herbicide, pesticide, automotive, chemical or other hazardous product containers
- green (yard) waste
- food waste
- pet food bags with plastic lining



## Arizona Department of Education Academic Standards

The *Too Good to Throw Away!* program for grades 3-5 addresses the following Academic Standards. (Complete versions of the Academic Standards are available at <http://www.ade.state.az.us>.)

SCIENCE STANDARDS	ACTIVITY #1	ACTIVITY #2	ACTIVITY #3	PRESENTATION
<b>SC03-S1C1-01</b> Formulate relevant questions about the properties of objects, organisms, and events of the environment using observations and prior knowledge.	✓	✓		✓
<b>SC03-S1C2-04</b> Use metric and U.S. customary units to measure objects.	✓		✓	
<b>SC03-S1C2-05</b> Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).	✓	✓	✓	
<b>SC03-S3C1-02</b> Describe the beneficial and harmful impacts of natural events and human activities on the environment (e.g., forest fires, flooding, pesticides).				✓
<b>SC03-S6C1-06</b> Describe ways humans use earth materials (e.g., fuel, building materials, growing food).				✓
<b>SC04-S1C2-04</b> Measure using appropriate tools (e.g., ruler, scale, balance) and units of measure (i.e., metric, U.S. customary).			✓	
<b>SC04-S1C2-05</b> Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).	✓	✓	✓	
<b>SC04-S3C1-01</b> Describe how natural events and human activities have positive and negative impacts on environments (e.g., fire, floods, pollution, dams).				✓
<b>SC04-S3C1-02</b> Evaluate the consequences of environmental occurrences that happen either rapidly (e.g., fire, flood, tornado) or over a long period of time (e.g., drought, melting ice caps, the green house effect, erosion).				✓
<b>SC04-S3C2-02</b> Describe benefits (e.g., easy communications, rapid transportation) and risks (e.g., pollution, destruction of natural resources) related to the use of technology.				✓
<b>SC04-S4C3-01</b> Describe ways various resources (e.g., air, water, plants, animals, soils) are utilized to meet the needs of a population.				✓

<b>SCIENCE STANDARDS</b> CONT	ACTIVITY #1	ACTIVITY #2	ACTIVITY #3	PRESENTATION
<b>SC04-S4C3-02</b> Differentiate renewable resources from nonrenewable resources.	✓			✓
<b>SC04-S4C3-03</b> Analyze the effect that limited resources (e.g., natural gas, minerals) may have on an environment.	✓			✓
<b>SC04-S4C3-04</b> Describe ways in which resources can be conserved (e.g., by reducing, reusing, recycling, finding substitutes).	✓	✓	✓	✓
<b>SC05-S1C2-04</b> Measure using appropriate tools (e.g., ruler, scale, balance) and units of measure (i.e., metric, U.S. customary).			✓	
<b>SC05-S1C2-05</b> Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).	✓	✓	✓	
<b>MATH STANDARDS</b>				
<b>M03-S1C1-08</b> Compare two whole numbers, through six-digits.			✓	
<b>M04-S1C1-07</b> Compare two whole numbers.			✓	
<b>M04-S1C2-02</b> Subtract whole numbers.			✓	
<b>M04-S1C2-05</b> Multiply multi-digit numbers by two-digit numbers.			✓	
<b>M05-S1C2-03</b> Multiply whole numbers.			✓	
<b>M05-S1C2-04</b> Divide with whole numbers.			✓	

<b>SOCIAL STUDIES STANDARDS</b>	ACTIVITY #1	ACTIVITY #2	ACTIVITY #3	PRESENTATION
<b>3SS-F2</b> Identify natural and human characteristics of places and how people interact with and modify their environment.				✓
<b>3SS-E2</b> Describe the impact of interactions between people and the natural environment on the development of places and regions in Arizona, including how people have adapted to and modified the environment.				✓
<b>4SS-F1</b> Describe how scarcity affects students' daily lives.	✓			✓
<b>LANGUAGE ARTS STANDARDS</b>				
<b>LS-F1</b> Use effective vocabulary and logical organization to relate or summarize ideas, events and other information.	✓			
<b>LS-F2</b> Give and follow multi-step directions.	✓	✓	✓	
<b>VP-F3</b> Access, view and respond to visual forms such as computer programs, videos, artifacts, drawings, pictures and collages.	✓			✓
<b>VP-F4</b> Interpret visual clues in cartoons, graphs, tables and charts that enhance the comprehension of text.	✓	✓	✓	

Teacher Note: Pursuing the suggested Extension ideas at the end of the pre- and post-visit activities will allow you to address additional ADE standards in a variety of subject areas.

# Pre-Visit Activity #1: Carlo's Day at the Landfill

## Overview:

After a trip to the landfill, Carlo learns to reduce, reuse, and recycle the packaging from his lunch. Students listen to the teacher read the story, and then solve a puzzle using recycling vocabulary.

## Arizona Department of Education Academic Standards:

Please refer to the Arizona Department of Education Academic Standards section for the ADE standards addressed by this lesson.

## Objectives:

Students will be able to:

- ☞ define and use recycling vocabulary
- ☞ state that almost half of what we put in our landfill could be reused or recycled
- ☞ identify and describe four alternatives to trash disposal: reduce, reuse, recycle, and compost

## You will need:

- one photocopy of each of the six recycling vocabulary images
- one photocopy of the six vocabulary words and their definitions (cut into strips as indicated)
- a transparency of the "Solve the Puzzle" page
- overhead projector and marker
- text of the story: *Carlo's Day at the Landfill*

## Directions: (estimated time 60 minutes)

### 1. Introduction

- Write the six recycling vocabulary words on the board.
- Tell the students that this activity will prepare them for a visit by a special guest from the City of Tucson's recycling program, *Too Good To Throw Away!*

### 2. Read *Carlo's Day at the Landfill*

Before reading the story, tell the students that there is a puzzle within the story that they will try to solve. Ask the students to listen carefully while you read the story. When they hear any of the six vocabulary words, they should raise their hand. Distribute one of the six images and the accompanying definitions to the first six students who hear the words in the text of the story. At the end of the story, have each student holding a recycling image stand up, show the class their image, and read the definition on the strip of paper. You may want to ask students to give their own examples for each word.

### 3. Solve the Puzzle

Using an overhead projector and the "Solve the Puzzle" transparency, ask students: *What could Carlo do differently to avoid throwing valuable natural resources in the landfill?* Work through the list and explore various options for each item. Make a star in the boxes corresponding with appropriate choices. (For some items, there will be more than one appropriate option.) Refer to "Answer key" and "Teacher Notes." Make the point that we do have other choices! Then help students choose the *best* option for each item. Circle that star. After completing the chart, be sure to wrap up by discussing:

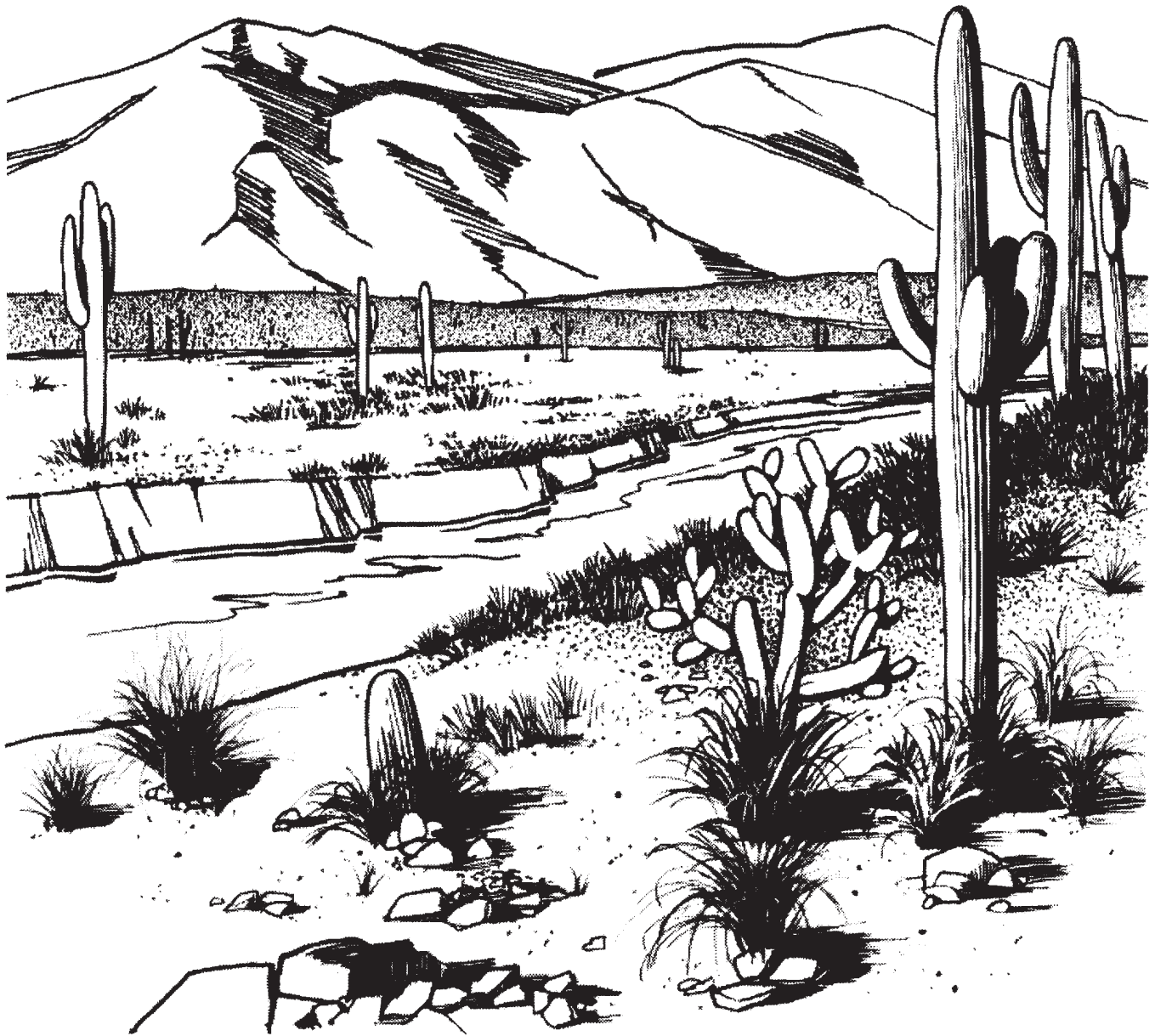
*(continued on next page)*

## Pre-Visit Activity #1: Carlo's Day at the Landfill (continued)

- Why is it important for Carlo—and us!—to recycle? Emphasize the importance of saving natural resources. Discuss how our lives would be different if our supply of various resources became depleted.
- What other options are more desirable than throwing resources away?
- Review the items on the list and differentiate between renewable and non-renewable items. Explain that even if a resource is renewable, it still may be limited (i.e., it takes many years for a tree to grow to maturity).
- How can students reduce the amount of trash from their own lunches?

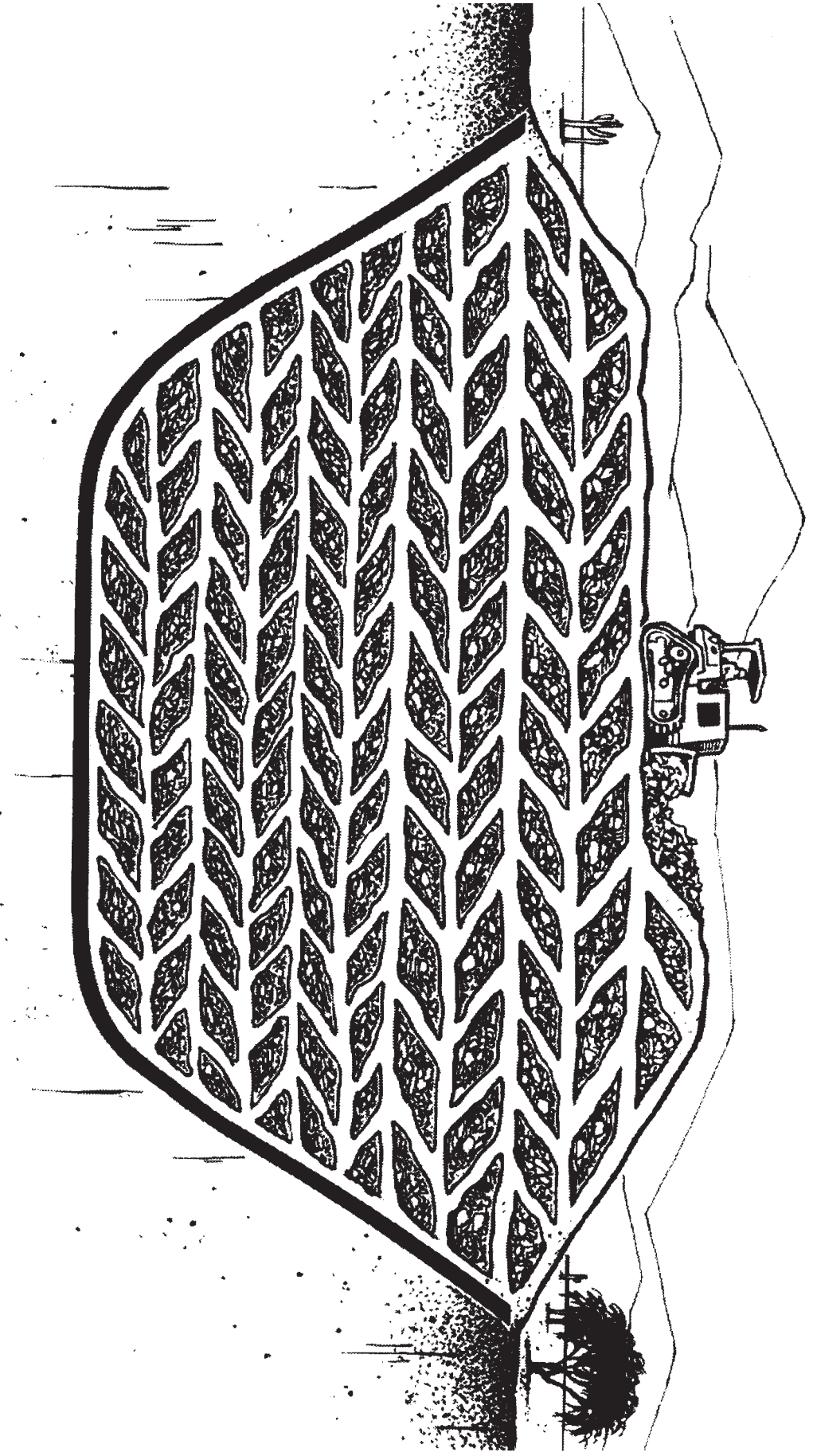
### Extension Idea:

As a research project, students could select an item from Carlo's lunch and trace it back to its natural origins. Guide students to the important conclusion that all things come from natural resources.



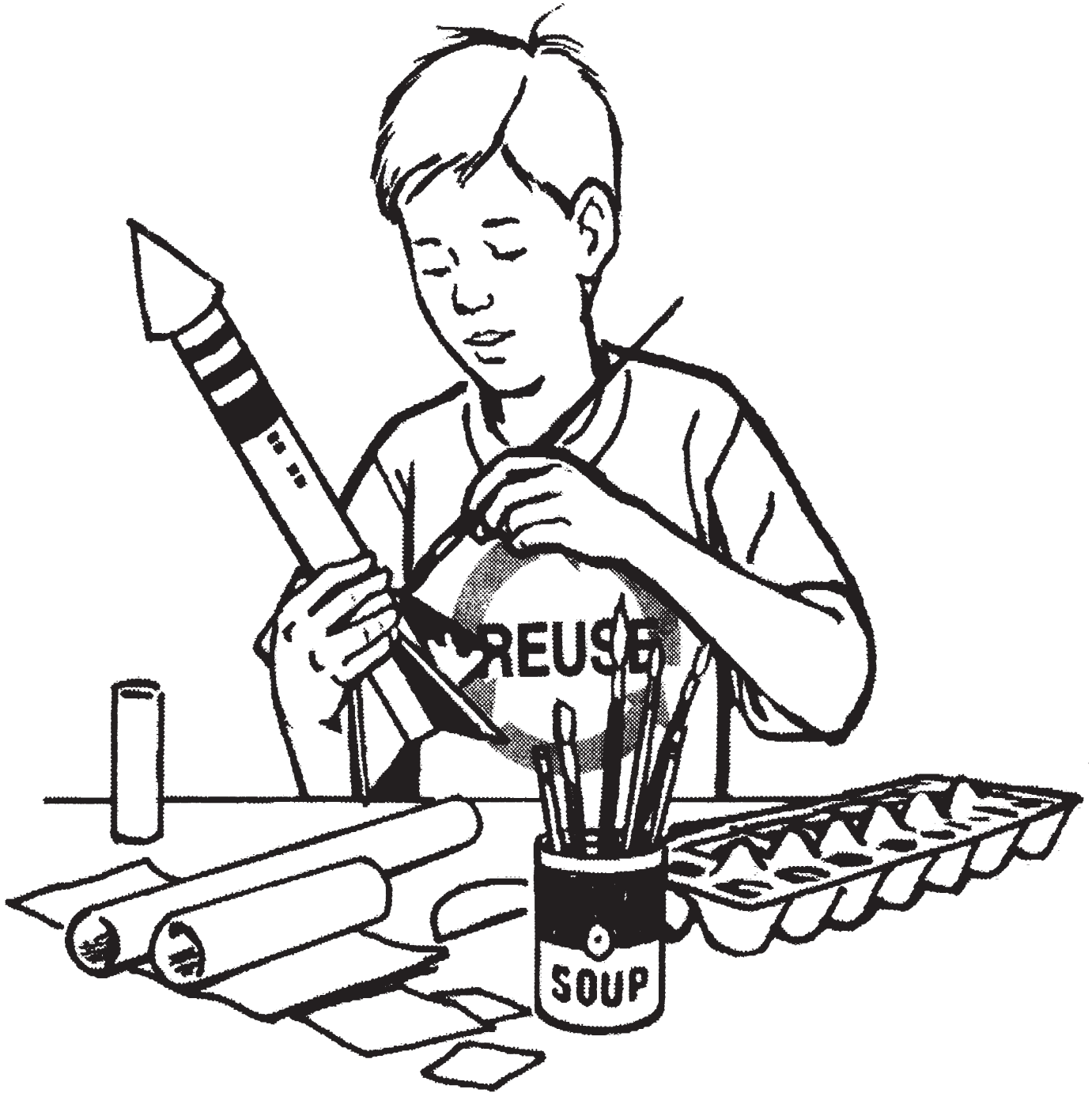
# natural resources

# Landfill





reduce



# reuse



recycle



# compost

## Know Your 3 Rs Vocabulary

**Note to Teachers:** Copy on card stock if available and cut along dotted lines.



**Natural Resources** (*noun*): Raw materials and energy that we get from nature: land, water, trees, sunshine, and minerals. Everything comes from natural resources. For example, this piece of paper came from a tree.



**Landfill** (*noun*): The place where trash is taken and buried in a special pit lined in plastic. Almost half of the things that end up there could have been reused, composted, or recycled.



**Reduce** (*verb*): To buy or use less stuff or to throw away less trash. For example, you can use a cloth bag repeatedly instead of a plastic bag to carry home groceries.



**Reuse** (*verb*): To save something and use it over again for the same purpose or another purpose. For example, you could make a toy rocket out of old paper towel rolls.



**Recycle** (*verb*): To make something used into something new. When you run out of things to do with your cans and newspapers, you can recycle them so they go to companies that make new things from them. A recycled newspaper can be made into another newspaper or comic book.



**Compost** (*verb/noun*): To compost is a way to recycle food scraps and yard waste. You can compost things that were once part of a living plant. Banana peels, coffee grinds, grass clippings, and leaves can all go in a compost pile to eventually turn into rich soil.



## Carlo's Day at the Landfill

*After a trip to the landfill, Carlo learns to reduce, reuse, and recycle the packaging from his lunch.*

**C**arlo loves field trips. Today was going to be especially cool: his 4th grade class was going to the landfill. On the bus, Carlo and his friend Jack talked about the awesome things they might find at the landfill: old bikes, video games, comic books, and maybe even some unopened bags of cookies.

"Speaking of cookies, what do you have for lunch?" Jack asked.

Carlo looked into his brown paper lunch bag. He pulled out a piece of pizza wrapped in aluminum foil, a plastic container full of applesauce, a plastic spoon, an aluminum can of soda, a banana, and a bag of potato chips.

"Trade you an apple for your chips," offered Carlo's friend.

"No way," answered Carlo. "Hey look! We're at the landfill!"

The landfill was a big place, but it was not as cool as they had expected. There was trash everywhere, and lots of it: plastic bags, old food, broken couches, boxes, paper, and more.

"Peeeuuwww!" said Jack. "This place stinks!"

Once they were off the bus, Ms. Ortiz talked to their class about the landfill. "This is where the garbage trucks come after they leave your house," she explained.

"Who cleans landfills up?" Jack asked.

"Nobody cleans them up," Ms. Ortiz answered.

"That's the problem. We just cover them up and dig another big hole. That's why it's best if we can find ways to throw out less trash."

"You mean by recycling?" asked another student.

"That's a great way," agreed Ms. Ortiz. "Do you see that newspaper over there? It could have been recycled into another newspaper. But instead, somebody just threw it out, and now we have to use more natural resources, like trees, to make more paper. Almost half of the things here could have been reused, composted, or recycled."

Ms. Ortiz pointed to the desert full of trees, cacti, and birds. "Once this landfill cell is full, we're going to dig a new one over there. That's why today I want to teach you how to reduce, reuse, recycle, and compost—so we don't have as much trash to bury."

After the visit to the landfill, the class ate lunch at the park. When Carlo finished his lunch, he was about to throw the whole bag into the trashcan. But then he remembered what Ms. Ortiz said about reducing, reusing, recycling, and composting.

**He looked down at his brown paper bag, at the aluminum foil, banana peel, plastic spoon, plastic applesauce container, aluminum soda can, and chip bag. Instead of sending it all to the landfill, Carlo made a plan, took his lunch bag home, and only threw away two of the seven things from his lunch. WHAT DO YOU THINK CARLO DID WITH THE OTHER FIVE THINGS?**








## Solve the Puzzle: *What should Carlo do?*

	REDUCE	REUSE	RECYCLE	COMPOST	THROW OUT
1. <b>Brown Paper Bag</b>					
2. <b>Aluminum Foil</b>					
3. <b>Applesauce Container</b>					
4. <b>Plastic Spoon</b>					
5. <b>Soda Can</b>					
6. <b>Banana Peel</b>					
7. <b>Potato Chip Bag</b>					

## Answer Key

## Solve the Puzzle:

### What should Carlo do?

	REDUCE	REUSE	RECYCLE	COMPOST	THROW OUT
1. <b>Brown Paper Bag</b>	 use a durable lunch box or a cloth bag	★	★	★	
2. <b>Aluminum Foil</b>	 use a durable container	★			
3. <b>Applesauce Container</b>	 fill a durable container from large jar	★ use in craft projects, etc.	#1 or #2 plastics must have a neck to be recycled		
4. <b>Plastic Spoon</b>	 use a metal spoon	★			
5. <b>Soda Can</b>	 use a durable container for juice		★		
6. <b>Banana Peel</b>					
7. <b>Potato Chip Bag</b>	 fill a durable container from large bag				

## Teacher Notes on *Carlo's Day at the Landfill*

*Carlo realized that there were many different things he could have done to reduce the amount of trash that he produced, but here's what he actually did:*

1. Carlo learned that he could **recycle** his brown lunch bag rather than toss it in the trash. But he noticed that the bag was still clean, so he decided to **reuse** it for the rest of the week. Then he used it to carry fruit peels out to the **compost** pile, since it could be composted too. A few weeks later, he realized that he could go further to **reduce** this waste. Instead of using a brown paper bag every week, he asked his parents to buy him a cool lunch container that would last for years.
2. Carlo realized he could rinse off the aluminum foil and **reuse** it a few times before recycling it. Later it occurred to him that he could further **reduce** waste by putting his pizza and sandwiches in a durable, washable plastic container.
3. Carlo knew that the applesauce container was *not* recyclable in Tucson. (Here we can recycle ONLY #1 and #2 plastic bottles or jugs with necks or screw-on lids. Tubs or containers without necks cannot be recycled even if they are #1 or #2.) So Carlo decided to **reuse** his applesauce cups to hold pennies and small toys. He even used a bunch of them to build forts with walls and towers. But Carlo really liked applesauce, and he soon realized that it would be quite a challenge to reuse all his applesauce cups. So to **reduce** his waste further, he convinced his dad to buy large jars of applesauce; then, when they packed his lunch, they spooned an individual serving into a small durable plastic container that could be easily washed.
4. At first, Carlo washed his plastic spoon with soap and water so he could **reuse** it. The spoons tended to get broken after a week or two. So Carlo took another step to **reduce** waste, by reducing the number of spoons he needed, and started carrying a regular metal spoon with his lunch.
5. Everyone knows that it is better to **recycle** an aluminum soda can than to throw it away. Soda cans are hard to reuse! But Carlo liked apple juice and orange juice as much as he liked soda. His family started buying cans of frozen juice concentrate to mix with water, because this involves less packaging waste than buying juice in other ways. Carlo dug a thermos out of the back of the kitchen cabinet. Each day he washed and refilled it from the big jar of juice in the fridge.
6. Carlo got an okay from his neighbor to start putting banana peels (and orange peels and apple cores too) in the neighbor's **compost** pile. Carlo liked the idea of composting his banana peels instead of letting them sit useless in a landfill. (When the neighbor gave Carlo's family green chilies and calabasas (squash) from the garden, it was interesting to think that this tasty food was grown with bits of Carlo's old fruit peels.)
7. Finally, because he knew it could not be recycled, Carlo threw away the potato chip bag. But avoiding putting things in the **landfill** had become a game to him. So sometimes he still took chips in his lunch, and sometimes he took tasty crackers. But to **reduce** waste, he convinced his dad to buy crackers and chips in big boxes and bags. Carlo then packed these in his lunch in a reusable plastic bag or even a plastic container to keep them from getting crushed.

## Post-Visit Activity # 2: Recycling Scavenger Hunt

### Overview:

Students identify different recyclables in their home and share findings in class.

### Arizona Department of Education Academic Standards:

Please refer to the Arizona Department of Education Academic Standards section for the ADE standards addressed by this lesson.

### Objectives:

Students will be able to:

- ☞ identify recyclables in their home
- ☞ distinguish between materials such as plastics, metals, glass, and paper
- ☞ describe how they can contribute to their home's recycling efforts

### You will need:

- photocopies of the two-sided Recycling Scavenger Hunt sheet for each student

**Directions:** (estimated time 30 minutes of homework followed by 30 minutes of class time)

#### 1. Explain Homework Assignment

- Hand out the two-sided Recycling Scavenger Hunt sheet to each student.
- Review the instructions and answer any questions.
- Encourage students to record recyclables as specifically as possible (i.e.: newspaper: *Arizona Daily Star* Sunday edition; aluminum: Sprite can).
- Students share findings in class the following day.
- Remember to stress safety issues as they look for recyclables.

#### 2. Share Findings\*

- Ask students to recount their adventures at home and list their findings.

The following questions may generate interesting discussions:

- What plastics did you find? Were they all recyclable (#1 or #2 bottles or jars with necks)?
- Did you find things in the trash that could be recycled?
- Does anybody's family compost? If so, please describe the process.
- Whose family recycles? Who uses neighborhood recycling centers? Who has a blue barrel? Brainstorm ways that students in different situations could help to organize recycling in their home.

\*Point out that the students' scavenger hunt lists could be kept as mini-recycling directories at home!

If there are questions about what can or cannot be recycled, consult the detailed blue barrel recycling list that you received. If still unclear, call the Recycling Info Line at (520) 791-5000 or visit our website: [www.tucsonrecycles.org](http://www.tucsonrecycles.org).

### Extension Idea:


Have students bring in one piece of trash, food, or recycled item, and tell its story as a show-and-tell. Where did it come from? Where will it go?

Name: \_\_\_\_\_

## Blue Barrel Recycling Scavenger Hunt

**Directions:** Look for materials at home that can be recycled instead of thrown in the trash. Remember to be careful handling bottles and cans and wash your hands when you're done. The kitchen is a great place to start! Once you find something that fits into one of


these boxes, write it down and see if you can find four items for each box! Two examples are given. Try to be as specific as possible. (If you are not sure where or if something fits, look on the back of this paper for hints.)

<p><b>Paper</b></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>	<p><b>Plastic #1 PETE</b></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>	<p><b>Plastic #2 HDPE</b></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>
<p><b>Glass</b></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>		<p><b>Cardboard or Paperboard</b></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>
<p><b>Aluminum</b></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>	<p><b>Tin/Steel</b></p> <p>1. Empty black bean can</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>	<p><b>Compost</b></p> <p>1. Banana Peel</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>

**Question:** Do you have a blue recycling barrel where you live? \_\_\_\_\_

To order a recycling container or to find the location of the nearest neighborhood recycling center, call (520) 791-3171. Visit our web site: [www.tucsonrecycles.org](http://www.tucsonrecycles.org) for more information. If you are in TUSD and are interested in helping to start commingled recycling at your school, contact Doug Crockett, TUSD Natural Resource Manager at (520) 225-4673 or [doug.crockett@tusd.k12.az.us](mailto:doug.crockett@tusd.k12.az.us).

## Blue Barrel Recycling Scavenger Hunt Hints

<p style="text-align: center;"><b>Paper</b></p> <p><b>HINT:</b> Paper can be white paper, colored paper, mail, newspapers, magazines, phonebooks or brown paper bags. <i>(Paper plates, paper cups, and paper towels and tissue cannot be recycled.)</i></p>	<p style="text-align: center;"><b>Plastic #1 PETE</b></p> <p><b>HINT:</b> Look on the bottom of plastic bottles and jars to find #1 PETE. Make sure they have “necks” or screw-on lids. <i>(Plastic bags and tubs, like yogurt and margarine, cannot be recycled.)</i></p>	<p style="text-align: center;"><b>Plastic #2 HDPE</b></p> <p><b>HINT:</b> Look on the bottom of plastic bottles and jars to find #2 HDPE. Make sure they have “necks” or screw-on lids. <i>(Plastic bags and tubs, like yogurt and margarine, cannot be recycled.)</i></p>
<p style="text-align: center;"><b>Glass</b></p> <p><b>HINT:</b> Clear, green, brown, and other colored glass bottles and jars are great, <i>but windows, light bulbs, mirrors and glasses don't count!</i></p>		<p style="text-align: center;"><b>Cardboard or Paperboard</b></p> <p><b>HINT:</b> Boxes, boxes everywhere! Look for cereal, shoe, and moving boxes. Milk and juice cartons as well as drink boxes count, too!</p>
<p style="text-align: center;"><b>Aluminum</b></p> <p><b>HINT:</b> This is a light metal, with a silvery color. You can find these. Don't foil the scavenger hunt here! Aluminum cans can be recycled, but not aluminum foil or baking pans.</p>	<p style="text-align: center;"><b>Tin/Steel</b></p> <p><b>HINT:</b> This is a heavier metal than aluminum. It is magnetic. It can be used to spray flowery scents in the bathroom.</p>	<p style="text-align: center;"><b>Compost*</b></p> <p><b>HINT:</b> <i>Please don't put compost in the recycling bin!</i> This organic plant matter (like peels, apple cores, and old bread) turns into soil if put in a compost pile.</p>

\*If you don't have a compost pile at your house, then these things must be bagged and tied and put in the garbage can.

**Remember when recycling, all items should be clean, dry, and empty.**

## Post-Visit Activity #3: What a Load of Garbage!

This activity is adapted from *Mission 3R: A Challenge for Change*.

For more activities like this one or a copy of the Mission 3R interactive CD, contact Arizona Department of Environmental Quality at (602) 771-4865 or visit [www.recyclearizona.net](http://www.recyclearizona.net)

### Overview:

Students focus on waste generated in the classroom and elsewhere in the school, and use mathematical calculations to estimate the amount produced by their school and by all schools in Arizona.

### Arizona Department of Education Academic Standards:

Please refer to the Arizona Department of Education Academic Standards section for the ADE standards addressed by this lesson.

### Objectives:

Students will be able to:

- ☛ realize the total amount of trash generated by their class.
- ☛ apply math skills to estimate trash totals for their school and beyond.
- ☛ identify ways to reduce waste in the classroom and elsewhere.

### You will need:

- plastic bag(s) large enough to hold the trash generated by the class in one school day
- scale (hanging scale or simple bathroom scale)
- a transparency of the “Trash Pile” master (or copy it on the chalkboard)
- the number of student attendance days in your school calendar

### Directions: (estimated time 60 minutes)

#### 1. Collect and save all trash in a typical school day.

You may choose to focus on classroom trash or to include additional rooms such as the art and lunch rooms. (Store food waste in a separate container, if possible in a refrigerator overnight or until you are ready to conduct the activity.)

#### 2. A world of waste

As discussed in the Teacher Background Information, point out that the U.S. leads the world in the production of municipal solid waste. Because the U.S. accounts for only a small percentage of the world's population, this means we produce several times as much waste per person as do people in other countries. Even compared to other wealthy, developed nations, we typically produce twice as much waste per person. The average U.S. citizen produces over four pounds of trash every day! Expand these points as you wish.

#### 3. We are what we throw away!

Remind students that the waste they throw away every day includes trash they generate at school.

Weigh the bag(s) of trash collected on the previous day. If using a bathroom scale, show students how a person's weight can be subtracted from the weight of that person holding the trash to arrive at the weight of trash. Write the total pounds of trash on the board.

*(continued on next page)*

## What a Load of Garbage!

### Directions (continued)

#### 4. “Trash Pile” Math

Ask students to find out how much trash the average student produces by dividing the total by the number of students in the class. Use the “Trash Pile” chart to guide students in projecting the amount of trash produced by their classroom, their school, and all schools in Arizona in the course of one school year. Students should discover that there might be more than one way to arrive at certain answers. Note that a Teacher Version of the “Trash Pile” chart is also provided.

#### 5. Discussion

##### Ask students:

- Do you think our class generates a lot of trash?
- What might we do to reduce the amount of trash generated?
- As students brainstorm, write their ideas on the board.
- After a list of several items has been created, lead the class into agreement on which strategies would make the most difference and prioritize the list.
- Then take concrete steps to set these strategies in motion. For example, if “use back of old homework for scratch paper” is listed, set up a basket or box for the class to collect and access homework that is clean on one side. If “create a classroom recycling program” is listed, set up an appropriate container and collection schedule.

### Extension Ideas:

1. Extend your classroom waste reduction efforts to the school. Students may wish to write letters or make presentations to enlist the support of the school administration and parent-teacher organization.
2. Have students analyze their family's household trash and develop strategies for reducing waste in the home as well.

## “Trash Pile” Overhead/Chalkboard Master

The Classroom	The School	Schools in Arizona
<p><b>A</b> Amount of trash per day =  _____ Pounds. <small>(This answer is the weight measured by the class. Use it to calculate other answers.)</small></p>	<p><b>E</b> Amount of trash per day =  _____ Pounds.</p>	<p><b>I</b> Amount of trash per day =  _____ Pounds.</p>
<p><b>B</b> Amount of trash per 5 day week =  _____ Pounds.</p>	<p><b>F</b> Amount of trash per 5 day week =  _____ Pounds.</p>	<p><b>J</b> Amount of trash per 5 day week =  _____ Pounds.</p>
<p><b>C</b> Amount of trash per month =  _____ Pounds.</p>	<p><b>G</b> Amount of trash per month =  _____ Pounds.</p>	<p><b>K</b> Amount of trash per month =  _____ Pounds.</p>
<p><b>D</b> Amount of trash per year =  _____ Pounds.</p>	<p><b>H</b> Amount of trash per year =  _____ Pounds.</p>	<p><b>L</b> Amount of trash per year =  _____ Pounds.</p>

## “Trash Pile” Teacher Version

The Classroom	The School	Schools in Arizona
<p><b>A</b> Amount of trash per day = _____ Pounds.</p> <p><b>This answer is the weight measured by the class.</b></p>	<p><b>E</b> Amount of trash per day = _____ Pounds.</p> <p><b>A x (number of classes in your school)</b></p>	<p><b>I</b> Amount of trash per day = _____ Pounds.</p> <p><b>E x (1100 schools in Arizona)</b></p>
<p><b>B</b> Amount of trash per 5 day week = _____ Pounds.</p> <p><b>A x 5</b></p>	<p><b>F</b> Amount of trash per 5 day week = _____ Pounds.</p> <p><b>E x 5</b></p>	<p><b>J</b> Amount of trash per 5 day week = _____ Pounds.</p> <p><b>I x 5</b></p>
<p><b>C</b> Amount of trash per month = _____ Pounds.</p> <p><b>B x 4</b></p>	<p><b>G</b> Amount of trash per month = _____ Pounds.</p> <p><b>F x 4</b></p>	<p><b>K</b> Amount of trash per month = _____ Pounds.</p> <p><b>J x 4</b></p>
<p><b>D</b> Amount of trash per year = _____ Pounds.</p> <p><b>A x (number of days in school year)</b></p>	<p><b>H</b> Amount of trash per year = _____ Pounds.</p> <p><b>E x (number of days in school year)</b></p>	<p><b>L</b> Amount of trash per year = _____ Pounds.</p> <p><b>K x (number of days in school year)</b></p>



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