

GED 2002 Teachers' Handbook of Lesson Plans

Content Area Science	Lesson Title <i>Recycling – A Job Everyone Can Do</i>	Correlation to Framework 03.04/03.05/03.06/03.07	Lesson Number 42
Objectives/Learner Outcomes At the end of this lesson, the learner will be able to: <ul style="list-style-type: none"> • Use appropriate tools and techniques to gather data • Identify and provide a solution to a problem related to ecology and recycling • Evaluate and make decisions about personal issues related to the environment 		Materials/Resources/Internet Sites/Handouts/Worksheets <ul style="list-style-type: none"> • Handout 1 – Recycling – Just the Facts • Handout 2 – Reduce, Reuse, Recycle, Respond • Handout 3 – Household Trash Survey • Internet Resources <ul style="list-style-type: none"> ○ 12 Tips for Reducing Solid Waste http://www.epa.gov/cgi-bin/epaprintonly.cgi ○ Earth 911 http://www.earth911.org ○ Dumptown Game http://www.epa.gov/recyclecity/gameintro.htm ○ Washington State Department of Ecology, Recycling Facts and Trivia http://www.ecy.wa.gov/programs/swfa/kidspage/trivia.html ○ American Forest and Paper Association http://www.afandpa.org/Template.cfm?section=About_AFandPA 	
Pre-Requisite Knowledge The learner should be able to: <ul style="list-style-type: none"> • Use the Internet to search for information and resources • Read charts and graphs • Construct charts and graphs • Make predictions 		Key Words <ul style="list-style-type: none"> • Reduce • Reuse • Recycle • Respond • Source Reduction • Toxicity • Pulp (paper) • Municipal Solid Waste 	

Anticipatory Set/Introduction

Ask: Do you ever worry about the environment? What concerns do you have? List the concerns on the board. Today, there are many efforts within local communities to improve air and water quality. There are also efforts to reduce the amount of waste that people dispose of everyday. In this lesson, we are going to look at one job that all of us can do to help protect the environment – recycling.

Preview Questions for Lesson

- Is there a recycling program in your community, development, apartment complex?
- What do you recycle? If there is a program but you don't participate, why not?
- Do you know how much waste is generated each year in your community, in the country, in the world?

Instructional Outline

This lesson requires that students access the Internet in order to obtain information about recycling in the United States. Before students begin their searches, discuss the concept of recycling and what they already know about it. Students should be able to answer each of the questions on Handout 1 – **Recycling – Just the Facts** when they complete their searches. Review and discuss any areas of concern.

Have student work in teams to play the *Dumptown Game* on the Internet. This game enables students to see what changes occur when certain types of programs are implemented in communities. To make the game more challenging, limit the amount of funds that students can use to clean up Dumptown and then discuss the reasons why they chose specific programs.

Provide students with Handout 2 – **Reduce, Reuse, Recycle, Respond**. Divide the students into teams of 2-4. Have each team identify specific steps or strategies they could use to meet each of the four principles of solid waste reduction. Have the students share their results at the end of the class.

Provide students with a copy of Handout 3 – **Household Trash Survey** that they can take home and use. Have the students sort through their own solid waste to see what they are throwing away each day. Have students track their trash over a period of 3-5 days. This is an activity that they can do with their children. Have students report the results to the class. See who has the least amount of waste and who has the most. As a group, brainstorm ways that each of them can reduce the amount of trash that they consume.

Have students write a paragraph or essay that explains the most important thing that they can do to reduce solid waste in their own homes. Have students share their writing samples with the class.

<p>Process/Activities</p> <p>During this lesson, students will:</p> <ul style="list-style-type: none"> • Use the Internet to find out basic facts about recycling • Read text and identify specific details associated with recycling • Complete an online recycling game • Conduct research at home to determine the types and quantity of waste that they and their families are generating each day • Write a paragraph or essay on how the most important thing they can do to reduce solid waste in their own homes 			
<p>Product/Evaluation/Summary</p> <p>When students have completed this lesson, they will provide the teacher with:</p> <ul style="list-style-type: none"> • a copy completed Handout 1 – Recycling – Just the Facts; • a copy of each team’s master list of ways to address of the four principle of solid waste reduction; • a copy of their home waste survey and plan for reducing; and • their paragraph or essay. 			
<p>Teaching to Different Types of Learners</p>			
	<p>Visual</p>	<p>Auditory</p>	<p>Kinesthetic/Tactile</p>
<p>Learning Activity</p>	<p>Provide written instructions for the activity.</p>	<p>Provide oral instructions to ensure students understand what is expected of them.</p>	<p>Provide students with strips of paper on which they can write their ideas for addressing each of the four principles for reducing solid waste. Have students sort their ideas into each category.</p>
<p>Special Differentiation Strategies</p>	<p>Have students add vocabulary words to their personal dictionaries and include definitions in their own words.</p>	<p>Have students watch the video from the American Forest and Paper Association. Click on Environment and Recycling, Open Menu and go to Recycling, and then Recycling Video.</p>	<p>Bring in an assortment of products and have the students separate them into those that can be recycled and those that cannot. This will provide students with practice before they go home and sort their own solid waste products.</p>

Evaluation	Have students compose their paragraphs or essays using basic word processing software.	Have students read their paragraphs or essays to the class. Discuss the different selections that students made as the most important thing they could do to reduce solid waste.	Have students construct poster boards of their recycling plans. Have someone from the Solid Waste Authority visit the class and judge each of the plans.
The Family and Adult Literacy Connection Have parents complete the trash survey handout with their children. Print copies of the Planet Protector's Online Coloring Book and provide to each student for their younger children. Encourage parents to go online with their children to the Nine Lives of a Peanut Butter Jar website. Have them identify a product in their own homes that they could provide with "nine lives" and share that information with the class. <ul style="list-style-type: none">• Plant Protector's Online Coloring Book http://www.epa.gov/epaoswer/osw/kids/color/index.htm• The Happy Earth Day Coloring and Activities Book http://www.epa.gov/region5/publications/happy.pdf• Nine Lives of a Peanut Butter Jar http://www.epa.gov/epaoswer/non-hw/reduce/catbook/jar.htm		ESE/ESOL Accommodations ESOL students come from very diverse cultures and may not be familiar with the concept of recycling or recycling may have been handled differently in their native countries. Have students share their customs with the rest of the class. Take students on a field trip to a recycling plant in the area and let them see what happens to the solid waste from their community.	

GED 2002 Teachers' Handbook of Lesson Plans Recycling – Just the Facts!

Use the following Internet resources to find the answers to each of the following questions:

- **12 Tips for Reducing Solid Waste** <http://www.epa.gov/cgi-bin/epaprintonly.cgi>
- **Washington State Department of Ecology, Recycling Facts and Trivia**
<http://www.ecy.wa.gov/programs/swfa/kidspage/trivia.html>
- **Thomas Recycling** <http://www.thomasrecycling.com/kids.html#anchor530036>

1. Another term for municipal solid waste is _____.
2. Paper cups consume trees, water, and chemicals. Most of them are not recyclable because they are often _____.
3. Paper products make up ____% of solid waste.
 - a. 25
 - b. 30
 - c. 40
 - d. 50
4. Food waste, such as leftovers, is a great source for composting.
 - a. True
 - b. False
5. According to the America Recycles Day report, 1996, Americans recycled ____% of the 99 billion aluminum cans produced.
 - a. 25
 - b. 33.3
 - c. 55.6
 - d. 63.5
6. Which of the following countries used the least amount of wood pulp in 1998?
 - a. Brazil
 - b. France
 - c. China
 - d. Canada
7. The U.S. has the highest consumption of paper products. Which of the following countries has the second highest consumption?
 - a. Belgium
 - b. Denmark
 - c. Finland
 - d. Canada
8. The four basic principles for reducing solid waste are: _____, _____, _____, and _____.
9. Buying products with less packaging is called _____.
 - a. Resource allocation
 - b. Resource reduction
 - c. Source reduction
 - d. Reduced quantity
10. By recycling 1 ton of paper, you can save _____ trees.
 - a. 3
 - b. 7
 - c. 12
 - d. 17

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Reduce, Reuse, Recycle, Respond

REDUCE	REUSE
RECYCLE	RESPOND

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Household Trash Survey

Use the following chart and survey the trash that is generated in your home for a period of 3-5 days. Keep a tally of each type of item and then total them at the end of the survey period. Construct a graph that shows how each category compares to the others.

	Day 1	Day 2	Day 3	Day 4	Day 5
Glass					
Aluminum Cans					
Paper					
Plastic					
Food					
Hazardous Waste					
Other					



the happy earth day

coloring and
activities
book

Keep your
Neighborhood
clean.

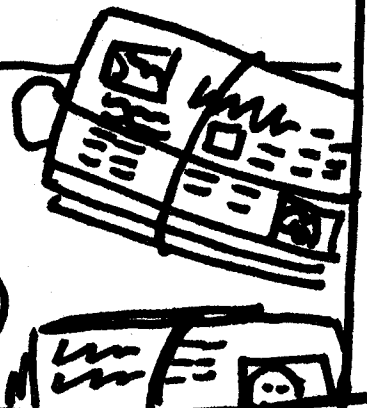
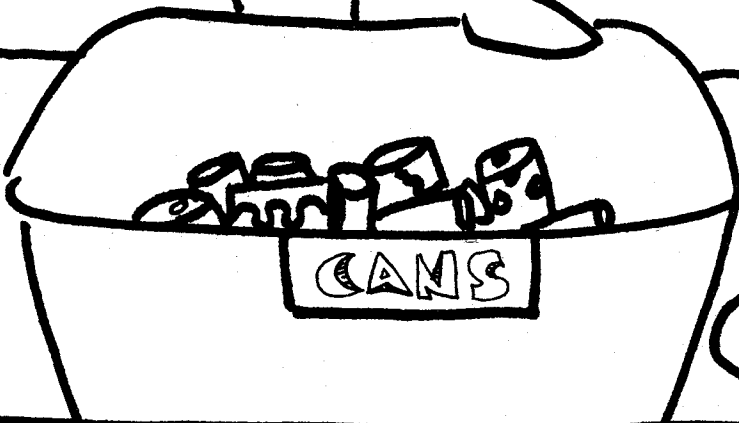
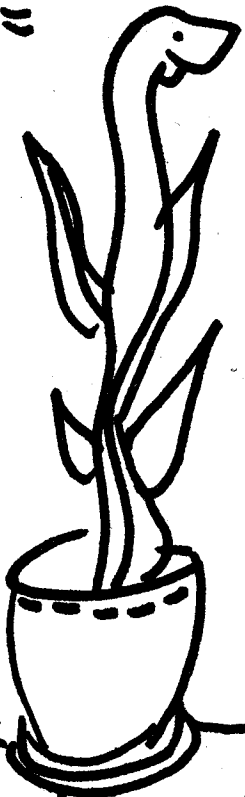
If you see trash on the ground,
toss it in the trash can.



Recycle
cans,
bottles and
paper, okay?

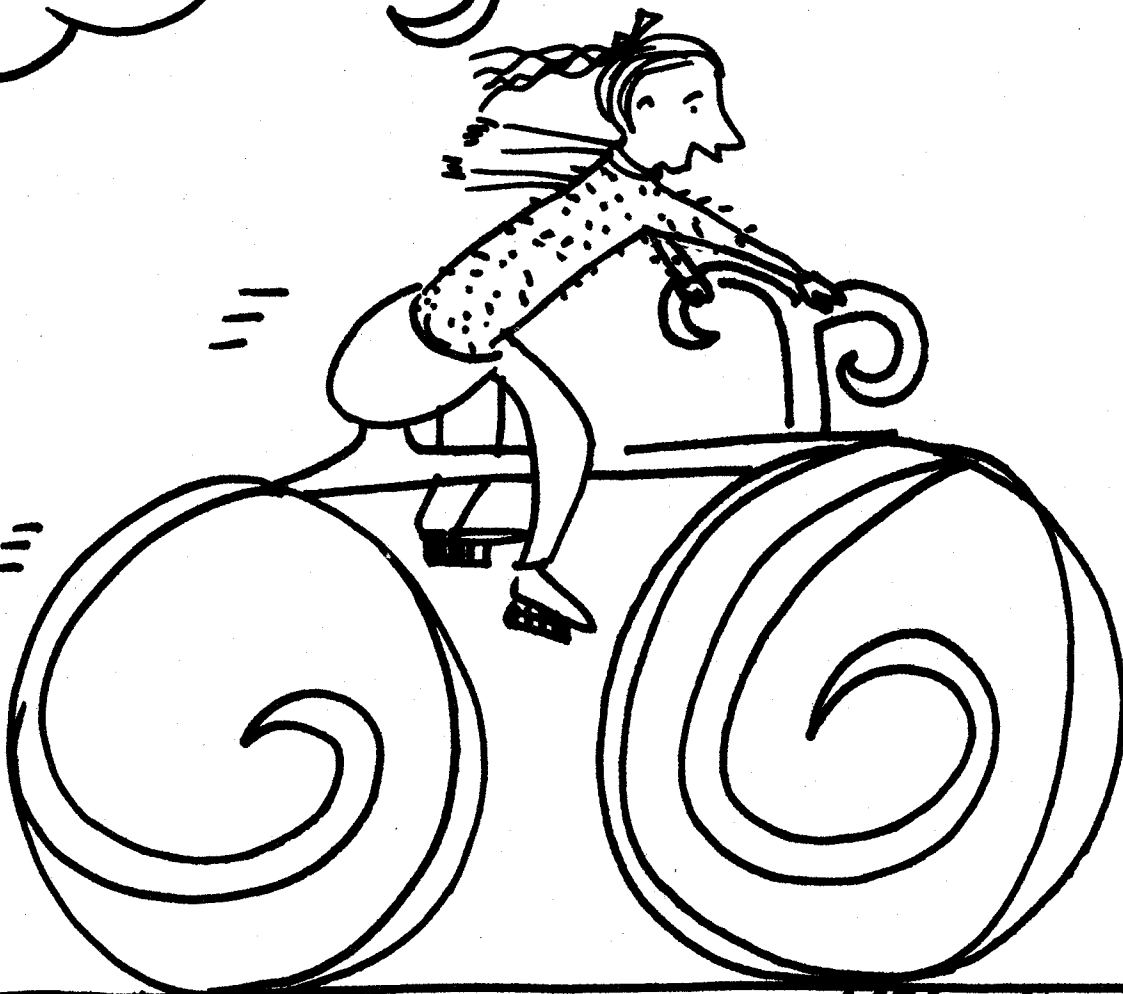


Save them at home and
school, and help your parents
recycle them.



help keep the air clean

Ride your bike
or walk to school.
Too many cars
equals lots of
air pollution.



Save Paper

save
trees
too!



Arrwwf!
use both sides
of your paper
at school and
at home.

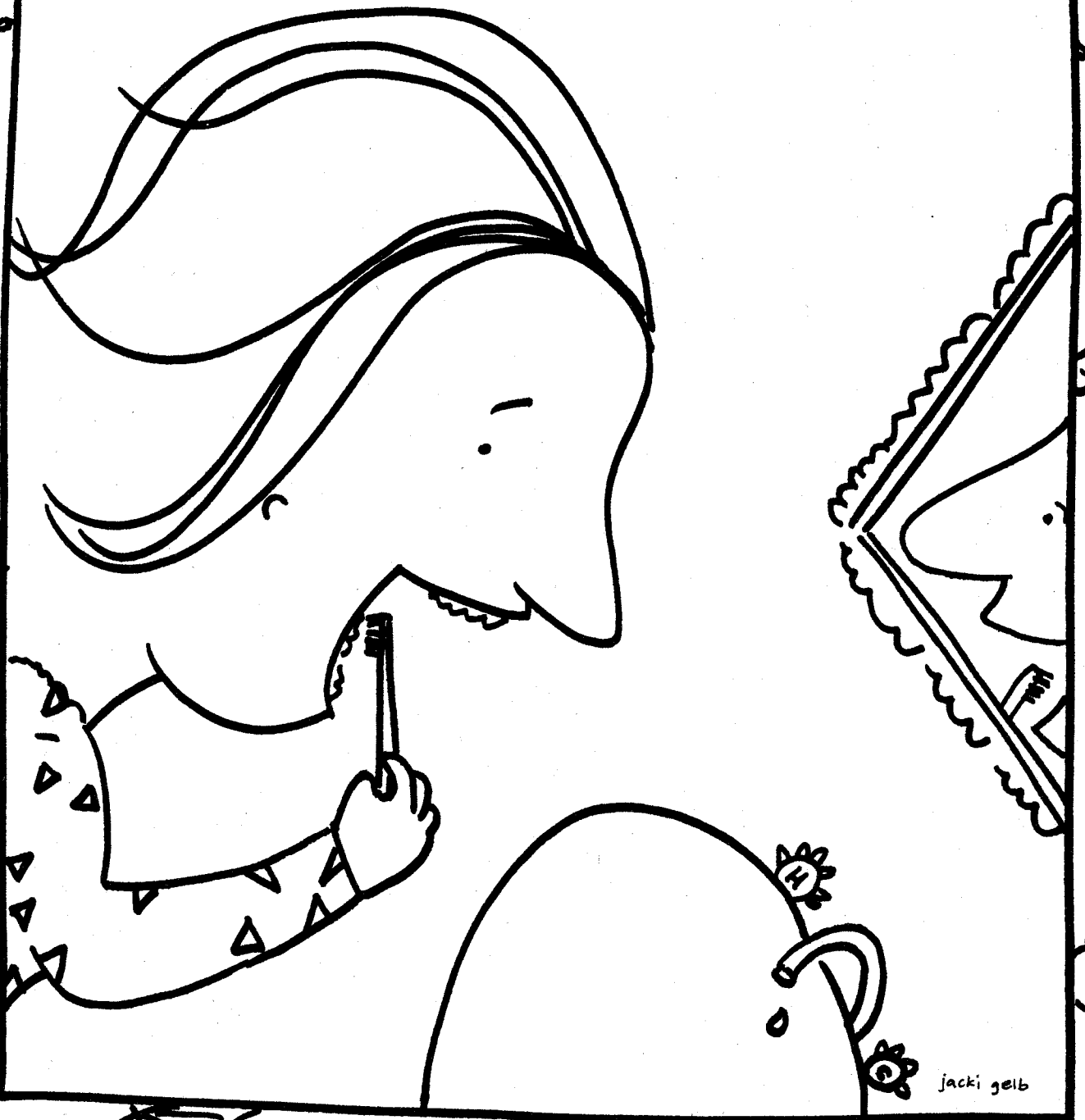


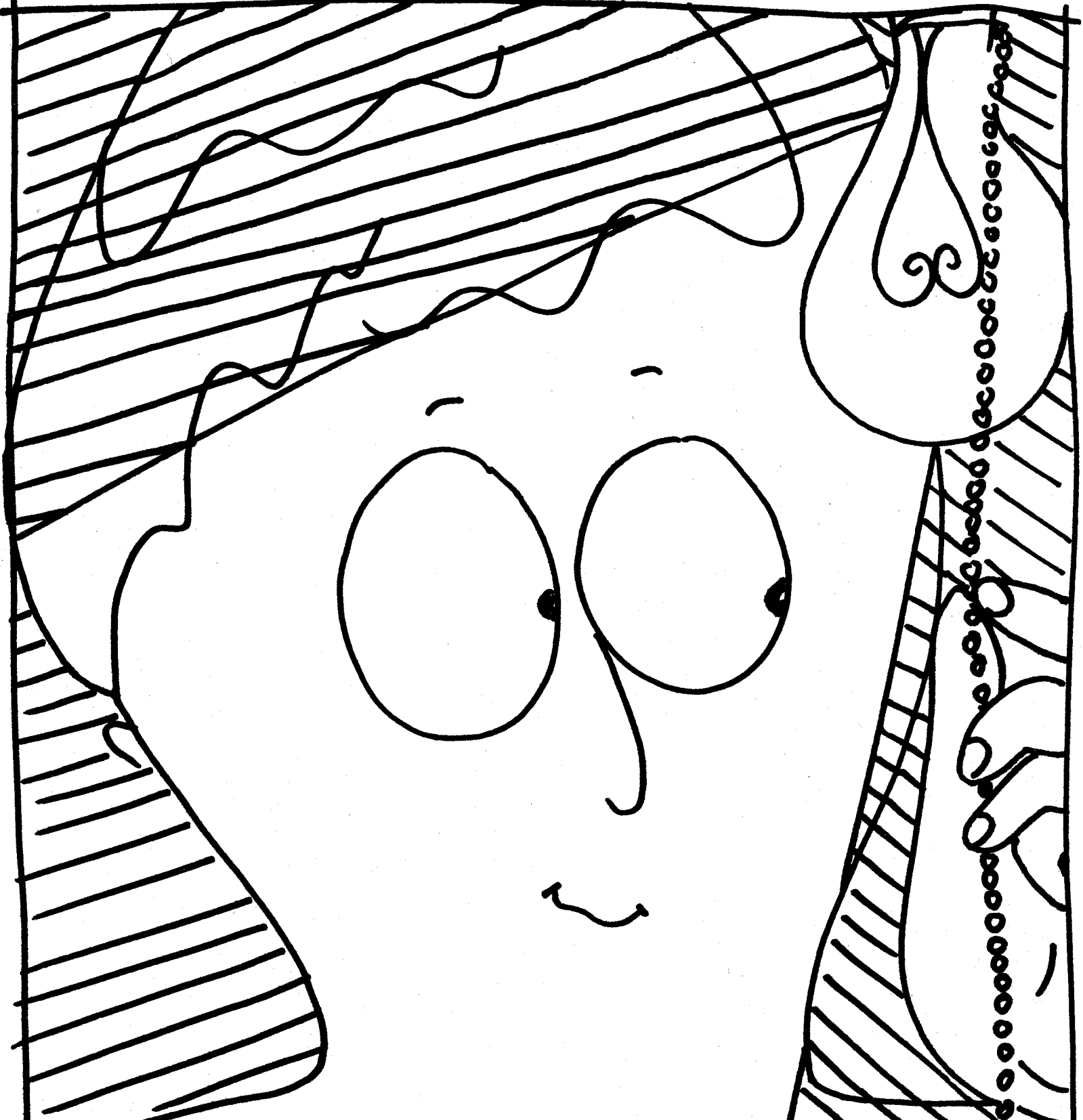
PLEASE
DON'T
WASTE
PAPER



help save water

don't leave the water running while you brush your teeth





HELP SAVE ENERGY!

Turn off the lights when you leave the room — and always turn off the TV when you're finished watching it.

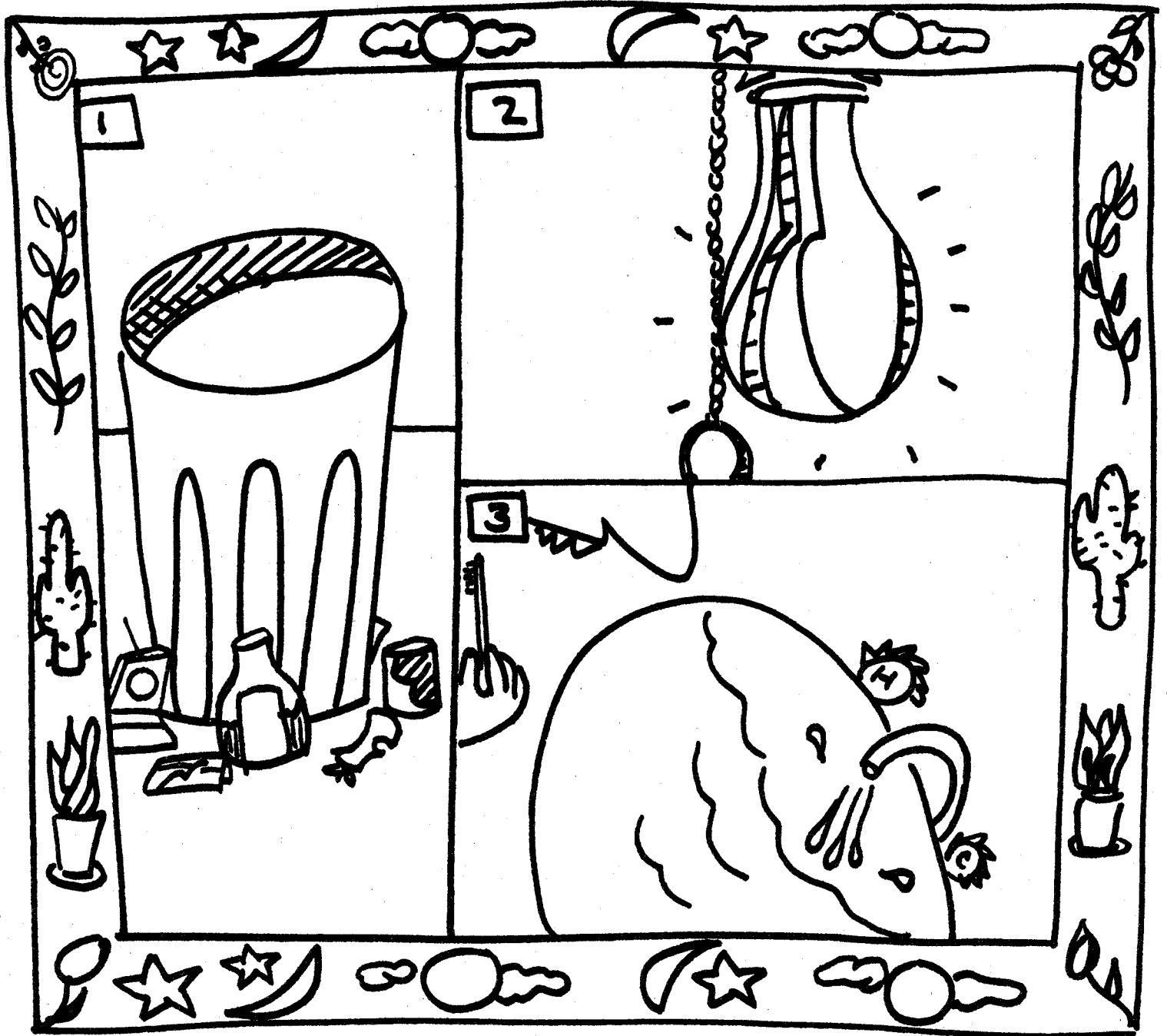
WASH FRUITS AND VEGETABLES



Always wash fruits and vegetables before you eat them to clean off dirt.

Jacki Gelb

What's wrong here?



1. WATER IS RUNNING
WHILE TEETH
ARE BEING BRUSHED.
ALWAYS TURN OFF
WATER WHILE YOU
BRUSH YOUR TEETH.

3.

2. LIGHT LEFT
ON WHEN NO
ONE'S IN THE
ROOM.
ALWAYS TURN THE
LIGHTS OUT WHEN
YOU LEAVE THE
ROOM.

2.

1. GARBAGE IS THROWN
ON GROUND INSTEAD
OF IN TRASH CAN.
ALWAYS USE THE
GARBAGE CAN AND
PICK UP TRASH WHEN
YOU SEE IT.

1.

do's

1. Always turn the T.V. off when you're finished watching it.
2. Use sponges or washable cloth instead of paper towels to clean up messes.
3. Save all your newspapers, cans, and bottles. Help your parents recycle them.

don'ts

1. Don't leave the refrigerator door open. Get what you want quickly and shut the door.
2. Don't leave the water running when you brush your teeth.
3. Don't ever think you're not important to our Earth. You are!

Fill in the blanks to find out how you can help protect the environment.

I can draw and color on _____ sides of my paper. I must remember to turn _____ the lights when I leave an empty room. This saves _____. I can also _____ up litter on the ground and put it in the _____ can. It is important that I help _____ cans, bottles, and newspapers. When I ride my bicycle, I don't _____ the air. I am important! I can _____ save the environment!

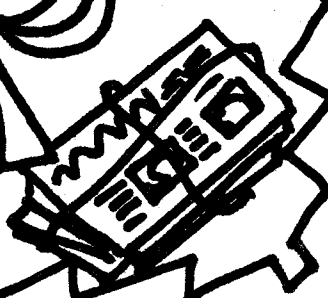
ANSWERS: 1. both/two 2. off 3. energy/electricity 4. pick 5. trash/garbage 6. recycle 7. pollute 8. help

PLEASE CUT HERE

glass



PAPER



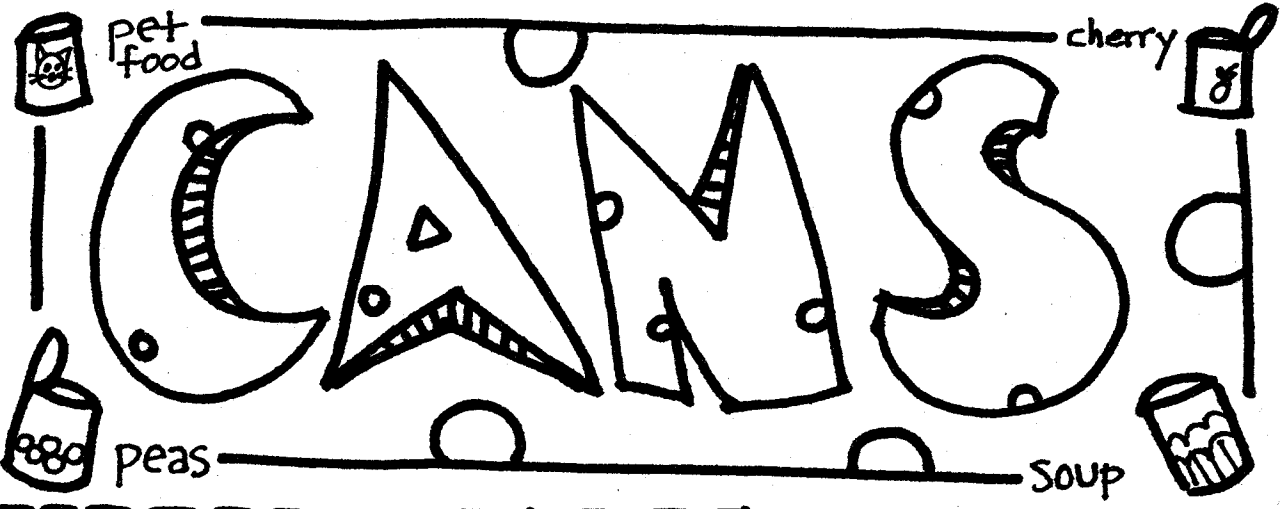
CANS

pet food

cherry

peas

SOUP



Plastic

