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# CHAPTER 9

## RECYCLING AND REUSING

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This chapter deals with **recycling** and **reusing** items in order to save the environment. The 50-minute lesson begins with a warm-up activity in which students explore the concepts of recycling and reusing. In groups, students then examine and discuss five objects they have selected, and create lists of new and unusual uses for each item. Next, students think of other objects that are or can be recycled or reused. The lesson concludes with a writing activity in which students reflect on what they have learned and individually write up a list of ways on how they can recycle or reuse items in order to help save the environment.

Through the listening, speaking, and writing activities in this lesson, students improve their language skills by learning and using new vocabulary and concepts associated with the theme of recycling and reusing. The four activities outlined in the section on [Classroom Applications](#) may be presented in a single 50-minute lesson. The activities may also be combined with some of the materials described in the section on [Internet Resources](#), to create a longer lesson or a unit of related lessons.



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### BACKGROUND INFORMATION

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#### What is Recycling?

Recycling is collecting and treating **waste products** and **discarded** materials so that they can be used again to **manufacture** new products. **Aluminum**, glass, and paper are some commonly recycled materials. Recycling usually involves four steps:

1. **Collecting:** In the collecting stage, used materials like glass, paper, and plastic are collected and taken to a **recycling center**.
2. **Sorting:** This is the stage where materials are separated by type. This is necessary because each material must be recycled in a different way.
3. **Reclaiming:** This is the stage in which something is done to the collected materials. Materials that are reusable are separated from those that are not. For example, metals are often **melted** at this stage.
4. **Reusing:** In this stage, the reclaimed materials are used in new products.

Recycling is sometimes a synonym for reusing, especially reusing things in new ways. For example, people might talk about recycling old **warehouses** as **condominiums**, or recycling old **jars** as **vases**.

#### What is Reusing?

Reusing simply means to use something again. In the four-step recycling process, outlined above, reusing means using reclaimed materials in new products. However, reusing can also refer to the practice of using something again—especially in a new way—without changing it in any fundamental way. For example, people might reuse an old coffee container as a **planter** for a small tree or as a holder for paintbrushes.

## What Are Some Examples of Recycling?

Some examples of recycling are:

- Turning used paper back into **pulp** and then making new paper from that pulp;
- **Shredding** old automobile **tires** and adding the pieces to **asphalt**;
- Melting aluminum cans, turning the metal into **sheets**, and using the sheets to make new cans;
- Melting discarded plastic items and using the plastic to make new furniture, toys, and videocassettes;
- **Crushing** glass bottles and jars into small pieces and melting them down to make new glass;
- Crushing and melting old automobiles and using the **steel** to make new cars.

## How Do Recycling and Reusing Help the Environment?

Recycling and reusing help the environment by saving space, energy, and **natural resources**, and by reducing air and water **pollution**.

### How Do Recycling and Reusing Save Space?

When people recycle or reuse things that they would normally throw away, they save outdoor space. Fewer waste products and discarded materials are thrown into crowded city **dumps** and **expanding landfills**. More outdoor space is left open for nature, instead of being filled with great mountains of **trash**.

### How Do Recycling and Reusing Save Energy?

Making new products from **raw materials** requires a lot of energy. Recycling used materials so that they can be used again does not require as much energy. For example, when we turn used paper into pulp to make new paper, crush old glass bottles to make new glass, and melt aluminum cans to make new cans, we save energy because the recycling process uses much less energy than it would take to make new paper, glass, or aluminum cans from raw materials. Reusing saves even more energy than recycling, since no energy is required when we simply use things again without changing them.

### How Do Recycling and Reusing Save Natural Resources?

Recycling is important because fewer raw materials are used and natural resources are saved. Because the recycling process uses old materials to make new products, fewer raw materials are needed. Recycling also saves natural resources because it saves some of the coal, natural gas, wood, or water that would have been used to manufacture new products. Reusing old products instead of buying new ones also saves resources, because no raw materials are needed to create the new products they would have bought.

## How Do Recycling and Reusing Help to Reduce Air and Water Pollution?

Recycling reduces air and water pollution because the recycling process requires less energy. This reduces the amount of air pollution produced by **power plants** and the amount of water pollution produced by chemicals used in the manufacturing process. Reusing reduces air and water pollution even more, because no energy is required to reuse items, and reusing items does not involve the manufacturing process.

### CLASSROOM APPLICATIONS

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#### Preliminary Lesson Planning

##### *Materials Preparation:*

- Locate an old glass jar.
- Gather a variety of objects such as paper clips, paper cups, aluminum cans, old pencils, plastic bottles, old socks, empty detergent bottles, used greeting cards, and bottle caps. Gather enough objects so that each group of 3 or 4 students in your class can choose and work with at least 5 different objects.
- Prepare and duplicate enough copies of the worksheet "New Uses for Old Things", provided in [Appendix A](#) to give one to each group of 3 or 4 students.

##### *Vocabulary Considerations:*

Before using the worksheet "New Uses for Old Things", consider which words students will need to know in order to carry out the lesson successfully. Determine which vocabulary items are already familiar to students, and which will be new to them. Some important terms and their definitions are included in the [Glossary](#).



### WARM-UP ACTIVITY (APPROXIMATELY 5 MINUTES)

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##### *Purpose:*

- To introduce the topic of recycling and reusing
- To stimulate students' interest in the topic
- To activate students' background knowledge about the topic
- To introduce vocabulary that will allow students to successfully complete the lesson

##### *Procedure:*

1. Draw two columns on the board. Write the word "recycling" at the top of one column, and the word "reusing" at the top of the other. Ask students what they think each word means.
2. As volunteers give their answers, write key words from their responses in the appropriate column on the board. If students are unfamiliar with the concepts of recycling and reusing, be prepared to provide the class with relevant information (see [Background Information](#) at the beginning of this chapter), adding words to the board as you introduce key ideas. If students are already familiar with these concepts, go on to step 3.

3. Conduct a brief, whole-class discussion centering on the following questions:

1. Do you recycle or reuse anything? Why or why not?
2. If you recycle anything, what kinds of things do you recycle?
3. If you reuse anything, what kinds of things do you reuse?
4. How do recycling and reusing help the environment?



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## ACTIVITY #1 (APPROXIMATELY 25 MINUTES)

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### ***Purpose:***

- To encourage students to share ideas on how they can reuse common objects
- To develop students' creative thinking skills
- To stimulate discussion
- To have students practice generating verbs and verb phrases
- To have students practice listening, speaking, and note-taking

### ***Procedure:***

1. Display the empty jelly jar to the class. Say: "As you can see, this is an old, used jelly jar. What are some new and unusual ways you can think of to use this jar?"
2. As volunteers respond, number and write the different answers on the board. (Some possible answers are: use it to store **leftovers**; use it to store pens and pencils; wash and reuse it as a drinking glass; fill it with water and use it to water plants; use it hold small coins; turn it upside-down and use it as a cookie cutter; use it as a small vase to hold flowers.)
3. Divide the class into groups of 3 or 4 students and distribute one copy of the worksheet "New Uses for Old Things" to each group.
4. Place the various objects you have collected (paper clips, paper cups, etc.) on a table.
5. Explain the task to the students. Each group will select 5 different items from the table. Groups will then discuss each of the 5 objects they have chosen, and think of at least 5 new and unusual uses for each item. Groups should use the worksheet "New Uses for Old Things" to record their answers. Tell students that if they need to **alter** a particular object to use it in a new way, they should include a brief note on how the object will need to be altered.
6. Groups select their items and then examine and discuss the items, and fill in their worksheets.
7. When groups have completed the worksheets, ask volunteers from each group to display their group's objects and read aloud their group's ideas for reusing of each item.
8. (Optional) If time allows, write the name of each item on the board, and under the name of each item list all the possible uses suggested by the students.



## ACTIVITY #2 (APPROXIMATELY 10 MINUTES)

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### **Purpose:**

- To reinforce the meaning of the terms recycle and reuse
- To give students the opportunity to express and share their own ideas about other materials and objects that can be recycled or reused
- To practice listening and speaking

### **Procedure:**

1. Ask the class to name as many materials or objects they can think of that are (or can be) recycled and/or reused. Encourage all ideas (excluding, of course, the objects the students examined and discussed in Activity #2).
2. As volunteers give their answers, write the names of the items on the board, indicating whether they can be recycled and/or reused. For example: Metal can be recycled. Clothing can be reused. Accept and write down all ideas, even those that may seem bizarre or very original.



## COOL DOWN ACTIVITY (APPROXIMATELY 10 MINUTES)

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### **Purpose:**

- To conclude the lesson
- To give students an opportunity to reflect on and assess what they have learned
- To practice writing

### **Procedure:**

1. Ask students to look at the list of recycling and reusing ideas on the board, and to think about what they have learned in the lesson. Then ask them to work individually and write a list of at least five ways that they as individuals plan to recycle materials or reuse objects in order to help save the environment. They may choose from the ideas on the board and/or write new ideas of their own.
2. Allow students about 5 minutes to write their lists.
3. After students have finished writing their lists, ask for volunteers to read their ideas aloud to the class.



## EXTENSIONS

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1. Students can work individually or in pairs to create posters to promote recycling, and reusing.
2. Students can work in groups to create and perform commercials for recycling and reusing.

3. Students can conduct a survey of 5-10 people asking them questions such as:

- Do you recycle at home? Why or why not?
- What sorts of things do you recycle?
- How can we get more people to recycle at home.
- Students keep a tally of the answers, write up a brief summary, and present their summary to the class.

Refer to the [Internet Resources](#) section for more information and lesson planning ideas.



## APPENDIX A

<b>New Uses for Old Things</b>					
Work in groups. In the spaces at the top of each column below, write the names of the 5 objects your group has selected. Then use your imagination. Think of at least 5 new and unusual uses for each object. List the uses in boxes 1-5 under the name of the object. If you will need to alter the item for use, explain how.					
	<b>Item 1:</b>	<b>Item 2:</b>	<b>Item 3:</b>	<b>Item 4:</b>	<b>Item 5:</b>
<b>1.</b>					
<b>2.</b>					
<b>3.</b>					
<b>4.</b>					
<b>5.</b>					

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