Marcal SAVING TREES SINCE 1950

small steps™ PAPER PRODUCTS

A Small, Easy Step to a Greener Earth™

Small Steps®

A Collection of Upper Elementary (grades 3–5) Level Activities from Marcal®

Message from the Marcal® brand:

Marcal is a small, earth-friendly, paper goods company that has been a friend to trees since 1950. At Marcal, we make paper products responsibly. Marcal was one of the pioneers of the manufacturing process that makes it possible to reuse paper to make high-quality paper napkins, towels, bath tissue, and facial tissue, rather than cutting down new trees.

At Marcal, we believe that products should be earth friendly, budget friendly, and work great. Marcal® Small Steps® products make it easy to help make a difference in our environment because Small Steps® is made from 100% recycled paper. It is a "Small, Easy Step to a Greener Earth™."

Marcal offers the following Small Steps® classroom resources to inspire your students to take an active role to lead environmentally healthier and more sustainable lives. Through the Small Steps® standards-based activities, you and your students can learn how you can be partners in preserving and protecting your environment.

The activities included here are recommended for grades three through five. The activities meet national standards in Science, English/Language Arts, Mathematics, Social Studies, Visual Arts, and Character Education. All pages can be photocopied in black and white for use with students.

We hope you and your students enjoy this lesson. We'd love your feedback. Please email us at lessonplans@marcalpaper.com or visit us online at www.marcalsmallsteps.com.

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Standards Connections

Each lesson aligns to the following National Science Education Standards as defined by the National Committee on Science Education Standards and Assessment and National Research Council.

Activity	National Science Education Standards
RE Words	NS.5-8.1 Science as Inquiry
	NS.5-8.2 Physical Science
	NS.5-8.5 Science and Technology
	NS.5-8.6 Personal and Social Perspectives
	NS.5-8.7 History and Nature of Science
How Much?	NS.5-8.1 Science as Inquiry
	NS.5-8.5 Science and Technology
	NS.5-8.6 Personal and Social Perspectives
	NS.5-8.7 History and Nature of Science
Recycling Survey	NS.5-8.1 Science as Inquiry
	NS.5-8.6 Personal and Social Perspectives
	NS.5-8.7 History and Nature of Science
Small Steps® Poster Design	NS.5-8.6 Personal and Social Perspectives

Resources

Web Sites

- The Environmental Protection Agency's **Recycle City:**
  http://www.epa.gov/recyclecity
  Games and locations on this site help teachers to set different goals that can match up with lessons being taught in class.

- **Rustle the Leaf:**
  http://www.rustletheleaf.com/index.html
  An online outreach that uses weekly comic strips and other creative tools to communicate environmental themes and to introduce and reinforce environmental education.

- **The Recycle Guys:**
  http://www.p2pays.org/recycleguys/index.html
  Activities and ideas developed by the North Carolina Division of Pollution Prevention and Environmental Assistance. While the site has a few North Carolina specific activities, all are easily transferable across the country.

Books

- ***50 Simple Things Kids Can Do to Recycle*** **by Earthworks Press**
- ***Beautiful Junk: Creative Classroom Uses for Recyclable Materials*** **by Karen Brackett and Rosie Manley**
- ***I Can Save the Earth*** **by Anita Holmes**
- ***The Lorax*** **by Dr. Seuss**
- ***Recycle That! (Rookie Read-About Science)*** **by Fay Robinson and Allan Fowler**
- ***A Sense of Place: Teaching Children About the Environment with Picture Books*** **by Daniel A. Kriesberg**

Educator's Instructions

The collection of activities can be used together in the sequence they are provided, as part of a week-long or month-long curricular unit. Alternatively, each activity can be used as a stand-alone lesson to supplement your own curriculum.

LESSON 1: RE WORDS

Use this lesson to help students identify, define, and discuss the concepts of REDUCE, REUSE, and RECYCLE.

Duration: One 45-minute class period

Materials: Copies of the RE Words activity sheet, pencils or pens

Procedures: Ask students what the prefix "re-" means (again or back). Invite students to brainstorm a list of "re words." Write the list on a board or chart. Introduce the words REDUCE, REUSE, and RECYCLE into the discussion.

Ask students to think about what these words mean to them. Suggest that these three words are actions that they can do to help protect the environment.

Hand out the RE Words activity sheet. Lead a discussion on each word and its meaning.

Explain that every single item people use can be traced back to a natural resource. For example, paper napkins are produced from trees and a plastic zipper is produced from petroleum (oil). To REDUCE use means that people use less stuff. When people reduce what they use, they help to conserve natural resources and prevent pollution.

Talk about how REUSING an item extends the life of that item. This may mean using something more than once for its intended purpose or creating a new use for the item. Extending an item's life means that people are keeping the item out of a landfill, generating less waste, and avoiding the use of natural resources.

RECYCLING takes the idea of reuse even further. New products are made from used materials. Sometimes the materials make the same kind of items (glass bottles are remade into new glass bottles) or totally different items (newspapers to make paper bags). Recycling

in order to make new items keeps trash out of landfills, reduces the use of natural materials, and uses less overall energy needed to make an item.

Have students work individually, or in pairs or small groups, to complete the activity sheet. Gather the class together to discuss.

Extension: Show examples of items that can be reduced, reused, and recycled. Have students categorize items into trash that can be reduced, reused, and recycled.

Assessment: Assess students on their ability to define each term and provide examples of how and why it is important to do each.

LESSON 2: HOW MUCH?

Use this lesson to help students calculate how much paper waste their school generates.

Duration: One day, plus one 30-minute class period

Materials: Copies of the HOW MUCH? activity sheets, cardboard boxes to collect paper waste, a scale

Procedures: Ask students to think about the many reasons for recycling materials at school. Discuss how recycling helps the environment as well as everyday living. Brainstorm a list of reasons for recycling paper products that are used in school. Tell students that they are going to research how much paper waste is generated at their school. Hand out the HOW MUCH? activity sheets. Explain the task. Set aside time for student groups to choose classrooms to participate. Explain the project to select teachers.

Extension: Conduct the same data collection experiment using other materials, such as aluminum cans or plastic materials.

Assessment: Assess students on their ability to articulate the benefits of reducing, reusing, and recycling paper. Ask questions to check for understanding.

LESSON 3: RECYCLING SURVEY

Use this lesson to help students consider their own use of items that create waste and the opportunities they have to reduce, reuse, and recycle.

Duration: One 45-minute class period

Materials: Copies of the RECYCLING SURVEY activity sheet, pencils or pens

Procedures: Distribute the survey. Assign students to complete the survey individually or in pairs. Once all the surveys are complete, gather the class to share and discuss results. Combine the results.

Extension: Encourage students to use the results to come up with a reduce, reuse, and recycle action plan. Invite a school administrator to visit the class. Have the class share the survey results with the administrator and pitch their solution ideas.

Assessment: Assess students on their ability to identify the school's needs and suggest solutions.

LESSON 4: SMALL STEPS® POSTER DESIGN

Use this lesson to help students express how they can support the environment through community service.

Duration: One or two 30-minute class periods

Materials: Copies of the SMALL STEPS® POSTER DESIGN activity sheet, crayons, markers, paint, scrap paper, poster boards, and other craft materials as desired

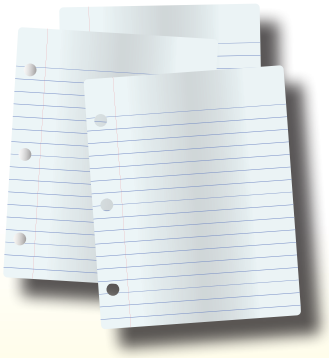
Procedures: Gather all materials. Ask students to think about how they might spread the word to advertise the importance of reducing, reusing, and recycling. Encourage them to brainstorm. Distribute the SMALL STEPS® POSTER DESIGN activity sheet. Have students work on their ideas individually, in pairs, or in groups of three. Sign off on each design and provide students with materials to create their posters.

Extension: In addition to posters, have students develop other campaign materials such as brochures, commercials, or even podcasts.

Assessment: Assess students on the completeness of their posters and messages about reducing, reusing, and recycling.

RE Words

Directions: Read about three of the small steps you can make to help the earth. Think about ways you can **REDUCE**, **REUSE** and **RECYCLE** every day.



REDUCE

Reduce waste or the need to recycle by using less stuff.

Here are a few examples of ways you can reduce waste:

- Take only the amount of paper napkins you need.
- Take your lunch to school in a lunch box, not plastic or paper bags.

Can you think of others? List three more:

_____

_____

_____

What are three ways you already practice **REDUCE** at school? _____

_____

_____

_____

_____

_____

_____

_____

CONTINUE

REUSE

Reuse items before recycling or discarding in the trash.

Here are a few examples of ways you can reuse items.

- Use a reusable drink bottle instead of a new bottle or carton each day.
- Donate old clothes, books, and toys to a charity.

Can you think of others? List three more:

_____

_____

_____

What items do you **REUSE** at school? _____

_____

_____

RECYCLE

Recycling is a way of changing a used material into another usable material.

Here are a few examples of items that can be recycled:

- Recycled plastic bottles can be made into new pile fleece, carpets, etc.
- Recycled writing paper can be made into toilet paper.

Can you think of others? List three more:

_____

_____

_____

What do you **RECYCLE** at school? _____

_____

_____

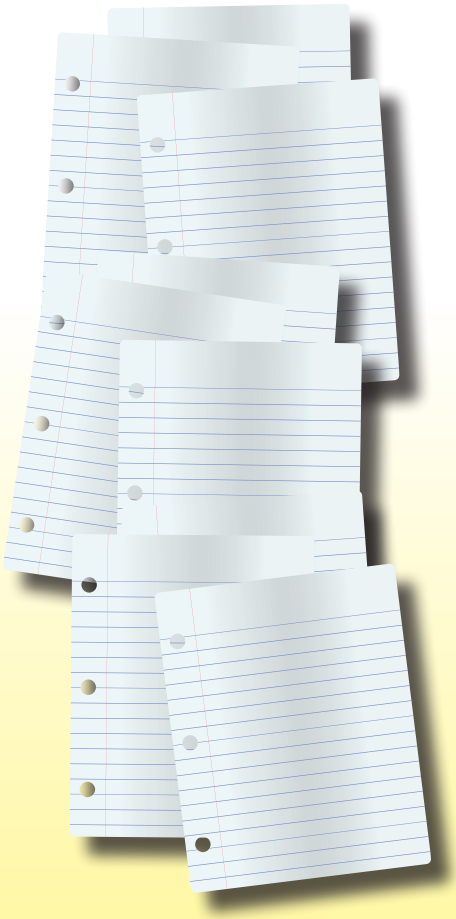
How Much?

Directions: Curious about how much paper your school uses?

Randomly pick five classrooms in your school. Place a cardboard box in each classroom. Collect the recyclable paper waste that is generated in each classroom for one day.

Have members of your class explain the project to the participating teachers. Use this sheet to record your findings.

Weigh the paper collected from each class. Record your findings.



Class Name	Pounds of Paper Waste

What is the average weight for all five classes? _____

What is the median weight? _____

What is the mode weight? _____

Estimate the average weight of paper waste for your school. To find the weight, multiply the average weight for the classes you collected paper from by the total number of classrooms in your entire school. _____

Estimate how much paper waste your school generates per week? _____

How much per year? _____

Recycling Survey

Directions: Complete this survey. Share and compare your answers with your class.

1. Put X's by the items that go into your garbage at school.

	cans (aluminum and/or tin)		newspapers
	glass bottles		sandwich bags (paper or plastic)
	paper (computer, drawing or notebook)		drink cartons
			batteries
	cardboard		catalogs and magazines
	plastic containers		computer ink cartridges

2. Which items (of those listed above) could be recycled—by you or someone else? List them:

3. Does your school have a place to recycle any of these items?
   _____ Yes _____ No _____ I don't know

4. Where does your garbage go once it leaves your school? (Draw a picture or explain in words.)

CONTINUE

5. List the advantages and disadvantages of recycling to your school.

Advantages	Disadvantages

6. List five items commonly used in your school that produce "instant garbage." Think of items that may be packaged in such a way that you throw away the wrapper or container as soon as the item is opened. Think of items that you throw away after using only one time.

   Can you think of any ways to reuse or recycle these items?

Instant Garbage	How to REUSE or RECYCLE
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

7. How does reusing or recycling things help the environment?

Small Steps® Poster Design

Directions: Think about what you've learned about **REDUCING**, **REUSING** and **RECYCLING**. Use the space below to design a poster to encourage kids to take small steps to protect the earth. Make your poster.

Create a list of words and sayings for your poster. Write them below.

Draw a sketch of your poster design in the box.