



Recycling Starts with You!



Dear Teacher:

Welcome to **Recycling Starts with You!**, a dynamic educational program aligned with national standards in **language arts, science, and math**. The materials will help your students build core skills as well as teach them important basics about paper recycling.

Look inside for:

- **Lessons** featuring a hands-on paper-making activity
- A **poster** to display above your recycling area or anywhere in the classroom
- **Links to more information** at paperrecycles.org, including facts, videos, and activities

Enjoy, and remember, recycling starts with you!

For free **printable copies** of this program plus other **online activities**, visit scholastic.com/recycling and paperrecycles.org.

Recycling Fast Facts

- Every ton of paper recycled saves more than 3.3 cubic yards of landfill space. That is about the same size as a small refrigerator.
- In 2008, a record high of 57.4 percent of the paper used in the U.S. was recovered for recycling. That's an average of 340 pounds for every man, woman, and child in the country. Also weighing in at around 340 pounds: an average adult male black bear.
- In 2007, 87 percent (268 million) of Americans had access to curbside or drop-off paper recycling programs.
- Paper recycling is not a new idea—in the 19th century, people used old cloths and rags to make new paper.
- Many different grades of paper can be recycled into new products. Notebook paper, for example, can become printing or writing paper, newspaper, or packaging. Newspaper is usually made into new newsprint, egg cartons, or paperboard. Cardboard is recycled into new cardboard or paperboard packaging.
- Wake County, NC's "Feed the Bin" paper recycling program, with more than 135,000 students, collected 800 tons of paper during the 2007–8 school year.

School Recycling Awards Available!

AF&PA Recycling Awards recognize outstanding paper recycling programs. You can win money and recognition for your school! Visit paperrecycles.org for more details.



**American
Forest & Paper
Association**



Lesson 1: Why Recycle Paper?

Overview: Students learn recycling facts to understand how to compute volume and display information as a line graph.

Curriculum Area: Mathematics

Time Required: Two 20-minute sessions

Materials Needed: Tape measure, graph paper

Directions:

1. Begin by sharing “Recycling Fast Facts.” Review the fact that every ton of paper recycled saves more than 3.3 cubic yards of landfill space.
2. Introduce the formula for volume as: $length \times width \times height$. Ask students to choose a classroom object they think is close in size to 3.3 cubic yards, such as a desk or chair. Measure the object and calculate its volume to check students’ estimates. Is 3.3 cubic yards bigger or smaller than what students thought? What does this fact say about recycling?
3. Share the following figures*:

| Year | Paper Recovered (millions of tons) | Paper in Landfills (millions of tons) |
|------|------------------------------------|---------------------------------------|
| 2006 | 53.3 | 36.7 |
| 2007 | 54.3 | 32.7 |
| 2008 | 51.8 | 28.7 |

4. Ask students: Between 2006 and 2008, did the amount of paper recovered increase or decrease? What about landfill space taken up by paper? Challenge students to draw two line graphs that display this information. On the vertical axis, track millions of tons. On the horizontal axis, track years.

Lesson 2: Make Your Own Paper

Overview: Through a hands-on activity, students understand the basics of the paper-making process by using recovered (or used) paper to make a new piece of paper.

Curriculum Area: Science

Time Required: 30 minutes for prep;

two 20-minute class sessions

Materials Needed: Wooden frame, wire screening, blender, large bowl, sponge, paper (newsprint, construction paper, or notebook paper)

Directions:

1. Before you begin, staple the wire screen to the frame, making a tool called a **deckle**. Tear paper into pieces and soak the pieces in hot water for 30 minutes.
2. Introduce the activity by explaining to students that they will be making new paper from used paper to see how recycling works. Before or after the activity, show students the video “Making Paper” at paperrecycles.org to give a real-world overview of the recycling process.
3. Fill a blender halfway with warm water, then add a handful of the soaked paper. Blend until the pulp has a soupy consistency. Pour the mixture into a bowl and then fill the bowl with warm water, mixing until the ingredients are evenly dispersed.
4. Slide the deckle into the bowl. Holding the deckle underwater, move it back and forth to get an even layer of pulp on the screen.
5. Lift the deckle out of the mixture, keeping it flat. Allow it to drip until most of the water has drained off. Press the pulp against the deckle screen gently to squeeze out moisture. Use the sponge to absorb excess water from the bottom of the screen.
6. After covering a flat surface with newspaper, turn the deckle paper-side down. Gently tap the screen to help release the paper. Let it dry for several hours or overnight. Gently peel off the paper when it is dry.
7. In your next session, discuss students’ thoughts on the activity. How is the new paper different from the used paper? Did the activity change how students felt about recycling? Why or why not?

Lesson 3: Make Your Ideas Heard!

Overview: Students use recycling facts to understand fundamental elements of a persuasive essay.

Curriculum Area: Language Arts

Time Required: Two 30-minute sessions

Materials Needed: Chart paper, writing notebooks and/or paper, pens/pencils

Directions:

1. Using chart paper, discuss as a class what students have learned about paper recycling.
2. Divide the class into pairs. Challenge one partner to pretend that he or she needs to convince the other to begin recycling. What do students need to say to effectively persuade their peers? Encourage students to use points listed on the chart paper as a starting place for their conversations. Give students five minutes to practice, and then switch roles.
3. Based on their discussions, have students write a short composition persuading someone who’s never recycled before to start. Discuss elements of effective persuasive writing, e.g., a strong argument, supporting details, and evidence. In your next session, invite students to read their compositions aloud. Discuss techniques speakers use to get their points across, such as making eye contact, and reading slowly and clearly.
4. Gather compositions to share with other classrooms, families, and the community.

Extension: Have students research their existing school paper recycling program. Brainstorm ideas to promote it, including developing slogans, posters, and flyers. If no program exists, brainstorm ways to start and promote a new one.

*Statistics from paperrecycles.org. Look under “Quick Links” for more statistics and graphs.