

PAPER RECYCLING

Teacher Lesson Plan

LEVELS

Grades 4-5

SUBJECTS

Science
Social studies
Language arts
Math
Visual arts

CONCEPTS

People use ingenuity and innovation to make the best use of available resources.

By reducing waste and recycling materials, people can extend the use of our natural resources.

Increased awareness of the environment and the need to conserve natural resources has resulted in lifestyle changes.

Industries work to meet consumer demand for recyclable or recycled products.

SKILLS

Analyzing
Discussing
Data gathering
Elaborating
Interpreting
Representing
Researching

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In addition to providing beauty and recreation, forests supply raw materials to help meet society's needs for housing, paper, containers and thousands of other products used by consumers every day. As one of the country's leading forest products providers, Georgia-Pacific LLC has a long-term interest in and commitment to the health of our nation's forests.

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OVERVIEW

Paper recycling has been around as long as paper itself. Today paper is the most recycled product in the United States.

DISCUSSION, STUDY TOPICS AND SUGGESTED ACTIVITIES

Paper recycling can be used in the context of many different areas of learning. Here are some suggestions:

SCIENCE

- **Experimenting with fibers.** Get a view of the different fiber lengths in different paper products. Using the papermaking process outlined in the student brochure, analyze paperboard, stationery, newspaper and other types of paper. Which fibers are longer? Is there a relationship between fiber length and paper strength? (*class experiment, research project*)

SOCIAL STUDIES

- **Waste.** How have people managed waste throughout history? How have attitudes toward waste changed over time? Have students interview their parents and grandparents to find out how waste is handled differently now. (*research project, essay topic, class presentation*)
- **Local recycling.** Does your community have a recycling center? What products does it recycle and where do they come from? If not, why not? Does your school have a recycling program? If not, could you start one? What resources would you need? (*field trip, class project, guest speakers*)
- **Supermarket safari.** How are different products packaged? Why? Would more or less packaging make a difference? Have students select a product and design the ideal package for it out of art materials. Why did they design the package that way? (*research project, class activity, art project, class presentation*)

MATH

- **Economics.** What are some of the costs involved in paper recycling? Does recycling always make financial sense? Have students calculate the potential profit or loss of recycling paper versus sending it to a landfill. (*research project, class activity, essay topic*)
- **Math Activity Suggestions.**
 1. If an average newspaper weighs 1/2 pound and you collected one paper per day, how much would a stack of papers weigh if you collected one paper each day for a year?
 2. If two trees can make 300 newspapers, how many trees are needed to make 900 newspapers?

LANGUAGE ARTS

- **What would happen if we didn't recycle paper products?** What would the world be like? Where would all that paper go? (*essay topic*)
- **Vocabulary Activity Suggestions.**

Vocabulary Words: collage, deinking, fibers, landfill, paperboard, pulp, recycling

Choose 4 or more words from the list above and write a poem about recycling paper. Share your poem with your class.

VISUAL ARTS

- **Recycled art.** Save scraps of paper from class art and other projects and make a collage. (*art project*)

For more information on paper and papermaking try the following books:

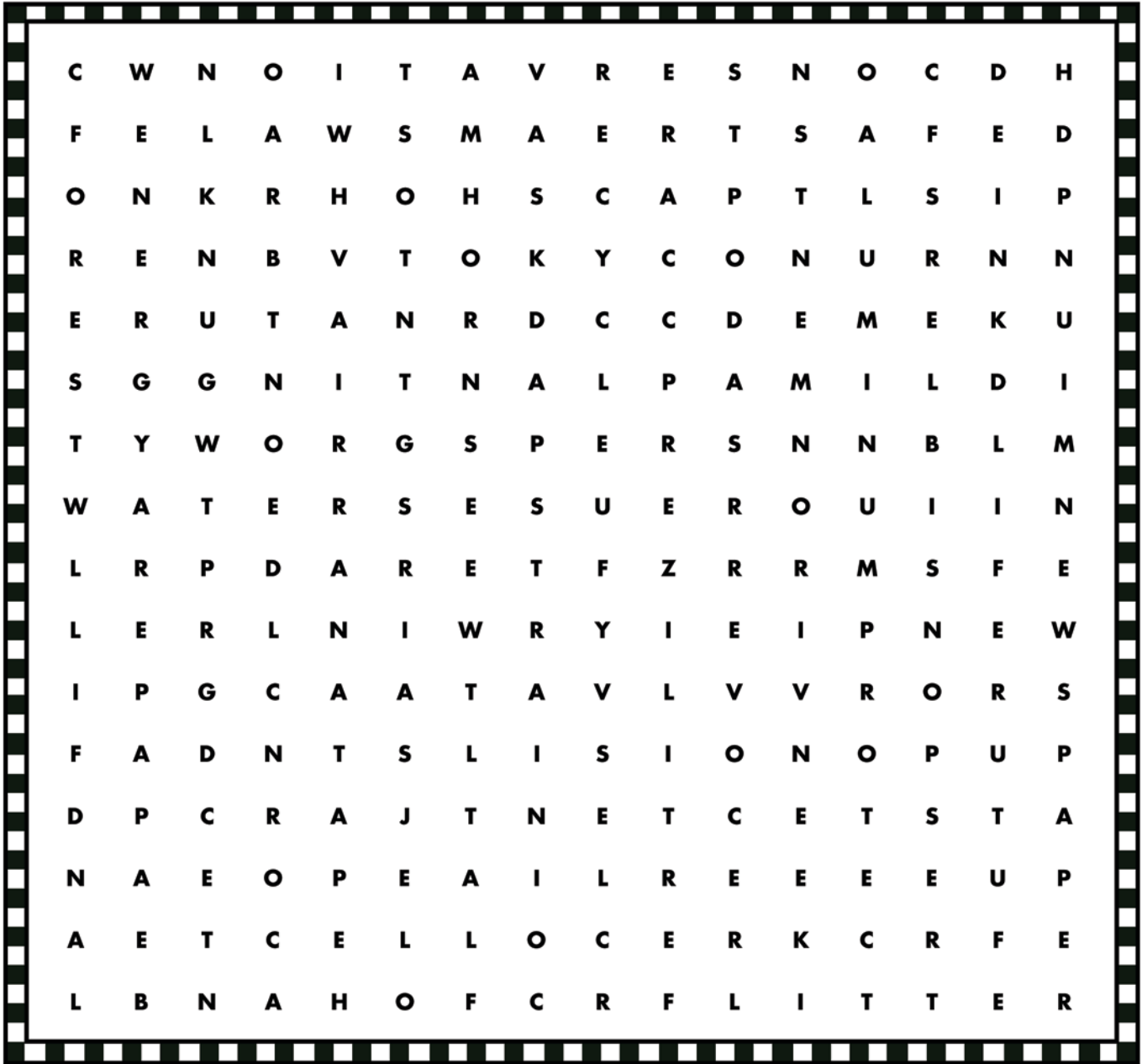
Tin Can Papermaking by Arnold Grummer
Material World Paper by Claire Llewelyn
Focus on Trees by Anita Ganeri

PAPER RECYCLING

Activity Sheet

WORD SEARCH

Some words that could have been recycled were thrown into the letter landfill. Can you recover them? If you search below, you'll find 35 words (listed at the bottom of the page) related to recycling and the environment.



Answers: (Caution: Words may appear backwards, upside down or diagonally.)

- adopt • air • aluminum • care • clean • collect • conservation • deink • earth • energy • environment • fertilize • forest
- future • glass • grow • land • landfill • litter • nature • newspaper • paper • plastic • protect • recover • recycle • renew
- responsible • reuse • safe • streams • tree • waste • water • wood



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