

REDUCE. REUSE. RECYCLE.

KANSAS KIDS CAN!

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IN THIS ISSUE:

- 1** • **Go Green for the Holidays!**
• **Research!** Vocabulary words you may want to investigate
- 2** • **Investigate** — Special Delivery:
Packing Peanuts
- 3** • **Green Your Gifts** — Make Your Own
Wrapping Paper
• **Go Green for the Holidays:**
Make Your Own Gifts



GO GREEN for the Holidays!

RESEARCH!

Here are some vocabulary words in this issue you may want to investigate:

- ✓ Polystyrene
- ✓ Biodegradable



Why not give a present to the planet and go green this holiday season? Did you know that between Thanksgiving and New Year's day, Americans throw away a million extra tons of garbage EACH WEEK? According to Robert Lilienfeld, co-author of the book *Use Less Stuff: Environmental Solutions for Who We Really Are*, the total holiday waste amounts to about 25 million tons of extra garbage and a lot of that extra garbage comes from holiday wrapping and packaging. That's a pretty big number — just how much garbage is this? Try to imagine: It would be about 50 football fields covered in garbage as high as a 40 story building! (Source: <http://science.howstuffworks.com/one-giant-landfill.htm>).

So how can you help go green for the holidays?

Here are some tips:

- Wrap presents in wrapping paper made of old magazines, newspapers, comics, reused boxes, re-

used ribbons or give gifts in reusable containers like tins and cloth bags. See this issue for making your own wrapping paper.

- If you purchase wrapping paper, be sure to purchase wrapping paper made from recycled materials.
- Collect wrapping paper and ribbons this year and re-use them next year.
- Re-use old holiday cards by cutting off the cover of the card and using it like a postcard or send electronic cards this year.
- Be sure to bring your own re-usable shopping bags when you shop.
- Give gifts that are home-made like cookies, breads, candies and treats or make presents out of re-used items like the wreath featured in this issue.

So give a present to the planet this holiday and have fun while you do it!



Investigate- Special Delivery: Packing Peanuts



Shown: Packing peanuts made of polystyrene

PRECIOUS CARGO TEST			
PACKING MATERIAL	HEIGHT=1 FOOT EGG BROKEN (YES/NO)	HEIGHT=2 FEET EGG BROKEN (YES/NO)	HEIGHT=4 FEET EGG BROKEN (YES/NO)
POLYSTYRENE			
TRIAL 1			
TRIAL 2			
TRIAL 3			
CORNSTARCH			
TRIAL 1			
TRIAL 2			
TRIAL 3			
NEWSPAPER STRIPS			
TRIAL 1			
TRIAL 2			
TRIAL 3			



Shown: Packing peanuts made of cornstarch

Have you ever received a package in the mail, opened it and found it full of packing peanuts? Maybe your family is planning on sending a package this year and you'll want to use some packing peanuts to protect your presents? Packing peanuts get their name because they look like peanuts, but in fact, they're not. They're either made of polystyrene or corn starch. How are these packing peanuts alike and different? Does one work better than the other to protect things from breaking when you ship them? Investigate the properties of packing peanuts in the following investigation and then decide for yourself what the better choice is!

Materials:

- A couple handfuls each of polystyrene and a handful of corn starch packing peanuts—if you don't have them at home, you can probably get them from a moving or shipping store and if you ask for

just a couple handfuls for a science investigation, they'll probably give them to you for free

- Newspaper, torn into small strips
- 2 glasses of water
- 3 small boxes or milk/juice cartons
- 3 eggs
- 3 plastic bags
- Tape

Procedures:

1. First examine one of each of the packing peanuts. How are they alike? How are they different? Try squeezing the peanut between your fingers. What happens? Does the peanut hold its shape or regain its shape?
2. Take two glasses and fill them with water, now one at a time, drop one of each of the packing peanuts into the glass and observe. What happens? Which of the packing peanuts do you think might be biodegradable or able to break down naturally?

3. Precious Cargo Test: Now you're going to test which packing materials are the best for shipping items that might break. Here's how:
 - a. Pack the cardboard box, milk or juice carton half full with the packing materials (one with polystyrene peanuts, one with cornstarch peanuts and one with newspaper strips).
 - b. Secure the egg in a plastic bag and place in the middle of the packing materials. Finish packing the rest of the box with the packing materials.
 - c. Once the egg is inside of the packing materials, close the cardboard box and use masking tape to close the open flap of the box.
 - d. Perform a "Drop Test" by holding the package and dropping it from a height of 1 foot, 2 feet and 4 feet. Use the data table above and record your results. NOTE: You may want to do this outside

incase your bag breaks and so does your egg!

NOTE: If your egg breaks during one of the packing materials trials, you do not need to conduct any more trials. If your packing materials hold up and the egg is unbroken, you might want to try it at 6 feet, 8 feet, etc. with the help of a parent.

4. Based on your data, what packing material would you use to ship a package that contained something that might break? Why? Which packing material is better for the environment? Why?



Green Your Gifts-

Make Your Own Wrapping Paper

It is estimated that if every family wrapped just three fewer presents a year, we'd save enough paper to cover 45,000 football fields! You might think, that isn't a big problem, so long as we recycle our wrapping paper, right? But wrapping paper often contains materials other than paper that can't be recycled (like glitter, plastic and other non paper fiber materials), can be very thin with few good quality paper fibers for recycling and has sticky tape attached to it, which makes recycling more difficult. So many recyclers won't collect wrapping paper (Source: <http://www.recyclenow.com>). You can always unwrap your presents carefully and fold and reuse wrapping paper. Or you can make your own wrapping paper. This is a great idea whether it is for your Christmas, Hanukkah, Kwanzaa, Las Posadas, New Year's Day or other presents throughout the year.

Here is what you do:



- Newspapers or comic strip pages
- Markers, crayons, tempera paints, or ink pad
- Something to stamp with (leaves, small branch of evergreen, pine cones, apple cut in half, Styrofoam and bottle caps, found objects, or make a potato stamp)

Now it's time to get creative! You can either draw or color on the newspaper or comic strips or you can create a stamp to create a design. To create a stamp from a potato, get help from your parents or another adult to cut the potato in half. Draw a simple design with a marker and then

get an adult to carve your design into the potato and you have a stamp! Or, cut an apple in half. Either way makes a pretty stamp. Don't want to compost a perfectly good apple or potato? Use leaves, small branches of evergreens, acorns, pinecones, rocks or other found objects as a stamp. Be creative! You can even make your own stamp by carving into a well washed piece of Styrofoam from a used plate or tray using a dull pencil or even your nail and glue it onto a bottle cap to make a stamp, be creative! Then put your own stamp on your holiday wrapping paper. Make sure to recycle or compost your paper after the present has been opened and you'll be on your



way to having a green holiday. Don't forget this idea for other presents throughout the year!



GO GREEN FOR THE HOLIDAYS: Make Your Own Gifts.



or you can make a gift reusing items from around your house. Reusing is one way we can help to keep items from the landfill. Here's an idea for a gift that can be made from reused materials almost everyone has around the house—a door wreath.

Materials:

- Old plastic shopping bags
- Scissors
- Wire coat hanger
- Other decorations and glue

1. Bend the wire coat hanger in the shape of a circle.
2. Cut strips from the plastic shopping bags that are approximately 2" by 7"

The width of the strips and how full you want the wreath to appear will determine how many strips you'll need. You may want to cut strips as you go so that you don't cut a bunch of extras.

3. Tie the strips around the hanger and repeat until the hanger is covered with plastic strips. **NOTE:** If you want your wreath to be fuller, push the strips together tightly as you go.
4. Add any additional decorations you want for your wreath such as ribbon, buttons, candies, etc.

Shown: A wreath ready to decorate for the holidays—be creative with your decorations!

Encourage your school to renew their commitment to recycling and environmental stewardship by joining the Kansas Green Schools Network. It's easy and it's free!

Find out more at:
www.kansasgreenschools.org



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