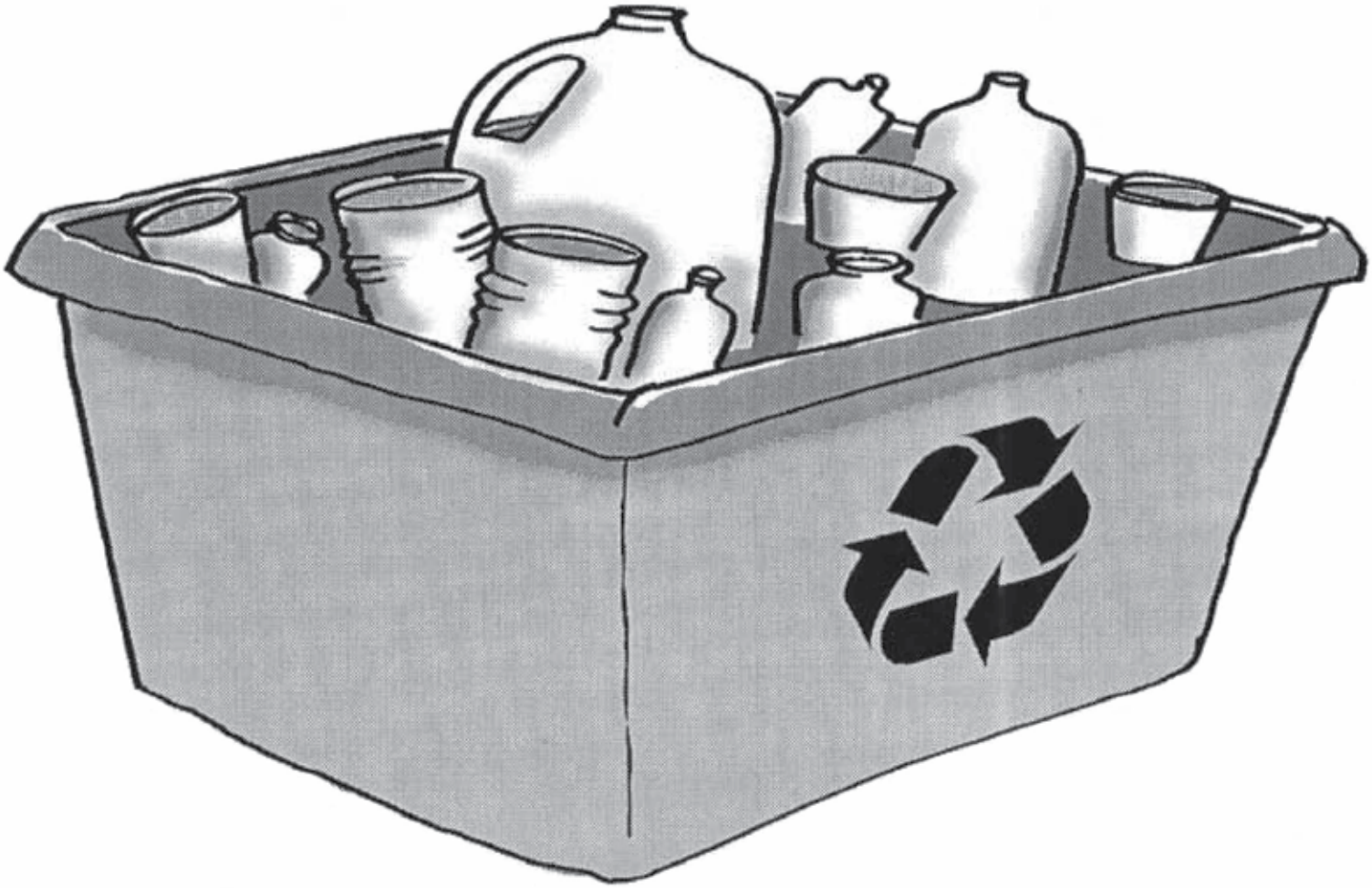
MILK JUGS

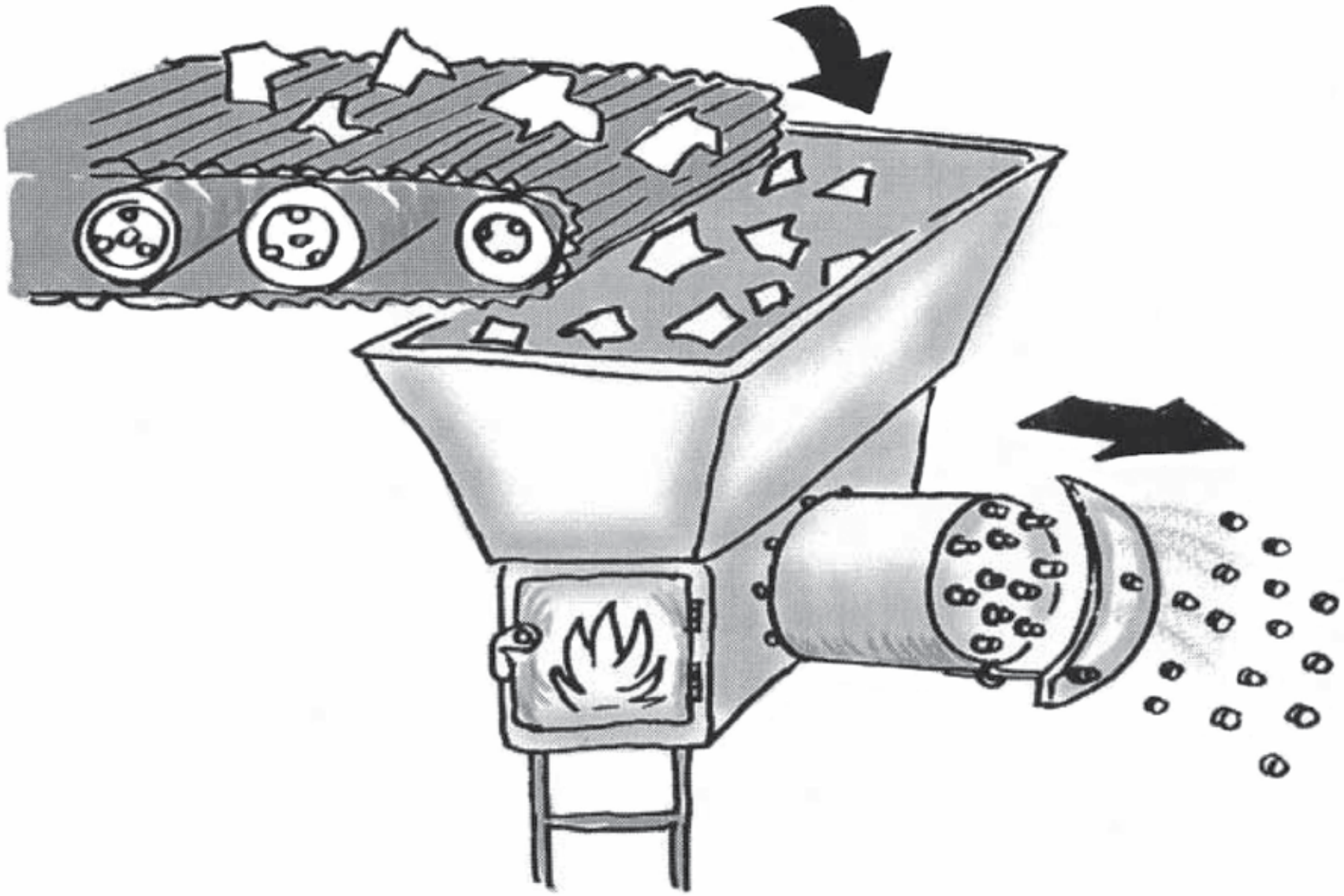
Read to the Rhyme, "The House That Jack Built"

This is the blue box,
That was made from the jug,
That was full of the milk,
That Jack drank.

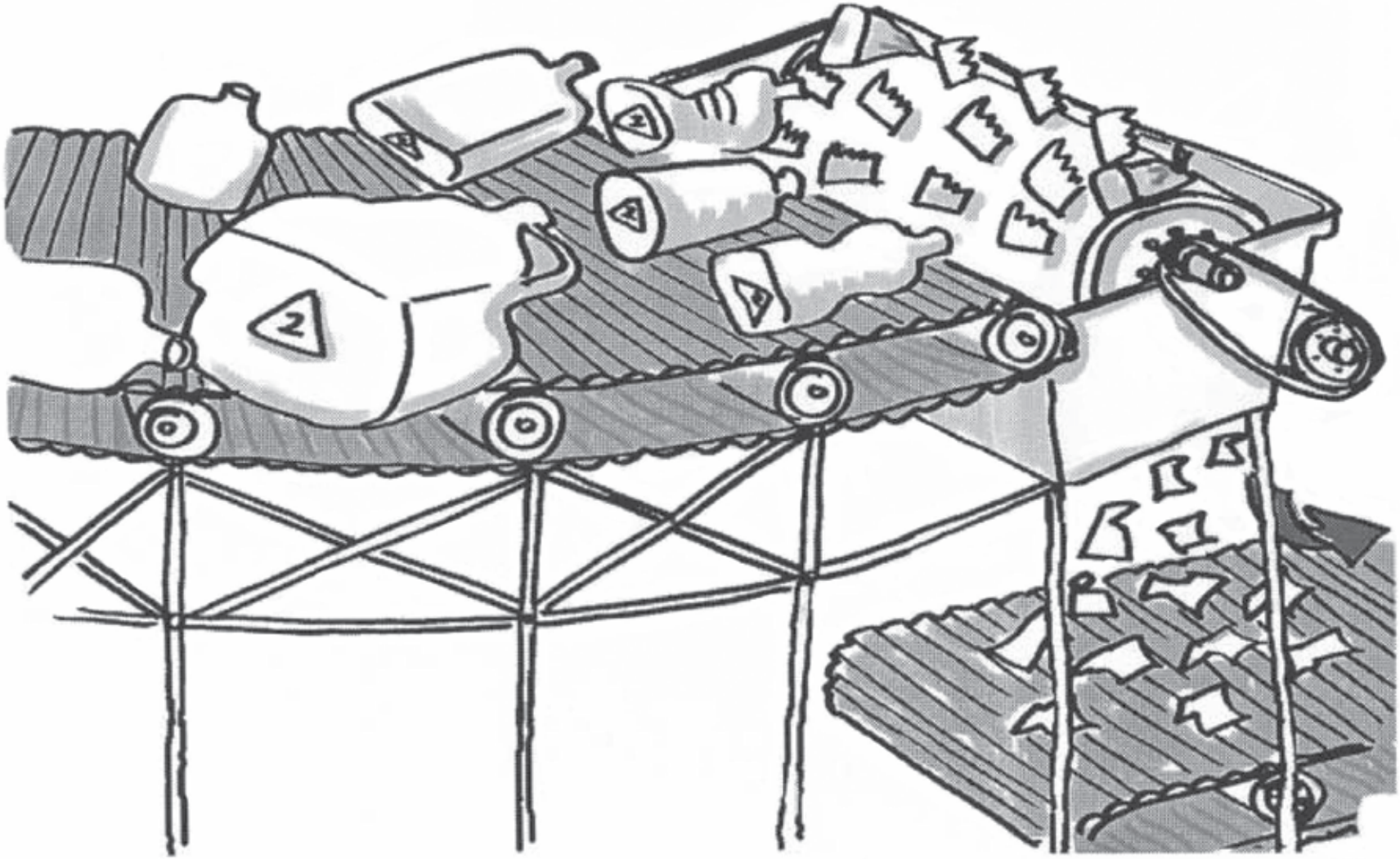


These are the pellets,
That formed the blue box,
That was made from the jug,
That was full of the milk,
That Jack drank.

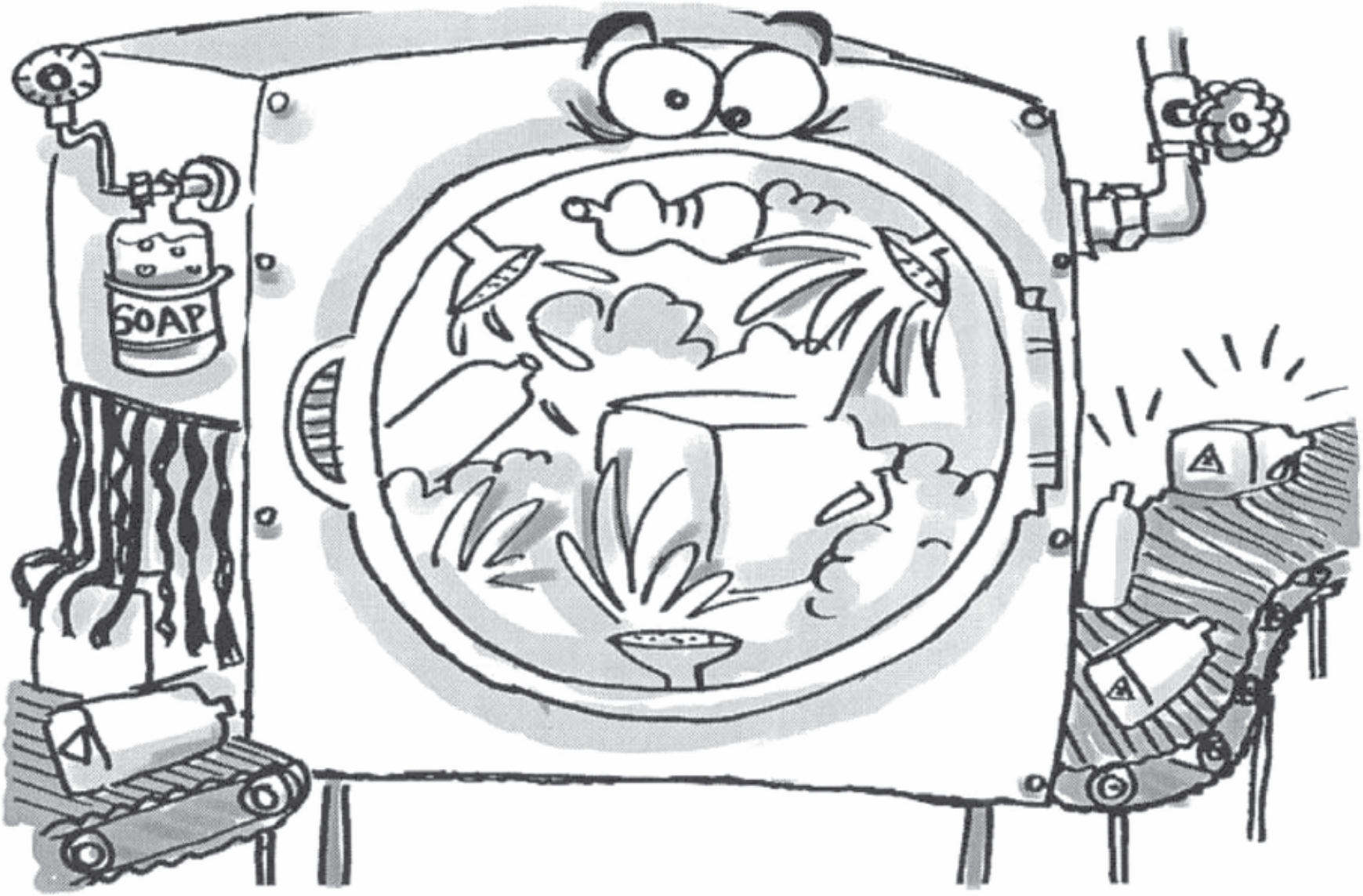
These are the flakes,
That were melted into pellets,
That formed the blue box,
That was made from the jug,
That was full of the milk,
That Jack drank.



This is the plastic,
That was cut into flakes,
That were melted into pellets,
That formed the blue box,
That was made from the jug,
That was full of the milk,
That Jack drank.

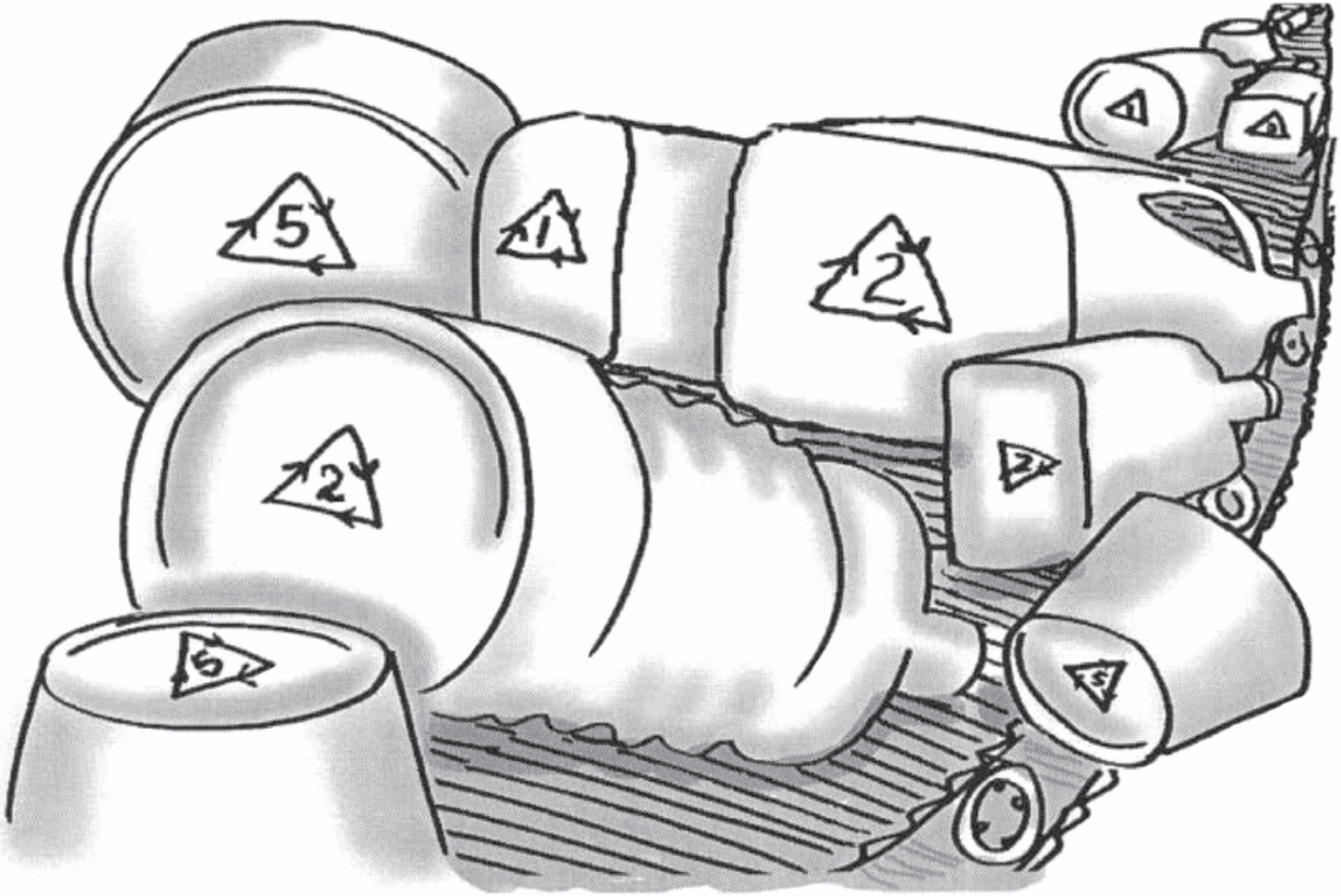


This is the machine,
That washed the plastic,
That was cut into flakes,
That were melted into pellets,
That formed the blue box,
That was made from the jug,
That was full of the milk,
That Jack drank.


SOAP

This is the worker,
Who loaded the machine,
That washed the plastic,
That was cut into flakes,
That were melted into pellets,
That formed the blue box,
That was made from the jug,
That was full of the milk,
That Jack drank.

This is the numbered plastic,
That was sorted by the worker,
Who loaded the machine,
That washed the plastic,
That was cut into flakes,
That were melted into pellets,
That formed the blue box,
That was made from the jug,
That was full of the milk,
That Jack drank.


5
2
5
1
2
1
4
2
5

MILK JUGS

Teacher's Guide

About this big book...

"Milk Jugs" is written to the rhyme called "The House that Jack Built."

This big book was developed by the GVRD
Story author: Dee Galasso, grade 1 teacher
Images: John Crossen
Teachers' guide: Marnie Olson
Editor: Mary Trainer
Teachers' guide design: Laura Galloway
Contributors: Penny Ford (grade 1 teacher), Pamela Nel, Jane Keresztes, Bruce Ford, and the Education Advisory Committee of the GVRD.

How to use this big book...

- copy it as often as you wish.
- copy it on two sides to make a book.
- shrink the size to make little books for every student to take home for additional reading practice with their family.
- have students work in groups with the different stages of recycling from the book.
- have students colour the drawings.
- laminate the one-sided version (coloured or uncoloured) for students to use in groups or as an activity to arrange the stages of recycling in order.
- copy segments of the book to use illustrations for other recycling activities in your classroom.
- make a school display of the story along with related student work.

For more information

Contact the CRD Hotline at 250.360.3030 or hotline@crd.bc.ca

Background

There are seven types of plastic. Each is a different type of resin with a different chemical make-up. The codes surrounded by "chasing arrows," on the bottom of plastic products, distinguishes each type of plastic. Code 1 is polyethylene and code 2 is high-density polyethylene. Codes 1 and 2 have the best markets for recycling. They are valuable because of their available quantity, quality, colour, and relative ease of processing. They also have favourable strength and flexibility characteristics.

Each municipality determines which plastics to collect, based on market demand. Check with your municipality to find out what is, and what isn't, collected, and why.

Recycling programs at schools are different from home. Schools are part of a sector called "Institutional, Commercial and Industrial." These facilities arrange collection through private companies. It can be confusing to see a recycling system that is different from what works at home. Consider exploring the differences and the reasons with the students.

Looking for a Web site on plastics?

The Canadian Plastics Industry Association has a site with information, a teacher resource area, and activities for students. You connect with these at www. plastics.ca.

Have you got questions?

Contact the CRD Hotline at:
250.360.3030 or hotline@crd.bc.ca

Craft Idea

Milk jug piggy bank

Papier maché a milk jug that has four egg carton sections glued on one side for legs and a slit on the opposite side for money.

Decorate, by using leftover paint.

Did you know?

The CRD offers a recycling presentation called "Closing the Loop". This presentation describes what happens to all the bottles, cans, newspapers and cardboard when the recycling truck picks up blue box materials.

Using a variety of recyclable material samples at their various stages of processing, students will learn how the materials are recycled, the benefits recycling has for the environment and how we can all help in the effort. The presentation lasts approximately 45 to 60 minutes and is enjoyed by students in all grades.

Other concepts to explore

- What items do you recycle at home, school, and outside? List three.
- Why recycle? Why reduce? Why reuse?
- What would happen if you did not recycle anything and threw everything into the garbage? What if everyone in your school did that? In your community?
- Where does garbage go? What does that look like?
- Even when we recycle everything we can, we still have garbage. Why?
- What other ways are there to avoid garbage?

Activity

Before and After

A new life for used plastic jugs

Plastic is made from crude oil, a non-renewable resource. Students see that recycling plastic saves resources.

Background

Plastic food containers are always made from new plastic to prevent harmful contact to food. Any recycled plastic container may become a completely different kind of container or another item. Refer to the fact sheet called, "Plastics," for the background information on the life cycle of a plastic bottle.

What you do

1. Read the big book to the class.
2. Lead the class in developing a "life cycle" style diagram to show what happens to plastic jugs that are recycled.
3. Have students help you label the stages of the loop, using the information from the story.
4. As a class, draw a diagram to show where a plastic jug goes when it is not recycled.
5. Compare the diagrams.

Questions to discuss

- If plastic jugs are not alive, how can they have a new "life?"
- Why don't milk jugs get recycled into new milk jugs? **Hint: Consider the problems with food and the containers.**

For more facts about plastics, visit: www.gvrd.bc.ca/services/garbage/rechome/pdf/plastics.pdf (123kb)

Activity

Transformers

Waste that is recycled into something new

What you need

Items on the left are recycled into items on the right.

assorted papers - egg carton
empty aluminum can - new aluminum can
apple core - compost
plastic P.E.T. container - polar fleece
(P.E.T. - 2 litre pop bottle)
used compact disc case - hard plastic "in" tray
or other office accessory
plastic milk jug - plastic shopping bag
plastic milk jug - shampoo bottle
plastic milk jug - plastic strapping
add some of your own!

What you do

1. Choose an item from the container.
2. Match it up with another item from the container, by considering the following questions:
   - What is it made from?
   - Which other items in the container are made from similar materials?
   - Can it be recycled or was it made from recycled materials?

Questions to discuss

- What were the easiest things to match? Why?
- What did you find surprising?
- Why isn't everything recycled?
- What's great about recycling? What's not so great?
- If you had the chance to invent something new, what would it be and what would you recycle to make it?

Teacher tip

Give the students a hint, or ask them for some ideas on matching things. For example, by matching the thins you know first, you may be able to make a better guess from the items that are left.

Activity

Sorting it out

Grouping plastics with the same number code

What you need

- Variety of clean plastic containers
- Rice, sand, beans or pebbles

Preparation

Have students bring in a selection of plastic containers from home, washed and dried. Fill each group's milk jug with rice or other material to provide weight for spinning.

What you do

1. Arrange containers on the floor or a table.
2. Form groups of seven.
3. Have each group sit in a circle and assign each student a number around the circle from one to seven.
4. Place the milk jug in the centre of the group.
5. Begin by spinning the milk jug. When it stops, the person that it is point to must go and find a plastic container with their number on it and bring it to the circle.
6. Once there are several examples of each number in the circle, have students group examples of each number together.
7. Step back outside the circle area. Have students describe their observations.

What do the numbers mean?

For a description of each type of plastic according to their number stamped on the bottom, visit the web at: www.plastics.ca/epic

Questions to discuss

- What's the same about the plastics in each grouping or pile?
- Why are there numbers on the bottom of plastic items?
- Why are the numbers different?
- How are plastics different? What makes them different?
- Describe the containers you were collecting. How are they similar?
- Why is it important to sort the plastic containers?

Variations

- **Try sorting** without looking at the code number.
- **Create a bar graph** to report on the number of items students find in each of the seven groups of plastics.
- **Set up a recycling plastic relay race.** Every team has a collection of plastic items. The first member of each team selects an item, identifies the number from the bottom and runs to the correct recycle box, from a selection of preset recycle boxes, labeled 1-7, respectively. When the first person returns to their team, they tap the next team member and the race continues until each person completes a turn.
- **Gather magazines**. Have students cut out images of products made from plastic. Using the list called, "What are plastics recycled into?," from the fact sheet called "just the facts," have students match plastics that are recycled into new plastic products. Display results.

Teacher tip

You may wish to copy and laminate the seven plastic codes as signs for students to see where each type of plastic is being collected during the game.

PETE HDPE PVC LDPE PP PS OTHER