



## Hello, teachers!

Welcome to the first edition of the Cuyahoga County Solid Waste District's student newsletter, "Mission: Recycle." In this edition, we introduce **CuyahogaRecycles.org**, our new website that features recycling information for all of Cuyahoga County. We invite students to explore our new, simplified recycling instructions and learn more about how recycling works. We also hope that you and your students will take part in our special programs.

Inside this teacher supplement, we have provided ideas to "reuse" the newsletter for daily instruction, journal writing prompts, an extension activity, and teacher keys for the activities found in the newsletter.

The text and activities in the newsletter and in this supplement correlate to the Ohio Department of Education Learning Standards for third and fourth grades.

Our plan is to produce this student newsletter once each school year. If you would like to receive classroom copies next year, please contact Education Specialist Kathleen Rocco at 216.443.3731 or [krocco@cuyahogacounty.us](mailto:krocco@cuyahogacounty.us). You can also sign up to receive our e-newsletter for teachers, which is emailed quarterly. To sign up, go to **CuyahogaRecycles.org**, scroll to "Subscribe to our newsletter," enter your information, and click "Recycling Education Resources." You can subscribe to our "Recycling News & Tips" at the same time.

We provide additional resources for teachers and other educators at our website. Simply go to **CuyahogaRecycles.org/teacher\_resources\_links** for lesson plans, professional development opportunities, and helpful links about reducing, reusing, recycling, composting and other environmental topics.

As always, we welcome your comments and suggestions on all of our programs.

The Cuyahoga County Solid Waste District is the leading resource in Cuyahoga County for information, expertise and programs that support sustainable materials management and reduce the environmental impact of waste. Our six staff work to empower residents, communities and organizations to manage their waste responsibly by reducing, reusing, recycling and composting. The District is governed by a Board of Directors and is advised by a Solid Waste Policy Committee which oversees the development and implementation of the Cuyahoga County Solid Waste Management Plan.

Cuyahoga County Solid Waste District

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**CuyahogaRecycles.org**

# Reuse Ideas

## Math

- Solve these problems:  $2/3 - 1/5 = \underline{\quad}$      $2/3 + 2/15 = \underline{\quad}$
- Circle a street address, a phone number and a ZIP Code in the newsletter.
- The average American throws away 70 pounds of clothing, shoes, bedding, towels, etc. each year. Only about 15% of that goes to reuse and recycling facilities. For the average person, how many pounds are reused and how many pounds go to landfills?
- The students are using egg cartons to create flowers. From each egg carton, they can make 12 flowers. If they want to make six dozen flowers, how many egg cartons will they need?

## English/Language Arts

- Underline a declarative sentence in the newsletter.
- On page 4 of the newsletter, find a word in a headline that starts with R and is a synonym of *cut* or *limit*.
- Write these words in ABC (alphabetical) order:  
containers    cans    cartons    critters    compost
- Add the correct punctuation: *I can't find my lunchbox he said*

## Science

- Select the term that doesn't belong:  
apple core    grass clippings    rocks    leaves
- Complete this analogy: aluminum : can :: \_\_\_\_\_ : jar
- If you wanted to compare the weights of a metal can, a glass bottle and a cardboard box, which tool would be the most useful?  
ruler    thermometer    microscope    scale
- What type of scientist might study organisms that live in a compost bin?  
biologist    meteorologist    geologist

## Social Studies

- List five goods which cost money that your family consumes (uses).
- List five services which cost money that your family consumes.
- List five services that your family produces. (Hint: These might include chores that you do, like vacuuming the carpet.)
- Does your family produce any goods? If so, what? Who consumes these goods?

## Extension Activity: Sail Away

The science activity on the next page encourages students to practice technological/engineering skills. Copy the master for each student or group or display it on your classroom whiteboard.



## Journal Writing Prompts

An old proverb states: "Use it up, wear it out, make it do, or do without." What do you think this means? How might you apply this proverb to your life and your stuff?

Using the letters in the term "zero waste lunch" make as many words as you can. You can use the letters more than once.

If you could solve any environmental problem, what problem would you solve? How would you solve it?

List 10 things you would be willing to sell at a garage sale. Why did you choose them?

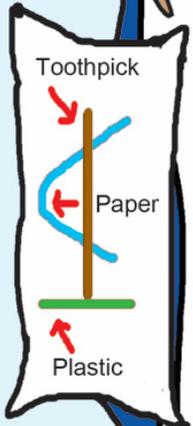
What is your favorite leftover food? Why?

Write a shape poem about recycling.

Imagine that you are a worm who has just moved to a new compost bin. Write a letter to a friend that describes your new home. Be creative!

This experiment will help you understand more about litter and the affect it has on waterways, such as rivers, lakes, and oceans. To do this experiment, you will need plastic bottles or containers, toothpicks, paper, scissors, glue, and a sink with a stopper.

1. Use the plastic, toothpicks, and paper to make a small ship. First, cut a small square out of the plastic. This will become the main body of the ship.
2. Cut the sharp part off one end of the toothpick and glue that end to the center of the plastic square. Be sure to hold the toothpick in place for about a minute and then allow the glue to dry completely.
3. Cut a square out of the paper about the same size as the plastic or smaller. This will be the sail of the ship. Feel free to decorate it with crayons or markers!
4. Carefully bend, but do not fold, the paper in half and stick the sharp end of the toothpick through the center of the two halves. Separate the two sides of the paper to open it up and create a sail.
5. Put the stopper in the sink and fill it with water. Place your boat, along with boats made by classmates or friends, on the water.
6. Try turning the faucet on and off or blowing on the sails. Observe the movement of the ships.
7. Leave the ships in the water and then pull the plug at the bottom of the sink.



### Questions:

1. Where do the ships end up when the water drains?  
\_\_\_\_\_
2. Imagine that the ships were litter and the sink was a waterway. What forces move litter around in nature?  
\_\_\_\_\_  
\_\_\_\_\_
3. How might litter affect the plants and animals living in and around a waterway? How might litter affect people who drink the water or use the waterway for recreation or fishing?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. If a plastic water bottle is dropped into a river, is it possible that the bottle could end up in the ocean? Why or why not?  
\_\_\_\_\_  
\_\_\_\_\_



# Teacher Keys



## Everything in its Place (page 2)

### Correlation to Ohio Learning Standards:

Math — Grade 3: 3.NBT.1; Grade 4: 4.NBT.1, 4.NBT.2

### Answers:

- 245,952
- 2,731,646

## Going for Zero (page 3)

### Correlation to Ohio Learning Standards:

English Language Arts

Grade 3: Reading: Foundational Skills — Phonics and Word Recognition (3, 4c)

Grade 4: Reading: Foundational Skills — Phonics and Word Recognition (3, 4c)

### Answers:

- |               |               |
|---------------|---------------|
| 1. reusable   | 4. silverware |
| 2. washable   | 5. cloth      |
| 3. refillable |               |

## Article Text (pages 1-4) and 2 by 2 (page 1)

### Correlation to Ohio Learning Standards:

English Language Arts

Grade 3: Reading: Informational Text — Key Ideas and Details (2), Craft and Structure (4), Integration of Knowledge and Ideas (7); Language — Vocabulary Acquisition and Use (4a, 4c, 4d, 6)

Grade 4: Reading: Informational Text — Key Ideas and Details (2), Craft and Structure (4), Integration of Knowledge and Ideas (7); Language — Vocabulary Acquisition and Use (4a, 4c, 6)

### Answers (2 by 2):



## Fraction Action (page 4)

### Correlation to Ohio Learning Standards:

Math

Grade 3: 3.NF.1, 3.NF.3b, 3.NF.3d

Grade 4: 4.NF.2, 4.NF.3a, 4.NF.3d

### Answers:

Grass clippings = 2/15

More fruit and vegetable scraps than grass clippings

More leaves than grass clippings

## Sail Away (teacher supplement)

### Correlation to Ohio Learning Standards:

Science

Grade 3: ESS — Earth's Resources

Grade 4: ESS — Earth's Surface; LS — Earth's Living History

## Recycle the Right Stuff (page 2)

### Correlation to Ohio Learning Standards:

Social Studies

Grade 3: Communities: Past and Present, Near and Far — Government — Civic Participation and Skills: Individuals make the community a better place by solving problems in a way that promotes the common good.

Grade 4: Ohio in the United States — Government — Civic Participation and Skills: Civic participation requires individuals to make informed and reasoned decisions by accessing and using information effectively.

