



Hello, teachers!

Welcome to the fourth edition of the Cuyahoga County Solid Waste District's student newsletter, "Mission: Recycle." In this edition, we invite students to explore how to recycle right and make a positive, long-term impact on our environment. We also hope that you and your students will take part in school recycling and our special programs.

Inside this teacher supplement, we have provided a coloring page that you can copy for students and an extension activity, as well as ideas to "reuse" the newsletter for daily instruction 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.

We produce this student newsletter once each school year. If you would like to receive classroom copies next year, please contact our new Education Specialist Carin Miller at 216.443.3731 or cmiller@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 "Resources for Educators." You can also subscribe to our "Talking Trash Newsletter," which includes recycling tips and tricks.

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

EYE-OPENING COMICS

by Laura I. Balliett 01/05/10

OUR OCEANS AND COASTLINES ARE OVERWHELMED WITH OUR LITTER, AND PLASTIC STRAWS ARE AMONG THE TOP TEN ITEMS FOUND.

EVEN IF YOU DO NOT LIVE NEAR THE WATER, YOUR PLASTIC LITTER WILL GET THERE.

WE NEED TO REDUCE OUR PLASTIC USE. START WITH ONE THING- STOP USING STRAWS!

DO YOU REALLY NEED THAT STRAW?

SAVING STRAWS

OUR LITTER HURTS ANIMALS.

ABOUT 500,000,000 PLASTIC STRAWS ARE USED EVERY DAY IN THE USA ALONE.

PLASTIC STRAWS ARE NOT RECYCLED.

Where am I supposed to lay my eggs?

PLASTIC STRAWS LAST FOREVER! EVERY STRAW THAT HAS EVER BEEN MADE IS STILL ON THIS PLANET IN SOME FORM.

STEP BY STEP

Abrianna decided to write down the steps for recycling paper, aluminum, and plastic, but she needs your help figuring out the correct order. Read the steps below and then number them 1 through 5 in the order they should occur.

Paper

- _____ Pulp is fed through large rollers to remove water and make the new paper smooth.
- _____ A machine chops the old paper into small pieces and water is added to create pulp.
- _____ The pulp is put on screens to filter out any large or unwanted pieces.
- _____ Finished paper is wound into large rolls.
- _____ The pulp is washed and cleaned and then turned into a slush or slurry.

Aluminum

- _____ Melted aluminum is formed into large blocks, called ingots.
- _____ The aluminum is shaped into new aluminum cans and products.
- _____ Used aluminum is sorted and cleaned.
- _____ The aluminum ingots are rolled out into long, flexible sheets.
- _____ The aluminum is melted down.

Plastic

- _____ The pellets are mixed with dyes and formed into new bottles and other products.
- _____ The plastic flake is washed and cleaned.
- _____ The plastic is shredded into small pieces, or flakes.
- _____ The melted plastic is made into pellets.
- _____ Shredded plastic is melted so that it can be reshaped.

Reuse Ideas

Math: List the factors of 16, 28 and 30. What is their greatest common factor?

English Language Arts: Write these words in ABC (alphabetical) order:

relearning recycling remember responsible receiving



Science: Complete this analogy: glass : jar :: aluminum : _____

Social Studies: If the student council makes decisions about activities, which kind of democracy is operating?

direct democracy representative democracy

Journal Writing Prompt: List three reasons to donate clothes you have outgrown.

Teacher Keys

Article Text (pages 1-4)

Correlation to Ohio Learning Standards:

English Language Arts: Grade 3: RI.3.1; RI.3.2; RI.3.4; RI.3.7; L.3.4; L.3.6 / *Grade 4:* RI.4.1; RI.4.2a; RI.4.4.; RI.4.7; L.4.4; L.3.6

Beginnings & Endings (page 1)

Correlation to Ohio Learning Standards:

English Language Arts: Grade 3: RF.3.3; L.3.2; L.3.4 / *Grade 4:* RF.4.3; L.4.4

Terms: dispose, responsible, incorrect, easier, recycled

Answers: 1. recycled; 2. responsible; 3. Dispose; 4. easier; 5. incorrect

Good Work (page 2)

Correlation to Ohio Learning Standards:

Social Studies: Grade 3: Geography 5, 6; Government 10; Economics 15 / *Grade 4:* Geography 10, 12; Economics 21

English Language Arts: Grade 3: RF.3.3; RF.3.4c; L.3.2f / *Grade 4:* RF.4.3; RF.4.4c; L.4.2d

Answers: 1. naturalist; 2. solid waste engineer; 3. forester; 4. solar contractor; 5. journalist; 6. recycling technician; 7. landfill operator; 8. composter; 9. research scientist; 10 director

Counting the Votes (page 2)

Correlation to Ohio Learning Standards:

Social Studies: Grade 3: Geography 6; Government 10 / *Grade 4:* Government 16

Math: Grade 3: 3.OA.7; 3.OA.8; 3.NBT.1 / *Grade 4:* 4.OA.3; 4.NBT.3; 4.NBT.6

Answers: 1. 63%, yes; 2. 7%, no; 3. 93%, yes; 4. 83%, yes; 5. 3%, no; 6. 53%, yes

Cycling Around (page 3)

Correlation to Ohio Learning Standards:

Social Studies: Grade 3: Geography 5, 6; Economics 17, 18 / *Grade 4:* Geography 12

Science: Grade 3: 3.ESS.3 / *Grade 4:* 4.PS.1

Answers: 1. A factory manufactures...; 2. You buy the drink...; 3. You place the empty can...; 4. The can is taken...; 5 The sorted aluminum cans...; 6. The bars are sent...

Fraction Action (page 4)

Correlation to Ohio Learning Standards:

Math: Grade 3: 3.NF.1; 3.NF.3 / *Grade 4:* 4.NF.2; 4.NF.3d; 4.NF.4

Answers: Ava gave away 2 shirts; Abigail gave away 4 shirts; Trinity gave away 3 shirts

Step by Step (Teacher Supplement)

Correlation to Ohio Learning Standards:

Science: Grade 3: 3.ESS.3 / *Grade 4:* 4.PS.1

English Language Arts: Grade 3: RI.3.3 / *Grade 4:* RI.4.3; RI.4.5

Answers: Paper: 4, 1, 3, 5, 2; Aluminum: 3, 5, 1, 4, 2; Plastic: 5, 2, 1, 4, 3