School Recycling Club SHIP

(Supporting Home Instruction Program)

Lesson Plan 3

Grade Level:	4-6
Lesson:	I.A.3—How Does Packaging Contribute to Waste? The Story of …
Source:	*3Rs of the Common Core*
Activity/Craft:	Flip Flop Flips PDF
Video Link:	How Sweden Turns Trash into Energy (https://www.youtube.com/watch?v=lpp_rDCf7F8)
Game Link:	EPA RecycleCity Challenge (https://www3.epa.gov/recyclecity/challenge/index.html)

Lesson Matrix Grades 4-6

3R's of the Common Core

Lesson	Leading Question	Objective	Common Core Alignments		Skills
4-6 **Litter Search** **I.A.1**	What kind of trash is found around the school?	Develop awareness of variety, sources and amount of litter Classify litter elements	**Grade 4** CC.L.4.6 CC.SL.4.1 CC.4.MD.4	**Grade 5** CC.L.5.6 CC.SL.5.1 CC.5.MD.2	Communicating results Gathering information Graphing data Investigating
			Grade 6 CC.L.6.6 CC.SL.6.1 CC.6.SP.4		
4-6 **Lunch Bags** **I.A.2**	How much of your lunch do you eat and how much do you throw away?	Measure lunch waste Categorize content of lunch waste Identify ways to reduce solid waste	**Grade 4** CC.SL.4.1 CC.SL.4.4 CC.4.OA.3	**Grade 5** CC.SL.5.2 CC.SL.5.5 CC.5.NBT.7	Analyzing Applying mathematical concepts Collaborating Collecting data
			Grade 6 CC.SL.6.2 CC.SL.6.5 CC.6.NS.3		
4-6 **The Story of…** **I.A.3**	What kind of container is best for the environment?	Understand resources that make up packaging Determine ways to reuse or recycle packaging	**Grade 4** CC.SL.4.2 CC.SL.4.4 CC.W.4.8	**Grade 5** CC.SL.5.2 CC.SL.5.5 CC.W.5.8	Communicating information Designing Evaluating Gathering information
			Grade 6 CC.SL.6.2 CC.SL.6.5 CC.W.6.8		
4-6 **What Kind of Waste Am I?** **I.B.1**	Name one thing we throw away that didn't come from the earth.	Understand the characteristics of waste	**Grade 4** CC.L.4.3a CC.L.4.6 CC.SL.4.1c	**Grade 5** CC.L.5.3a CC.L.5.6 CC.SL.5.1c	Designing Developing models Identifying Questioning
			Grade 6 CC.L.6.3a CC.L.6.6 CC.SL.6.1c		

Lesson	Leading Question	Objective	Common Core Alignments		Skills
4-6 **The Lorax** **I.B.2**	What are some of the consequences of our throw-away habits?	Explore the impact of humans on natural systems Draw conclusions about the environmental impact of human behaviors	**Grade 4** CC.RI.4.3 CC.SL.4.2 CC.SL.4.6 CC.W.4.4 **Grade 6** CC.RI.6.3 CC.SL.6.3 CC.SL.6.4 CC.W.6.4	**Grade 5** CC.RI.5.3 CC.SL.5.3 CC.W.5.3 CC.W.5.4	Communicating solutions Interpreting Problem solving Researching
4-6 **Then and Now** **I.C.1**	How have our lifestyles changed in the past one hundred years? How have these changes affected our waste stream?	Describe ways in which changing domestic habits have intensified human impact on the environment	**Grade 4** CC.SL.4.1 CC.SL.4.3 CC.W.4.4 CC.W.4.7 **Grade 6** CC.SL.6.3 CC.W.6.4 CC.W.6.8	**Grade 5** CC.SL.5.2 CC.SL.5.3 CC.W.5.4 CC.W.5.8	Interviewing Inventing Investigating Synthesizing
4-6 **Hauling it Away** **II.A.1**	How much does waste disposal cost?	Understand that trash must be disposed of, that disposal options are limited, that managing trash can be problematic	**Grade 4** CC.SL.4.3 CC.SL.4.4 CC.W.4.2 CC.4.OA.3 **Grade 6** CC.SL.6.3 CC.SL.6.5 CC.W.6.2 CC.6.NS.3	**Grade 5** CC.SL.5.3 CC.SL.5.4 CC.W.5.2 CC.5.NBT.5	Applying mathematical concepts Communicating information Interviewing Questioning

Lesson Matrix Grade 4-6

3R's of the Common Core

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4-6 **Plastic Litter** **II.A.2**	Is plastic litter a problem?	Recognize the environmental hazards of plastic litter	**Grade 4** CC.L.4.6 CC.RI.4.2 CC.SL.4.2 CC.W.4.3	**Grade 5** CC.L.5.6 CC.RI.5.8 CC.SL.5.3 CC.W.5.3	Analyzing Carrying out investigations Explaining Observing
			Grade 6 CC.L.6.6 CC.RST.6-8.3 CC.RST.6-8.9 CC.W.6.3		
4-6 **Landfills** **II.B.1**	Do we take our trash to a sanitary landfill or an open dump?	Understand how sanitary landfills are made and are operated Understand the pollution problems associated with sanitary landfills	**Grade 4** CC.RI.4.7 CC.SL.4.1c CC.W.4.4	**Grade 5** CC.RI.5.7 CC.SL.5.1c CC.W.5.4	Designing Gathering information Observing Questioning
			Grade 6 CC.RI.6.7 CC.SL.6.1 CC.W.6.4		
4-6 **Investigating Incineration** **II.B.2**	Is burning a good way to get rid of trash?	Consider advantages and disadvantages of incineration	**Grade 4** CC. RI.4.5 CC.SL.4.1c CC.SL.4.3 CC.W.4.4	**Grade 5** CC.RI.5.5 CC.SL.5.1c CC.SL.5.3 CC.W.5.4	Analyzing Defining problems Evaluating Questioning
			Grade 6 CC.RI.6.6 CC.SL.6.1d CC.SL.6.3 CC.W.6.4		
4-6 **Solid Waste Bulletin Board** **II.C.1**	What can I do with this piece of solid waste?	Categorize solid waste items into reusable, recyclable, recoverable or able to be revised	**Grade 4** CC.L.4.6 CC.SL.4.4 CC.W.4.4	**Grade 5** CC.L.5.6 CC.SL.5.4 CC.W.5.4	Applying ideas to solve problems Designing Developing models Evaluating
			Grade 6 CC.L.6.6 CC.SL.6.4 CC.W.6.4		

Lesson	Leading Question	Objective	Common Core Alignments		Skills
4-6 **Pondering Packaging** **III.A.1**	What problems does packaging pose?	Examine examples of over or conglomerate packaging Assess the negative impact of overpackaging Brainstorm alternatives to overpackaging	**Grade 4** CC.L.4.6 CC.RI.4.8 CC.SL.4.1c CC.W.4.4	**Grade 5** CC.L.5.6 CC.RI.5.8 CC.SL.5.1c CC.W.5.4	Designing Developing models Interpreting Problem solving
			Grade 6 CC.L.6.6 CC.RI.6.8 CC.SL.6.1c CC.SL.6.6 CC.W.6.4		
4-6 **Wise Use of Paper** **III.A.2**	How much paper do you think you use? Do you need to use all of it?	Understand how much paper is wasted Know how to conserve paper	**Grade 4** CC.SL.4.1 CC.W.4.4 CC.4.MD.4	**Grade 5** CC.SL.5.1 CC.W.5.7 CC.5.MD.2	Collaborating Collecting data investigating Researching
			Grade 6 CC.SL.6.1 CC.W.6.7 CC.6.SP.2		
4-6 **New Things From Old** **III.A.3**	Why did our grandparents make patchwork quilts?	Understand that materials can be reused to make useful objects	**Grade 4** CC.SL.4.4 CC.RI.4.7 CC.RL.4.2	**Grade 5** CC.RI.5.7 CC.RL.5.2 CC.SL.5.5 CC.W.5.7	Collaborating Designing Interviewing Sharing research and writing
			Grade 6 CC.SL.6.6 CC.RI.6.7 CC.RL.6.2 CC.W.6.7		

Lesson Matrix Grade 4-6

3R's of the Common Core

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Lesson	Leading Question	Objective	Common Core Alignments		Skills
4-6 **Where From, Where To?** **III.B.1**	Where do things we use come from and where do they go to?	Trace lifecycle of objects from source, to consumer, and back again	**Grade 4** CC.SL.4.1c CC.SL.4.5 CC.W.4.4	**Grade 5** CC.SL.5.1c CC.SL.5.5 CC.W.5.4	Analyzing Applying ideas to solve problems Communicating information Researching
			Grade 6 CC.SL.6.1d CC.SL.6.5 CC.W.6.4		
4-6 **Papermaking** **III.B.2**	Why should we recycle paper?	Learn how paper is recycled Make recycled paper	**Grade 4** CC.L.4.6 CC.RI.4.3 CC.SL.4.2 CC.W.4.4 CC.4.MD.4	**Grade 5** CC.L.5.6 CC.RI.5.3 CC.SL.5.2 CC.5.MD.2 CC.5.NBT.7	Applying mathematical concepts Collecting data Designing Researching
			Grade 6 CC.RI.6.4 CC.RST.6-8.3 CC.SL.6.2 CC.6.RP.3c CC.6.SP.2		
4-6 **Where to Recycle** **III.B.3**	What is recyclable and where can we take our recyclables?	Gather information about where materials can be recycled	**Grade 4** CC.SL.4.1 CC.W.4.1b CC.W.4.6	**Grade 5** CC.SL.5.1 CC.W.5.1b CC.W.5.6	Collaborating Communicating information Gathering information Sharing research and writing
			Grade 6 CC.SL.6.1 CC.W.6.1b CC.W.6.6		
4-6 **Mini-Compost** **III.C.1**	What do you do with your food scraps?	Learn about recycling organic matter	**Grade 4** CC.RI.4.1 CC.W.4.4 CC.4.NBT.3	**Grade 5** CC.RI.5.2 CC.W.5.4 CC.5.OA.1	Graphing data Investigating Observing Predicting
			Grade 6 CC.RI.6.2 CC.W.6.4 CC.6.SP.2		

How Does Packaging Contribute to Waste?

Concept
Some packaging is better for the environment than others.

Objective
Students will gain an understanding of the resources which make up some typical packages and potential ways to reuse or recycle them.

Method
Students will answer questions about different containers.

Materials
Aluminum can, plastic bag, cardboard box, steel can, glass bottle, attached The Story of...

Subjects
Social Studies, Language Arts

Skills
Communicating information, designing, evaluating, gathering information

Time
Several class periods.

Vocabulary
Biodegradable, photodegradable, raw materials, natural resources, reuse, recycle, pollution, processing

Resources
Glass Packaging Institute; Reynolds Aluminum Company; The Aluminum Association; American Forest and Paper Association; Vicki Cobb, *The Secret Life of School*; Brad Herzog, *S is for Save the Planet: A How-to-be-Green Alphabet;* Norman Smith, *If It Shines, Clangs and Bends, Its Metas*; Suzanne Hilton, *How Do They Get Rid Of It?*

3R's of the Common Core
Parallel Activities
K-3, Gum Wrappers
7-8, Potato Cakes
9-12, Packaging Preferences
Information
Components of the Waste Stream
Packaging
Resources
Green Consumption, Consumerism and Sustainable Development
Solid Waste and Recycling

Leading Question

What kind of container do you think is best for the environment?

Procedure

1. Divide the class into five groups, each group representing one of the following common types of packaging:
    a. aluminum can
    b. plastic bag
    c. cardboard box
    d. tin can
    e. glass bottle
2. Each group will do some research into their packaging type using the attached The Story of... questions as guidelines for inquiry.
3. After completing their research, each group will produce a written report and either a multi-media component or visual display to present to the class explaining the discoveries about their type of packaging.
4. As a class, compare reports, discuss advantages and disadvantages of each type of container and decide which are most desirable.
5. Teacher to hold up examples of mixed packaging. Class to discuss problems caused by mixed packaging. See 4-6, III.A.1, Pondering Packaging.

Evaluation

Was the student able to report about a packaging type?

Common Core Alignments

GRADE 4

CC.SL.4.2
Speaking & Listening:
Comprehension & Collaboration

CC.SL.4.4
Speaking & Listening:
Presentation of Knowledge & Ideas

CC.W.4.8
Writing:
Research to Build & Present Knowledge

GRADE 5

CC.SL.5.2
Speaking & Listening:
Comprehension & Collaboration

CC.SL.5.5
Speaking & Listening:
Presentation of Knowledge & Ideas

CC.W.5.8
Writing:
Research to Build & Present Knowledge

GRADE 6

CC.SL.6.2
Speaking & Listening:
Comprehension & Collaboration

CC.SL.6.5
Speaking & Listening:
Presentation of Knowledge & Ideas

CC.W.6.8
Writing:
Research to Build & Present Knowledge

Classroom Activities

A. Try to use reusable containers for your lunch. Keep a tally of how many of the students bring reusable containers each day for a week. Award a prize to the student making the most effort.

B. Collect all the packaging from products you buy for a period of time. Could you have made wiser choices in your product selection? Could the manufacturer have made wiser choices in the package production?

C. Design an environmentally sound package for a product.

D. Write a letter thanking a local restaurant for using recyclable packaging for its takeout containers or a letter requesting that the restaurant consider changing its current packaging.

Name:_____ **Date:** _____

I am a/an _____ container.

Please tell my story by finding answers to the following questions:

1. Describe me.
2. What are some of the things I am used for?
3. What am I made of?
4. What natural resource do I come from?
5. Are large amounts of my raw materials available?
6. How does it affect the earth when companies extract my raw materials?
7. Does it take a large amount of energy to produce me?
8. Am I thrown away after I am used?
9. Am I biodegradable? Am I photodegradable?
10. Do I disintegrate if I am thrown into a river, lake or ocean? If so, by what chemical/ biological means do I disintegrate?
11. What are some ways in which I could be reused?
12. Can I be recycled? Am I recycled? Where am I recycled?
13. What happens to me when I am recycled?
14. Who is responsible for disposing of me?
15. Who pays the cost for disposal?
16. Do you think I am a good container? Why or why not?

From our friends at allfreeholidaycrafts.com

Turn Broken Flip flops into DIY Stamps

By: Lisa Neri from cucicucicoo.com

"It's so annoying when your flip flops break and it's bad for the environment to throw them in the trash. So what can you do with your broken flip flops? Easy: turn them into fun DIY alphabet stamps, pedicure toe separators and anti-pinch window guards! Cut a flip flop into rectangles and use an Xacto knife to cut out the shapes or letters that you want. For the toe separators and window guards, all you have to do is cut openings in a larger piece. So easy and a super useful upcycling project!"

Click here for free holiday craft

Thanks so much for looking! ? Lisa

Estimated Cost: Under $10

Time to Complete: Weekend project

Primary Technique: Green Crafting

Holiday: Summer

Materials List

- Broken flip flops
- Scissors and/or Xacto knife (with parental permission/supervision)

For all the instructions, and other ideas for old flip flops, go to: http://www.cucicucicoo.com/2009/06/cosa-fare-con-infradita-vecchie/

Quick Repair for Broken Flip Flops

If you haven't given up hope, we also found this video on a simple fix for Flip Flops: https://www.youtube.com/watch?v=A_Qalc4I2l4