RethinkWaste
Ryan’s Week Lesson Booklet

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# Ryan’s Week Schedule

Overview: Students join Ryan on her week-long quest to learn about waste. Each day includes a full lesson that begins with a short story.

Instructions: Start on Monday and follow the story and corresponding lessons for the entire week or select individual lessons based on grade level, time, topic, etc.

<table>
<thead>
<tr>
<th>Day</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Ryan’s interest in waste is sparked and her curiosity inspires her to learn more.我们都开始&lt;/p&gt;</td>
</tr>
<tr>
<td></td>
<td>We start the week by watching a video to learn what waste is. Afterwards, we will:</td>
</tr>
<tr>
<td></td>
<td>- Complete a reflection worksheet (K-5)</td>
</tr>
<tr>
<td></td>
<td>- Build a model landfill with items from around your home (3-5)</td>
</tr>
<tr>
<td>Tuesday</td>
<td>After learning the basics of waste, Ryan explores how to dispose of her waste properly.</td>
</tr>
<tr>
<td></td>
<td>Today we practice sorting our waste:</td>
</tr>
<tr>
<td></td>
<td>- Watch an episode of the Green Zone</td>
</tr>
<tr>
<td></td>
<td>- Test our skills by playing a sorting game</td>
</tr>
<tr>
<td></td>
<td>- Teach others about sorting</td>
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<tr>
<td></td>
<td>- Put up sorting guides at home</td>
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<tr>
<td></td>
<td>- Write a letter to someone explaining the importance of sorting</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Now that Ryan has knows more about waste and sorting, she wants to see how her own family is doing. She performs a waste audit of her home.</td>
</tr>
<tr>
<td></td>
<td>We are going to be waste detectives for a day! During the at home waste audit we will:</td>
</tr>
<tr>
<td></td>
<td>- Record data on the type of waste we see</td>
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<tr>
<td></td>
<td>- Use math to find fractions of our waste</td>
</tr>
<tr>
<td></td>
<td>- Discuss what we learned</td>
</tr>
<tr>
<td>Thursday</td>
<td>Ryan hopes to reduce what she sends to the landfill by finding new ways to use and repair old, broken items before throwing them away.</td>
</tr>
<tr>
<td></td>
<td>Today is all about the special 5th &quot;R&quot; - Repair! In the Repair lesson, we will:</td>
</tr>
<tr>
<td></td>
<td>- Look at broken items around the house</td>
</tr>
<tr>
<td></td>
<td>- Brainstorm ways to fix those items</td>
</tr>
<tr>
<td>Friday</td>
<td>After a week of waste lessons, Ryan is excited to share and reflect on her findings.</td>
</tr>
<tr>
<td></td>
<td>Let’s reflect on all the important things we learned about waste this week!</td>
</tr>
</tbody>
</table>
What is Waste?

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   d. Driving Question
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   c. Instructions
   d. Video
   e. Reflection, K-2
   f. Reflection, 3-5
What is Waste?
Teacher Lesson Plan

Overview

On average, Americans throw away 4.5 pounds of waste daily. Over 50% of this waste is sent to be buried forever at the landfill. Not only is this a poor use of our natural resources, but landfills also release methane, a powerful greenhouse gas, that contributes to climate change.

By taking actions like practicing the 4R’s (Reduce, Reuse, Recycle, and Rot), we can make a positive difference by decreasing and diverting the waste we generate.

Purpose & Learning Objectives

This activity allows students to reflect on the What is Waste video. Students will be able to share how they feel, better understand waste processes, and communicate what they wish to learn more about. By learning more about waste issues, students can discuss with others and encourage others to participate.

Materials

Students will need internet access to watch the video before completing this reflection sheet. Adult facilitation is helpful for this activity.

Driving Question

What happens to our items after we are done using them? How does the way that we discard them affect the environment?
Introduction

Meet Ryan! Ryan is a fourth grader from San Mateo, California. She lives in an apartment with her mom, dad, and their big dog, Jax. While Ryan plays many sports, her favorite is soccer. When she isn’t practicing soccer with her friends, she likes to sing, paint, and take dance lessons at the community center with her mom.

At school, Ryan enjoys learning fun facts and new things that she can talk about with her classmates, friends, and family. She enjoys it so much, she wants to be an author so she can turn what she learns into stories to share with even more people!

On a sunny day in April, Ryan plays soccer with her friends at recess. She gives a final kick and the ball soars into the goal just as she hears the teacher’s whistle blow. Ryan’s class lines up and heads back inside. As they approach the classroom, Ryan notices that the class lights are off and the TV screen is on. The students all take their seats, and Mr. Wilson explains that for Earth Day they'll be watching a documentary on where waste goes.

Ryan watches the movie and is amazed by what she’s learning. She sees a truck pick up waste in a neighborhood that looks just like hers! The truck drops the garbage off at a Transfer Station, where hundreds of garbage bags are loaded into a huge semi-truck. She watches as the semi-truck dumps its waste into the landfill to be buried, and... oh no! Birds swoop down, trying to eat the trash. As she listens to the movie closely, Ryan hears someone say, “Each of us makes about 4.5 pounds of waste a day.” Ryan looks at her friend in disbelief. “No way!”, she thinks to herself. The documentary ends, but the idea of waste sticks with her.

Ryan makes it her mission to find out more about waste. Using the computer in the library, Ryan asks her teacher if she can look up more information about waste. With her teacher’s approval, Ryan begins her search to find out more. Are there different types of waste? Does all waste go to the landfill? What else could we do with waste instead? So many questions!

Key Terms

**WASTE:** Anything no longer needed or wanted

**RECYCLING:** To make new products from used material. This is what happens to items in our blue recycling bin

**GARBAGE:** Items that are no longer useful, can’t be recycled, composted, or fixed which are sent to a landfill
Watch the "What is Waste?" video and then answer the questions below.
Note: If you do not have access to a printer, please complete the lesson using the Google Form.

1. Did you think of another item that belongs in the garbage? Write it below:

2. Are you excited to learn more about waste this week? What are you most excited to learn more about?

3. How did it make you feel when you saw the different kinds of waste (garbage, compost, and recycling)?

4. Why is it bad when garbage items go into nature?

5. What is one thing that your family can do to make less garbage?

6. Imagine a plastic water bottle. Can you think of a new way to use it?
What is Waste?
Student Worksheet, Grades 3-5

Instructions & Reflection Questions

Watch the "What is Waste?" video and then answer the questions below.
Note: If you do not have access to a printer, please complete the lesson using the Google Form.

1. Did you think of another item that belongs in the garbage? Write it below:

2. Are you excited to learn more about waste this week? What are you most excited to learn more about?

3. How did it make you feel when you saw the different kinds of waste (garbage, compost, and recycling)?

4. Review the 4R’s: Reduce, Reuse, Recycle, and Rot. Can you think of a 5th R?

5. How do you and your family practice the 4R’s? Try to think of 1 example for Reduce, 1 example for Reuse, 1 example for Recycle, and 1 example for Rot.

Next, complete the Build A Model Landfill* activity!
*Build a Model Landfill adapted from our partners at the County’s Office of Sustainability
Let’s Sort Successfully!

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   f. Standards & Topic Connections
   g. Adaptations & Extensions

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Let’s Sort Successfully! Teacher Lesson Plan

Overview

Did you know that 39,485,479.05 tons of waste were sent to California landfills in 2018 alone (Cal Recycle, 2018)? Of this, 181,189 tons were from the RethinkWaste service area (RethinkWaste, 2019). While this comprises less than 1% of our state’s total landfilled waste, we can still work to reduce it.

When material is sent to the landfill, it is compacted and becomes a source of methane, which is a greenhouse gas that contributes to climate change. By reducing the amount of waste we are sending to landfill, we are reducing the amount of methane sent into our atmosphere.

Purpose & Learning Objectives

This activity allows students to reflect on their own behaviors and think about how they affect the environment. Students are encouraged to share what they have learned with their caretakers or other decision-makers in their community.

Materials

Students will need internet access for this activity. They will also need a pencil and paper. Adult facilitation is strongly recommended but not required.

Driving Question

How does sorting our waste into the compost, recycling, and garbage bins help the environment?
Let’s Sort Successfully! Grades 2-5
Teacher Lesson Plan

Key Terms

ORGANIC MATTER: Matter that has come from a recently living organism. Organic matter can decay, or break down

FOOD SOILED PAPER: Paper products that have come in contact with food. Ex: A used napkin

CONTAMINATION: To make something unusable by adding things that don’t belong

Standards & Topics Connections

One Planet Living Topic
Zero Waste, Products & Materials (Consumption)

Environmental Principles and Concepts (EP&Cs)
Principals 1, 2, 3, 4, and 5

Standards: NGSS, HSS, Common Core
Crosswalk of Standards

Problem Exploration
NGSS: 3-5-ETS1-1, 3-5-ETS1-2, 5-PS1-3, 5-ESS3-1

HSS: Geography of the Local Region, Development of the Local Community, Change Over Time

Common Core: 3-5.W.1, 3-5.W.8, 3-5.SL.6, 3-5.L.1, 3-5.L.2, 3-5.L.3, 3-5.L.6

Adaptations & Extensions

This lesson can be extended to learn about sorting at the Material Recovery Facility (MRF). Follow this lesson plan* where students use critical thinking and engineering skills to build their own MRF!

*Lesson adapted from Wake County Environmental Services
Introduction

Yesterday, Ryan decided to learn more about waste after hearing that “Each of us makes about 4.5 pounds of waste a day.” With permission from her librarian and teacher, Ryan used a computer to do research. Ryan discovered that:
1. All of our garbage is taken to a landfill, where it is buried in the ground.
2. Waste that makes its way into our environment can harm people and nature.
3. We can all help make a difference by making less waste!

Learning about waste problems makes Ryan wonder what she can do about it. She remembers the blue bin in her classroom, for all of the paper scraps - Mr. Wilson said that those scraps will be made into new paper. Ryan has a similar blue recycling bin at her family’s apartment, but she’s not sure her family knows what other items can be recycled besides paper.

Ryan sets a goal to learn how to sort her waste properly. She knows that correctly sorting items into the recycling and compost bins means less of her waste has to go to the landfill. But…Ryan realizes that her apartment doesn’t have a compost bin. They’ve been putting food and dirty napkins in the garbage bin, but if she got a compost bin, they could put food stuff in there instead!

Ryan decides to ask her mom for help. Ryan’s mom listens to the dilemma and begins to think. “Well,” says Ryan’s mom, “Maybe we should write a letter to the person in charge of our apartment complex and ask for a compost bin!” Ryan smiles excitedly. “Great idea!” she says, as she jets off to find a pencil and paper.

Instructions

1. Watch Episode 2 of The Green Zone.
2. Next, try your hand at sorting with this game on the RethinkWaste website.
3. Share what you’ve learned with everyone that you live with! If you have recycling, compost, and garbage options available to you at home, pick one of these options:
   - Post these signs wherever you see waste bins in your home.
   - Create your own new signs and post them wherever you see waste bins in your home. Use words or phrases that will work best for you and your family!
   - Teach the other people that you live with about how and why we sort our waste.

If you do not have sorting options available to you at home or at school, write a letter to whoever is in charge of arranging these services. For example, this could be your apartment complex’s property manager, your principal, or your adult guardian.

- Explain why you are requesting compost or recycling services, and why it is important that we do our best to sort our waste!
- If you don’t have a compost pail in your kitchen, ask your parent or an adult in your household to help request a free compost pail by contacting Recology here.
Reflection Questions

Note: To access the reflection questions online, click here.

Below are the printable version of the reflection questions:

1. Who or what do you think is affected by landfills being in or near their homes? Do you think they like the landfill? Hint: Think about smells, litter, and natural habitats!

2. What is the benefit of putting food in the compost bin instead of the garbage bin? What about putting recyclable items in the recycling bin instead of the garbage bin?

3. What is one change that you can make in your own life to send fewer things to the landfill?

4. What is one thing that you’ve learned during this lesson that you wish everyone knew?
Waste Detectives

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   e. Data Review
   f. Reflection
   g. Practicing the 4Rs at Home
Overview

In America, more than half of all of our waste gets sent to landfills (EPA, 2020). Yet, a significant portion of the waste sent to landfills should be composted or recycled instead. We can improve our use of natural resources by ensuring that recyclable items are remade, and compostable items can properly decay.

In this lesson, students will conduct a waste audit to tally what materials they commonly throw away. After some reflection, students will conduct an additional waste audit to see what impact their new behavioral changes have on their waste output. This lesson intends to increase awareness and change waste habits through a waste composition study, data review, and analysis.

Purpose & Learning Objectives

This activity allows students to reflect on their own behaviors and think about how they affect the environment. Students are encouraged to share what they have learned with their caretakers or other decision-makers in their community.

Materials

Students will need internet access for this activity. They will also need a pencil and paper. Adult facilitation is required for younger students.

Driving Question

What kinds of waste do we make? How can studying our waste help us to reduce it?
Introduction

Two days ago, Ryan watched a documentary about waste. She was so surprised to learn that each day, Americans make about 4.5 pounds of waste! Ryan was inspired to do some more research to find out how to sort waste properly into the recycling and compost bins. Today, she’s going to see how much waste her family makes.

Ryan knows that sending all of her family’s waste to the landfill would not be good for the environment. When we put waste into the garbage bin, it goes straight to the landfill where it is buried forever. Ryan really wants to change her family’s habits - she wants everyone to use compost and recycling bins as much as possible, since things that go in those bins can be made into something new!

Ryan makes up her mind: she is going to show her parents how much waste they can save from going to the landfill by doing a waste audit. She will count her family’s waste and demonstrate what should be recycled and composted. Then, hopefully they'll want to learn how to sort properly, too. Fingers crossed!

Key Terms

COMPOST: A nutrient-rich fertilizer made from our food and yard scraps. Anything we put in our green compost bin becomes fertilizer.

LANDFILL: An area of land meant to handle the disposal of solid waste. The landfill is the final destination for anything we put in our garbage bin.

REDUCE: To make less waste by using fewer items and resources.

REUSE: To extend the life of an item by using it over and over again or thinking of new ways to use it.

RECYCLE: To make new products from used materials. This is what happens to items put in our blue bin.
**Instructions**

**Step 1:** For this activity, we will be taking a detailed look at the waste we create for 2 days! This is called a waste audit. From when you wake up to when you go to bed, make a list of the types of items you are using throughout the day (ex: hard plastic container). Keep a tally of these items in the provided table.

To see an example waste audit and a refresher on how to sort your waste correctly into each bin, watch this video.

**Step 2:** Answer the Data Review and Discussion questions.

**Step 3:** Next, do your best to reduce your waste over the next week. Try to use less paper, reuse containers, and save your leftovers for later! See the provided “Tips and Tricks” sheet for more ways to reduce.

**Step 4:** Conduct another waste audit. Think about what changed and what stayed the same.

Optional: If you do not have a compost pail in your kitchen, ask your parent or an adult in your household to help request a free compost pail by contacting Recology here.

If you live in an apartment, ask your parent or an adult to talk to the property manager of your apartment complex about getting compost services for everyone in your building!

Remember: When we put items in the black bin, they go straight to the landfill and are buried in the ground forever. This means that if we put compostable or recyclable items into the landfill bin, they can never turn into nutrient-rich fertilizer or new items.

We all share the planet Earth with each other. Let’s do our part and think before we throw!
# Waste Detectives Student Worksheet

## Waste Audit #1

<table>
<thead>
<tr>
<th>Material type</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Plastic</td>
<td></td>
</tr>
<tr>
<td>Water bottles, applesauce and yogurt containers, peanut butter jars, etc.</td>
<td></td>
</tr>
<tr>
<td>Soft Plastic</td>
<td></td>
</tr>
<tr>
<td>Chip and candy wrappers, zip-top bags, plastic lids to snack containers, etc.</td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td></td>
</tr>
<tr>
<td>Cans for tuna, soup, beans, soda cans, aluminum foil, etc.</td>
<td></td>
</tr>
<tr>
<td>Paper/Cardboard</td>
<td></td>
</tr>
<tr>
<td>Boxes for cereal or snack bars, junk mail, magazines, newspaper, etc.</td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td></td>
</tr>
<tr>
<td>Soda bottles, jars for pasta, jam, pickles, etc.</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Plastic straws, plastic utensils, juice boxes, tissues, diapers, pet waste, etc.</td>
<td></td>
</tr>
<tr>
<td>Food Scraps</td>
<td></td>
</tr>
<tr>
<td>Egg shells, fruit peels, chicken bones, any uneaten food items</td>
<td></td>
</tr>
</tbody>
</table>

Notes and Observations:
## Waste Audit #2

<table>
<thead>
<tr>
<th>Material type</th>
<th>Tally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Plastic</td>
<td></td>
</tr>
<tr>
<td>Water bottles, applesauce and yogurt containers, peanut butter jars, etc.</td>
<td></td>
</tr>
<tr>
<td>Soft Plastic</td>
<td></td>
</tr>
<tr>
<td>Chip and candy wrappers, zip-top bags, plastic lids to snack containers, etc.</td>
<td></td>
</tr>
<tr>
<td>Metals</td>
<td></td>
</tr>
<tr>
<td>Cans for tuna, soup, beans, soda cans, aluminum foil, etc.</td>
<td></td>
</tr>
<tr>
<td>Paper/Cardboard</td>
<td></td>
</tr>
<tr>
<td>Boxes for cereal or snack bars, junk mail, magazines, newspaper, etc.</td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td></td>
</tr>
<tr>
<td>Soda bottles, jars for pasta, jam, pickles, etc.</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Plastic straws, plastic utensils, juice boxes, tissues, diapers, pet waste, etc.</td>
<td></td>
</tr>
<tr>
<td>Food Scraps</td>
<td></td>
</tr>
<tr>
<td>Egg shells, fruit peels, chicken bones, any uneaten food items</td>
<td></td>
</tr>
</tbody>
</table>

Notes and Observations:
Waste Detectives
Student Worksheet

Data Review

1. What material type did you generate the most of?

2. What fraction of your waste was soft plastic?

3. What fraction of your waste was hard plastic, metals, paper/cardboard, glass, AND food scraps? When sorted into the correct bins, these items will not end up in a landfill.

4. Choose 10 items and graph them by material type below. What do you notice?

<table>
<thead>
<tr>
<th>10</th>
<th>9</th>
<th>8</th>
<th>7</th>
<th>6</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard Plastic</td>
<td>Soft Plastic</td>
<td>Glass</td>
<td>Metal</td>
<td>Paper</td>
<td>Fabric</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Take out your crayons, colored pencils, and markers and get ready to express yourself! First, think about what feelings you had while doing this lesson. Go ahead and write down all of the different feelings (mad, sad, happy, angry, worried, etc.) on the lines. Pick a color for each of the feelings that you wrote down. Fill in the box next to the line with each of the different colors. Color in the heart to show how this lesson made you feel. After you’re done drawing, show your drawing to someone and tell them about it.

Waste Detectives, Grades 2-5

Reflection Questions

1. How is the waste you create at home different from the waste you create at school? Why is it different (or the same)?

2. Think about your answer to Question 1 of the Data Review. How could you reduce the amount of waste you create in this category? What about the other categories?

3. Color Your Feelings!
Take out your crayons, colored pencils, and markers and get ready to express yourself! First, think about what feelings you had while doing this lesson. Go ahead and write down all of the different feelings (mad, sad, happy, angry, worried, etc.) on the lines. Pick a color for each of the feelings that you wrote down. Fill in the box next to the line with each of the different colors. Color in the heart to show how this lesson made you feel. After you’re done drawing, show your drawing to someone and tell them about it.
Waste Detectives
Student Worksheet

Practicing the 4R’s at Home

Reducing your waste can seem hard, especially when it feels like everything is wrapped in packaging! Here are a few tips for practicing the 4R’s (Reduce, Reuse, Recycle, Rot) at home.

**Bulk Buy:** Small snack bags are perfect to pack in our lunches, but they create a lot of waste that gets sent to the landfill. Instead, buy a bigger container of your favorite snack and pack them in reusable containers. This is also a great way to reduce the number of trips you take to the grocery store.

**Reuse Reuse Reuse:** Store leftovers in containers instead of plastic bags. If you prefer plastic bags or it’s what you have on hand, give them a quick rinse so you can use them more than once.

Instead of putting plastic food containers from restaurants and markets in the recycling or trash, clean them out and use them to store food or other small household items.

**Dismiss Disposables:** When ordering food to-go or delivery, ask the staff not to include disposable utensils if you will be eating at home.

Instead of using paper towels, try using more cloth napkins or small hand towels that can be washed when necessary.

Beeswax wrap is an easy, sustainable alternative to one-use plastic wrap. You can even make your own!

**Successful Storage Systems:** Try to eat food that will spoil first - move them to the front of the fridge or create a special, designated area for them and tell the people you are living with!

**Bad Banana Becomes Bread:** Be creative with produce that is past its prime. Soft fruits can go into smoothies and wilted vegetables can be added to soup or stew.

**Clean Clutter but Curb Waste:** If you plan to start spring cleaning early, save items that you don’t want but are in good condition for donation.
Another “R”: Repair!

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2. Student Worksheet, pages 24-29
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   b. Fix-It Tips
   c. Materials
   d. Instructions
   e. Repair Journal
   f. Reflection
Another “R”: Repair!
Teacher Lesson Plan

Overview

Waste is generated at an increasing rate every year. On average, one person living in America (that includes us!) makes about 42 pounds of electronic waste per year. Sadly, most of that will likely end up in landfills.

From electronics to small appliances, furniture to clothing, we want to remind students that “broken” doesn’t have to mean “trash”. We can all help conserve our natural resources by trying to fix our broken items instead of throwing them away. We know the 4R’s: Reduce, Reuse, Recycle, and Rot (Compost). Now, we want to introduce one more important “R”: Repair!

Purpose & Learning Objectives

This activity gives students the opportunity to practice observation skills by noting broken items in their home. They will be prompted to reflect on and discuss the theme of “Repair” using cause-and-effect reasoning. Students will also engage in creative problem-solving by brainstorming possible solutions and sketching.

Driving Question

How does repairing our broken goods benefit the environment?

Materials

Students need a notepad and pencil to record their broken items if they are unable to print the following worksheets. Internet access will be helpful for the lesson extension where students can directly input their data. Assistance from an adult is strongly recommended, but not required.

Key Terms

**REPAIR**
To fix or mend something that is broken.

**MATERIAL**
What things are made of; the elements, substance, or parts of which something is made or can be made with.
This activity can be expanded to analyze data as a class and include multiple students. Each student can input their findings into a spreadsheet, logging information such as number of broken items, item type(s), and brand(s). This data can then be graphed for further analysis and/or mathematical calculations. Use “Lesson Repair Template” as an example.

Alternatively, teachers may facilitate a discussion among students and encourage them to share their findings and compare what they found. This could become an extended exercise by keeping a posted log in the classroom (or online) of broken items at home and/or school.
Introduction

On Monday, Ryan watched a movie about waste and did some extra research. On Tuesday, she learned how to properly sort using the compost, recycling, and garbage bins. Yesterday, Ryan conducted a waste audit of her home. She looked through her family’s waste to see what they throw away. She even wrote a letter to ask for a compost bin at her apartment. Today, Ryan tries new ways she could use items before putting them in any of the bins.

“Daaaaaaad!” Ryan yells. “Have you seen Teddy?” Ryan has been searching high and low for her favorite teddy bear, but can’t seem to find it. Ryan’s dad tells her that he hasn’t seen it either. Ryan continues searching, but it’s not under her bed, behind the couch, or in her chest of toys. Ryan sits on the couch to think about where it might be.

From the corner of her eye, she sees a flash of golden fur. Ryan turns to look and sees Teddy in her dog’s mouth! She gently wrestles the toy from her dog, but notices that Teddy’s arm is badly ripped. Ryan thinks about throwing the toy away, but she’s had so much fun playing with Teddy.

Ryan thinks back to everything that she’s learned this week and decides that she doesn’t want her toy to be buried at the landfill. Can she glue it back together? Maybe she can reuse the fabric for an art project. Finally, Ryan decides to ask her dad for help sewing the rip!

A Few Tips from the Fix-it Fairies!

Clothing can easily be fixed by sewing up small holes or putting patches over large rips. Even a broken backpack strap can be repaired with a needle and thread!

Has the rubber or plastic covering on a cord worn away or broken so that the metal wires are exposed? Use some electrical tape to carefully cover up the wire - no need to buy a new one.

A zipper that opens behind the zipper slider is an easy fix. Use locking pliers to squeeze the top and bottom plates of the zipper slider closer together - just a little at a time. Repeat slowly until the zipper starts closing behind the zipper pull.
Another ”R”: Repair!
Student Worksheet

Materials
All you will need is a pencil and creativity. You can either print the table from this worksheet, or write your answers on a separate sheet of paper and type it in later. Try using scratch paper if you have some available.

Instructions

**STEP 1**  Walk through all the rooms in your home. In each room, look for items that are broken in any way. This could be items like appliances, electronics, clothing, etc. Ask an adult to help you if you can’t reach something or if you aren’t sure what something is.

**STEP 2**  When you find an item that could be repaired, document the details. Carefully fill out the table on the next page of this worksheet, or write down the answers to these questions if you’re using a separate sheet of paper:

- What is today’s date?
- What is the item that is broken? Write the name or draw the item
- Where was it found? Example: kitchen cabinet
- What material is this item made of? Example: glass and plastic
- What is it (intended to be) used for?
- How often would we use it if it were working? Every day? Once a year?

**STEP 3**  Repeat Steps 1 and 2 until you think you’ve found all of the broken items in your home. You can also check your back or front yard, with adult permission.
<table>
<thead>
<tr>
<th>Date</th>
<th>What item is broken? Write or draw</th>
<th>Where was it found?</th>
<th>What material is this item made of? How often do we use it? Write a sentence.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: 9/1/20</td>
<td>Example: Clothes iron</td>
<td>Example: Laundry room shelf</td>
<td>Example: The iron is made of plastic and metal. We use it 3 times a week.</td>
</tr>
</tbody>
</table>

Example: 9/1/20

Clothes iron

Laundry room shelf

Example: The iron is made of plastic and metal. We use it 3 times a week.
**Another “R”: Repair!**

**Repair Journal**

<table>
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</table>
1. Find the sum of all of the broken items. Then, multiply the sum by the number of classmates you have. How many total broken items might belong to you and all of your classmates combined?

2. Graph the number of items by material type. What material breaks the easiest? What material does not seem to break as easily? If an item is made of more than 1 material, pick the material that makes up the majority of the item.

3. Choose one item and guess how it might need to be fixed. Write your idea below. Then, with the help of an adult, look up a video on how to fix the item. Was your idea similar? What were the similarities? What were the differences?
4. How do you think this item could have been made differently to prevent it from breaking in the first place?

5. What do you think about when considering whether or not to fix a broken item vs. replace it? Cost? Convenience? Time?

With the permission of an adult, report your broken items here: http://bit.ly/brokenitemreport. If you can, hold on to these items for the next Fixit Clinic in your neighborhood.

If your teacher is collecting data from your class, input your findings into the shared spreadsheet.
Ryan’s Week Wrap-Up

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   b. Purpose & Learning Objectives
2. Student Worksheet, pages 32-35
   a. Part I: Reflection
   b. Part II: Nature Walk
Ryan’s Week Wrap-Up
Teacher Lesson Plan

Overview

In 2018 alone, the RethinkWaste service area sent 181,189 tons of waste to the landfill (RethinkWaste, 2019). Over the course of the week, students have come to understand why it is important to decrease that amount. By working together and making small but significant changes, we can reduce it!

Students will have an opportunity to reflect on what they learned, what they will do differently, and why it matters.

As the final day of Ryan’s Week, this lesson concludes in an introspective walk, where students will use their senses to appreciate nature.

Purpose & Learning Objectives

This activity allows students to reflect on what they learned this week and how they can change their habits. Students will internalize the lessons and enjoy nature by taking a mindful walk.

Driving Question

How does our waste impact the environment? What can we do to decrease our impact?
Part I: Reflection

We've made it to the final day of Ryan's Week! This week, we followed Ryan as she investigated what waste is generated in her home and the ways she can reduce what goes to the landfill. She learned about how to sort properly, what happens to the waste she puts into the 3 bins, and why it is so important (and fun!) to try repairing and reusing things before throwing them away.

Reflect on the activities you completed for Ryan's Week and answer the following discussion questions:

1. What is something you learned this week that surprised you?

2. Describe how you felt about waste at the beginning of the week and compare it to how you feel now. Are you more confident about what goes into the different bins?

3. Why do you think it is important that we learn about waste?
4. Where does waste come from, and why do we have so much of it?

5. Ryan’s challenge to you: Think back to the waste audit you completed. What is one change you or your family is going to make next week to reduce the amount of waste being thrown out?

Part II: Nature Walk

It is important to connect to our environment, so we can better understand why we need to protect it. Let’s stretch our muscles and enjoy the great outdoors! With your guardian’s permission, go for a walk around your neighborhood (or another natural setting) with a family member or friend.

Pay close attention to your five senses while out and about: sight, smell, hearing, touch, and taste. Sometimes we forget to appreciate the small, everyday things because we are so used to having them around - like the sound of birds chirping or the nice cool feeling of the breeze on your skin!

1. What is one interesting thing that you saw during your walk? How did you feel when you saw it?
2. What is one quiet thing you heard during your walk? Where was the sound coming from?

3. Gently touch a safe item during your walk, like grass, a flower petal, or tree bark. Circle the descriptors: Was the item hard / soft / furry / prickly / rough / smooth? Did it make you feel happy / sad / excited / nervous / scared? Write your other feelings below!

4. Describe a smell that you encountered during your walk. What was your reaction to the smell?

5. Our final sense: taste! What was the first thing you ate when you got home from your walk? What did you enjoy about eating this item?
Use the blank space below to draw one thing that made you happy during your walk. Thank you for working hard to keep Earth beautiful!