

Our Planet, R Choices

Assembly Discussion Guide



King County's assembly program **Our Planet, R Choices** encourages students to practice the four Rs - Rethink, Reduce, Reuse and Recycle - at home and in school to prevent the waste of valuable resources. By explaining the preferred order of the 4 Rs, **Our Planet, R Choices** enables students to see that each choice has a different impact on the planet and its resources, and that the best choice for the environment is often easy to make if we simply rethink!

The version of the assembly for primary students emphasizes keeping materials out of the landfill by first rethinking their actions. It provides examples of sorting out what is reusable, recyclable, compostable or trash. The version for intermediate students includes a more in-depth look at reducing food waste, encouraging students to take only what they can use or eat.

The assembly is part of King County's effort to keep materials of value, whether for reuse, resale, or recycling, out of the landfill. More than half of what ends up in King County's Cedar Hills Regional Landfill is readily recyclable. By keeping paper, wood, scrap metal, glass, plastic and food out of the landfill, only garbage - materials that currently have no other use - is left for disposal.

About the Assembly

As the program begins, students find themselves in the audience of a science talk show. The host Yvanna Use-less will be asking members of the audience how they manage their waste at school and has invited special guest, Dr. Wally Y. Waste-Me, an expert in the field of waste, to assist. Yvanna discovers that Wally is actually expert at wasting rather than managing waste and sends him on a journey of discovery.

Wally's journey takes him to the landfill where he learns the source of all the stuff we buy and use and where he is introduced to the four Rs. He next visits with a mysterious professor who teaches him the preferred order of the four Rs. He learns that rethinking helps us realize that reducing waste and reusing items use fewer resources than recycling. Through practice and a fun game show, Wally realizes that the best choices for the environment are often easy to make with a little rethinking.

During the assembly, have your students watch for

- the order of the four Rs.
- what happens to things that get thrown away.
- examples of how to reduce waste.
- ways in which the characters practice rethinking.

Essential Learnings

Students use listening and observation skills to gain understanding of environmental and resource issues. They learn about garbage systems and cycles.

Discussion Questions and Activities

Teachers may wish to introduce some of the concepts in this guide prior to the assembly so students can watch and understand what the characters say about garbage, natural resources, and rethinking their choices.



King County

Department of
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Solid Waste Division

Garbage

What is garbage? *Things we can't use or don't want anymore. Things that no longer have use or value that we put in the trash.*

Where does your garbage go? *All of the garbage in King County, (except for the city of Seattle) goes to the Cedar Hills Regional Landfill. The landfill is operated by the King County Solid Waste Division, sponsor of the assembly.*

Activity – What sorts of things does your class throw away? Record what is in your classroom garbage can over the course of a day, weigh the garbage and calculate how much each student throws away on average.

Follow-up – After the assembly, review the list of what is thrown away and discuss ways to rethink these items.



Facts

- The Cedar Hills landfill covers over 920 acres and receives about one million tons of waste a year.
- Most of our garbage is paper (23%) and food (19%), materials that can be either recycled or composted. Other components include
 - wood/yard waste 14%
 - plastic 13%
 - metal 5%
 - glass 2%

Natural Resources

What are natural resources? *Stuff we use from nature to make the things we need, such as metal to make soda cans, oil to make plastic, or trees to make paper. Almost all manufacturing processes require water as well.*

Activity – I Spy a Resource

One student thinks of an item in the classroom and tells the class what resources it is made from. The class guesses what the item is. The student who guesses correctly gets the next turn.

Activity – The Story of Our Stuff

Ask students to pick an everyday item and create a poster of its pathway or “life cycle.” Use these guiding questions: What resources is it made from? How long will you use it? Where will it end up when you're finished with it? Rethink an alternative ending or story other than the landfill.

Facts

- The average American uses 650 pounds of paper each year.
- Trees absorb carbon dioxide, one of the greenhouse gases responsible for global warming. Each tree absorbs almost 15 pounds of carbon dioxide from the air each year.
- Nearly 10 percent of U.S. oil consumption - approximately two million barrels a day - is used to make plastic.
- Each year, Americans throw away almost one hundred billion plastic bags and only six percent are recycled.
- Some natural resources, such as oil and metals, are non-renewable – when they're gone, they're gone!



The Four Rs

What are the 4 Rs? *Rethink, Reduce, Reuse, Recycle.*

What does it mean to rethink? *To think twice about the choices you make. Can you do or choose something that saves more natural resources?*

What does it mean to reduce? *To use less in the first place.*

What does it mean to reuse? *To use an item over and over again.*

What does it mean to recycle? *To turn a used item into something brand new.*



Rethink R Activities

In what ways did Yvanna and Wally rethink the stuff they used? *They chose a canvas bag instead of plastic grocery bag, used a durable water bottle, packed their own lunch, used both sides of a piece of paper, composted food and food-soiled paper, among other actions.*

Why is rethinking so important? *If we think about the stuff we use, where it came from and where it will end up and make our choices accordingly, we will save natural resources, keep items out of the landfill and prevent waste.*



Activity – Practice Rethinking!

Make a list with students of the ways they practice the 4 Rs at home and school. What are some ways to reduce waste? *Examples could include using a durable water bottle or replacing paper towels with a sponge.* What are some easy items to reuse? *Examples could include reusing a plastic grocery bag, wrapping paper or packing material.*

Activity – The Coat of ARRRRs

After the assembly, have students create their own “coat of ARRRRs” to display. Ask them to use actual items used at school or at home that demonstrate rethinking, reducing, reusing, recycling, composting, and what must go in the trash. Post them around the school or have students hang them at home.

Facts

- If everyone in Washington State said “no thanks, I don't need a bag” at least once, that would save over six million bags.
- Need batteries? Use rechargeables. There are now cool AA rechargers that plug into computer USB ports for charging on the go.
- In 2008, over 173 million aluminum cans were disposed at the Cedar Hills landfill. Those cans could have been recycled!
- Recycling one soda can saves enough energy to power a TV for three hours.
- By sending the school newsletter by email, one elementary school saved a ream (500 sheets) of paper each week.

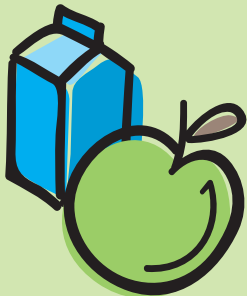
What's 4R Lunch?

What are the different ways you can pack a lunch?

Why do we make these choices?

What happened to all the packaging from Wally's snack? *It went in the garbage can and on to the landfill.*

How does packing a lunch in reusable containers help save resources? *You can reuse the containers over and over again, you're not using as many resources, and you're not making as much garbage.*



Activity – What's 4R Lunch?

Collect the packaging from students' lunches and snacks over a day or two. Lay the packages on a table. Have the students identify which natural resources each package uses. Have students brainstorm ways to cut down on packaging waste. Follow up with a waste-free lunch day when students try to bring a lunch with little or no garbage waste. Find waste-free lunch ideas on King County's website.

Facts

- In King County, food scraps make up about 32 percent of school garbage. Food scraps plus food-soiled paper can make up more than 50 percent of a school's garbage.
- A student who brings a disposable lunch - one that is packed in non-recyclable, non-reusable containers and that results in leftover food and packaging being thrown away - generates an average of 67 pounds of waste per school year.

R House

Name some items you saw Wally use that you also use at home. *Examples might include paper towels, sponge, juice pouches, glasses, plastic grocery bags.*

How did Wally learn to prevent waste at home? *He used a sponge instead of a paper towel, a pitcher and glasses instead of individual juice boxes, and a canvas bag for carrying groceries.*



Activity – Home Waste Interview

Ask students to interview a member of their household about the garbage at home. Use the following questions as a guide, create your own, or download the 4R Home Survey from King County's website.

What do you typically throw away at home? What can you recycle? Do you reuse any items at home? How can you rethink your household's garbage?

Facts

- In 2009, it was estimated that the average King County resident generates 15 pounds of garbage per week.
- The average family throws out over 500 pounds of food and food-soiled paper each year.
- Recycling a one-gallon plastic milk jug will save enough energy to keep a 100-watt bulb burning for 11 hours.
- The family that reduces waste in the home helps protect the environment. Waste reduction is as important as recycling in saving natural resources, energy, disposal space and costs, and in reducing pollution risks.



Alternative Formats On Request
206-296-4466 | TTY Relay: 711
1-800-325-6165 ext. 6-4466

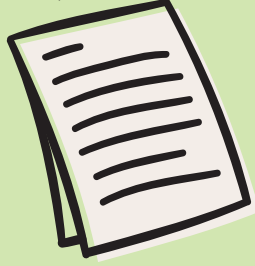


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Ready 4 Class

How did Wally learn to prevent waste in the classroom? *Use both sides of a piece of paper, recycle as much as possible, reuse old magazines or calendars.*



Activity – Ask the students to list ways they can reduce waste in the classroom. Ideas might include the following:

- Create a reuse box for every classroom, so that every piece of paper can be used on both sides.
- Use white boards instead of paper.
- Make a list of the items you can recycle at school. Create a 3D poster using actual items.
- Organize a Swap Day to share and reuse books, movies, or school supplies.

Activity – Crafty Reuse Challenge!

Start collecting reusable materials - old calendars, magazines, posters. For the next holiday party in your class, require that students make cards and decorations only out of these reusable materials.

Facts

- Forty-seven percent of school waste is recyclable paper.
- Keeping the recycling bin next to the trash can makes it easy to recycle.
- A piece of paper can be recycled up to seven times before the fibers get too short for making paper. After that, it is used in making toilet paper, tissue paper or paper towels.
- King County provides assistance to schools that want to conserve resources through its Green Schools Program. More than 400 schools and 11 school districts have received assistance from the program.

Composting

What can we do with our food scraps and food-soiled paper instead of throwing them in the trash? *They can be collected for composting with curbside yard waste and made into soil.*

Name some items that Wally learned to compost. *Pizza boxes, paper napkins, apple core, banana peel.*

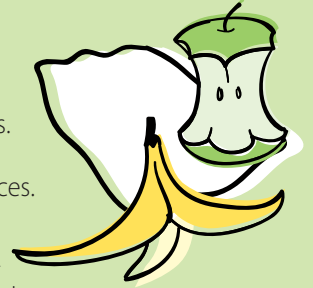
Activity – Classroom Compost Observation

Each student places an item of food – potato peelings, orange or banana peel, bread, apple core – in a sealed jar. Students observe and record in their journals the details of how their items decompose using these or your own guiding questions:

What color is the item? Is there moisture in the jar? What texture is it? Do you see any noticeable changes each day? Compare results.

Activity – Worm Bin

Set up a classroom worm bin to compost fruit and vegetable scraps. Find instructions on King County's website listed below under Resources.



Facts

- The average single-family household throws away about 45 pounds of food scraps and food-soiled paper every month.
- When you recycle your food scraps and food-soiled paper with your yard waste, it gets turned into compost.
- Materials decompose very slowly at the landfill. Paper can take up to 50 years to decompose, while a plastic bottle or aluminum can take hundreds of years.

Our Planet, R Choices

What's 4R Lunch?	R House	Ready 4 Class	Rethink R Activities
100	100	100	100
200	200	200	200

Resources

Download more activities on rethinking, reducing, reusing, recycling and setting up a worm bin at your.kingcounty.gov/solidwaste/elementaryschool/index.asp. Find project examples and read the Go, Green Team! blog.

Green Team specialists are available to help your classroom with environmental stewardship projects. Classrooms that conduct projects will receive recognition and are eligible to receive prizes such as water bottles made from recycled plastic. Visit the King County website, or contact 206-583-0655 or greenteam@triangleassociates.com to learn more or receive assistance.

