

R Choices – continued from inside

Rethink

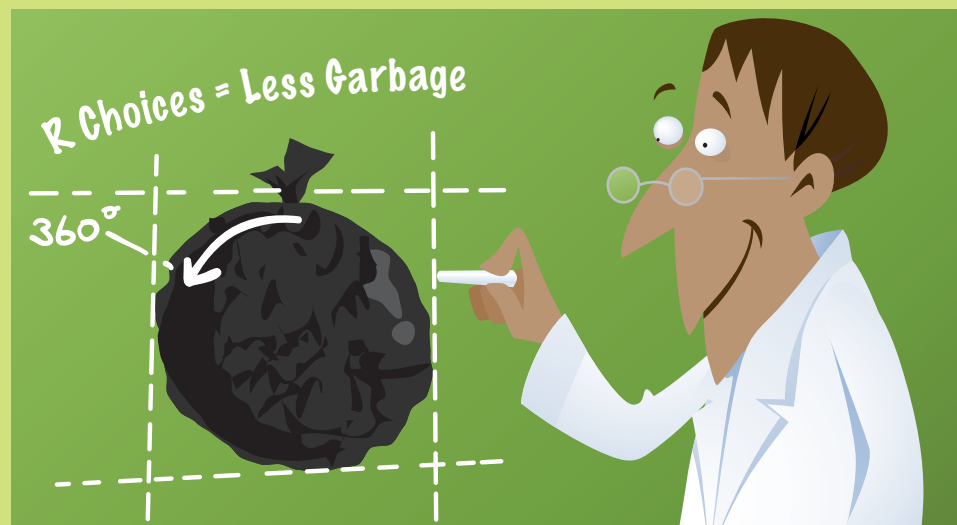
- What does it mean to 'rethink' your garbage? *Rethinking means thinking twice about the choices you make. Do I need it? Can I reuse it? What should I do with it when I'm done with it?*
- What are examples of things that you buy that you could rethink? *Books or movies that you borrow or rent instead of buy; snacks in large rather than individual packages.*
- What are examples of things that you recycle that you could rethink? *Plastic water bottles that could be replaced by durable, reusable containers; paper or plastic grocery bags that could be replaced by durable cloth bags.*
- What are examples of things that you throw away that you could rethink? *Pizza boxes that can go in the yard waste rather than the garbage, juice pouches that could be replaced by recyclable containers.*

Facts

- Fifty percent of the garbage at the Cedar Hills landfill is readily recyclable and doesn't belong there.
- If everyone in Washington State said "no thanks, I don't need a bag" at least once, that would save over six million bags.
- When you recycle your food scraps and soiled paper with your curbside yard waste, it gets turned into compost. Compost helps build healthy soil.
- In 2006, King County residents threw away more than 250,000,000 aluminum cans that could have been recycled.
- Turning off your car if you are stopped (and not in traffic) for more than 10 seconds cuts fuel use and air pollution.

Activity - Make a *Rethink* poster for the trash can. Challenge students once a month to rethink everything that goes in the garbage. Could it go somewhere else? Research additional facts about the 4 Rs. At the end of the day, share the different ideas that students come up with and add them to the poster.

Earth Challenge - Have a waste-free day in your classroom. Challenge the class to bring snacks or lunch in reusable containers. Alternatively, choose a day for the students to create zero paper waste.



Resources

More activity ideas on reducing, reusing, recycling, and on setting up a worm bin are downloadable at the King County's website at www.kingcounty.gov/dnrp/swd/elementaryschool/index.asp.

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 County website or contact 206-583-0655 or greenteam@triangleassociates.com to learn more or receive assistance.

Earth Challenge: The Choice is Rs!

Assembly Discussion Guide



More than half of what ends up in King County's Cedar Hills Regional Landfill is readily recyclable. King County's new assembly *Earth Challenge: The Choice is Rs* encourages students to take responsibility for proper recycling at home and in school to prevent the waste of valuable resources. The primary version of the assembly emphasizes keeping materials out of the landfill through proper sorting of trash into recyclables, reusable items, compost and garbage. The intermediate version helps students recognize the role that waste reduction and recycling can play in reducing the factors that lead to climate change.

About the Assembly Show

As students Terence and Angela prepare for the finals of the Earth Idol competition, undercover reporters reveal that their families and classmates are still making some common mistakes when it comes to waste reduction and recycling. After a trip to the landfill where they learn about natural resources, what happens to garbage, and how long their everyday items will sit at the landfill, Terence and Angela head home and back to school to make improvements in the ways that they reduce, reuse and recycle their waste. With the help of audience volunteers, they face off in the Earth IQ trivia game and realize that waste reduction and

recycling is every person's responsibility. When everyone takes the responsibility to do it—everyone wins.

During the assembly, have your students **watch for**

- what happens to the things that get thrown away.
- examples of how Terence and Angela reduced their waste. (*Packing cookies in a reusable container rather than buying a single-serving package.*)
- what types of things Terence and Angela reuse.
- ways to help improve recycling at home and at school.



Essential Learnings

Students use listening and observation skills to gain understanding of environmental and resource issues.

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 in the show are learning about garbage, recycling and natural resources.

Garbage

- What is garbage? *Things we can't use or don't want anymore. Things that no longer have use or value.*
- What sorts of things do we throw away? *Paper, packaging, food, junk mail...*
- What are these things made from? *Natural resources such as trees to make paper, oil to make plastic, etc.*

Activity - Record what is in the garbage can and recycle bin over the course of a day. Sort and graph the types of materials. How do they compare with what is thrown in the landfill? See the waste composition data under Facts.

Earth Challenge - Review what was thrown away and discuss ways to reduce this amount. Were there items that could be reused or recycled? What about ways to rethink the garbage? Challenge students to think of one item that was thrown away and to consider whether it could be reduced, reused, or recycled instead. Use ideas from the assembly.

Facts

- All of King County's garbage (excluding Seattle's) goes to the Cedar Hills Landfill.
- Most of our garbage is paper waste (23%) and food waste (20%). Other components include
 - plastic 11%
 - yard waste 5%
 - metal 7%
 - glass 3%
- When materials go the landfill, they decompose very slowly. Here are some everyday items and their decomposition rates:
 - paper – 50 years
 - aluminum can – 500 years
 - plastic bottle – 1,000 years
 - Styrofoam – lasts forever
- As garbage slowly decomposes at the landfill, it releases methane – a greenhouse gas. Greenhouse gases are a leading cause of global warming. Using less stuff means less trash at the landfill, which means less methane released!



R Choices

Reduce

- What is waste reduction? *Creating less garbage in the first place.*
- Why is it important to use less stuff? *Saves natural resources; fewer materials go to the landfill.*
- Why is waste reduction better for the earth than reusing or recycling? *Think about the steps in buying, using, and recycling something—buying less stuff saves resources, energy, and money.*
- What are some other things that we can reduce that will help the environment? *Our use of cars, water and energy.*

Activity – Think about the life-cycle of a paper bag. Think about all the steps it takes to plant a tree, harvest it, send it to the paper mill, and ship the product to the store before it ends up at your home. What happens to it after you use it? Does it go to the landfill or the recycle center? How is it made into new paper? What kinds of resources are used along the way? (*Trees, water, energy, transportation*) What would be saved if you brought your own bag to the store?

Earth Challenge - Challenge your students to see how many times their families can use the same grocery bag. Which lasts longer, paper or plastic? Participate in the Grocery Bag Project where students decorate unused paper grocery bags with messages encouraging their reuse and then return them to the store for their customers. Visit earthdaybags.org for complete instructions.

Facts

- Americans use 40 billion paper bags per year.
- When one ton of paper bags is reused or recycled, three cubic meters of landfill space is saved and 13 to 17 trees are spared!
- Each tree saved can absorb more than 14 pounds of carbon dioxide, reducing global warming.
- You save one pound of carbon dioxide for each mile of driving you eliminate.



Reuse

- What does it mean to reuse something? *Use an item more than once. For example, a tin can could be used to hold pencils.*
- What is one way to reuse paper? *Use the back side or use it as wrapping paper.*
- How is reuse different from recycling? *Recycling changes an item into something new, which requires energy. Reuse is changing how an item is used and doesn't require any energy in the process.*

Activity - Set up a reuse bin in your classroom. Create separate boxes for construction paper and one-sided paper. Have students decorate the sides of the boxes with examples of what goes in each. Make the boxes fun and splashy so that students will use them!

Earth Challenge - Look at what is in the trash can and recycling bin and make a list with students of things that could have been reused instead. Examples might include replacing disposable snack wrappers with snacks brought to school in reusable containers or using a reusable water bottle. Hold a book, CD, and DVD swap where students bring in items they are done with and swap them with other students.

Facts

- Using both sides of a piece of paper cuts down on the amount of paper needed by half.
- Americans consume 38 billion plastic water bottles a year, which uses over 10 billion barrels of oil. Think of the resources saved by using a reusable bottle or cup.
- If every family reused just two feet of holiday ribbon, the 38,000 miles of ribbon saved could tie a bow around the entire planet.
- Thoreau Elementary in Kirkland switched from Styrofoam to durable trays in the lunchroom, resulting in an 82% reduction in waste and 47,000 fewer Styrofoam trays in the landfill annually.

Recycle

- What does it mean to recycle? *To make or reprocess a used product into something new.*
- Give an example of something that belongs in your classroom recycle bin. *Paper, cardboard. Some schools recycle plastic bottles, aluminum cans, and other materials.*
- What is contamination? *Anything that does not belong in the recycle bin such as food waste, food wrappers, pencils, etc.*
- What are some reasons why people don't recycle? *Don't know how, recycling bin isn't nearby, don't care.*

Activity - Improve recycling in the classroom by making it easy. Make sure the recycle bin is labeled with what can and cannot go into it, and place it next to the garbage can. Discuss challenges to recycling with your class and ways that they can encourage better participation.

Earth Challenge - Promote recycling around the school. Make posters and signs about what belongs in the recycle bin and put them up around your school. Have students share morning announcements that encourage students and staff to practice proper recycling.

Facts

- Nearly half (47%) of school garbage is recyclable paper.
- Recycling one ton of paper can save 17 trees, 380 gallons of oil, and 7,000 gallons of water.
- Seventeen trees can absorb up to 250 pounds of carbon dioxide, a source of global warming.
- Recycling saves energy! Making a can from recycled aluminum uses 95% less energy than making it from newly mined aluminum. To put it another way, you can make 20 cans from recycled aluminum with the same amount of energy used to make just one can from newly mined aluminum.
- Plastic comes from petroleum, a nonrenewable resource. Recycling plastic bottles gives them a new life in fleece jackets, carpets, and other textiles.

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