A Word on Waste*

The word "waste" is a bit misleading and subjective. What one person sees as waste, another may see as valuable. Waste management is a term applied to the systems used to deal with waste, whether at an individual, classroom, school, municipal or regional level. Managing waste involves sorting discarded materials into different categories so that the value of the material is recognized and seen as a resource.

So, even though we may be sorting valuable items for reuse, recycle or compost, we still tend to call the materials "waste".

Maybe the time has come to call "waste" something else that better reflects its value. Have a discussion with your students and let us know what they think!

GRADE 4 WASTE REDUCTION CHALLENGE

Howdy!
Welcome to the Triple StaRs Waste Reduction Challenge. This is your opportunity to transform the Waste and Our World unit into a memorable experience. Your students will have a hands on experience with waste* generated in the classroom. Triple StaRs is a five-day waste audit that takes place during Waste Reduction Week. The week’s finale is when your class develops a Pledge of Action to reduce waste in the classroom for the rest of the year.

Healthy Planet, Healthy Kids
Triple StaRs includes an option where you can support teaching the waste reduction challenge by further teaching about packing healthy lunches. If your class commits to reducing lunch time waste in their Pledge of Action, you can easily combine waste reduction messages with packing healthy lunches.

Triple StaRs helps teachers:

🌟 Meet Grade 4 Science Waste and Our World curriculum objectives;
🌟 Support Grade 4 Health and Math curricular objectives;
🌟 Win great prizes; and
🌟 Have fun!

“I absolutely LOVE this unit and was able to integrate many subjects into this challenge. My students are VERY diligent about recycling now, and make a huge effort at home to educate their parents about reducing waste. This challenge was easy to do and it was simple for me to cover many of the Grade 4 Waste and Our World unit objectives.”

~Grade 4 teacher

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How the Challenge Works
During Waste Reduction Week (third week every October), your class will collect all of its garbage and separate it into seven containers: beverage, paper, cardboard, plastic, glass, organics and other. You can also complete the challenge during another week in the school year if it is more convenient for you and your class.

At the end of the week, students will see how much garbage they produced and how much of it could be diverted from going to a landfill. Students record their findings. As a group, you will discuss six questions and pick one thing—just one thing—that your class pledges to do for the rest of the year to reduce waste.

Tip
To help the students visualize how much waste they are reducing during Waste Reduction Week, on the day before the challenge have the students take note of how much garbage is in their classroom. This will help them see the difference and understand the importance of reducing the amount of waste that is sent to the landfill.

ORIENTATION TO THE TRIPLE STARS CHALLENGE

Step One: Get Branded
Howdy partner. Welcome to the Triple StaRs Grade 4 Waste Reduction Challenge. It’s headquartered out of the Triple StaRs Ranch which operates on a waste-free philosophy; that’s why this is an on-line program.

Have you met Star yet?
Star is the alpha dog at the Triple StaRs Ranch. Star is the champion for the three (triple) Rs: Reduce, Reuse, Recycle. And when Star barks, it sounds like, “R. R. R.”

Introduce Star to your students and feel free to enlarge any of the pictures of Star and hang on the sorting containers and around the classroom. Images can be downloaded from https://recycle.ab.ca/rrr.
Step Two: Round up Materials
Some things you will need:
- Seven bins or boxes to sort and collect waste
- Seven standard plastic grocery bags to line the inside of the bins (plus extras)
- Results Round-up sheet (see page 10; also one of the five student activity sheets, download online in English and French)
- A camera to take a photo record of your challenge and share it with your school (optional).
- People power such as parents as a possible means of delivering the recyclable waste to a depot. We encourage you to involve parents.

Step Three: Make the Time
This program is designed to support Waste Reduction Week, the third week of October. Make time to collect, sort, record and submit the results. The results include the volume of each kind of waste material. The finale of this challenge is to discuss six questions and come up with your class action plan to reduce waste. To celebrate Waste Reduction Week, your commitment or Pledge of Action (page 12) is what you and the class have agreed to do throughout the rest of the year to reduce waste.

Giddy up!
Now you’re ready to take on the Triple StaRs challenge!
**Lasso the Waste**

**Step One: Set up**
Set up a waste collection station in your classroom with seven containers. Label and line each container with a plastic grocery bag and label them: Beverage Containers; Paper; Cardboard; Plastic; Glass; Organics; Other.

**Step Two: Collect**
Instruct the class that during the week they will be sorting all their waste into one of the seven bins. This includes items you would recycle on a daily basis, which will be recycled at the end of the week, as well as those for which recycling facilities which may not exist in your community. The purpose of this is to provide your class with a vivid picture of the amount and type of waste that is being generated in the classroom.

**Step Three: Count ‘n’ Record**
At the end of the week, have students record the total amount of waste collected in each category on the Results Round-up record sheet. You can determine your unit of measure; however we suggest that the unit or measuring component be recorded by the number of typical plastic grocery bags collected. Record the amount of bags in mixed fractions or with decimals, for example, 1½ bags or 1.5 bags. Give it your best guess. And if you are not using plastic grocery bags, give it your best guess as to how many bags that would be.

**Step Four: Examine Your Results**
Have the students discuss and answer the six questions on the Results Round-up record sheet. See page 10. It is also available as a student worksheet, found online as one of the Five Activity Sheets.
**Step Five: Commit to Action**

The final element of the Triple StaRs challenge is for your class to decide on one action that will reduce waste for the rest of the year. It might be keeping a worm compost bin in your classroom, avoiding pre-packaged food in lunches, or bringing lunches in reusable containers. Discuss options with your class. Consider all the information that you learned about the waste your class and school produces. Remember to consider strategies for **Reducing, Reusing and Recycling** while doing school work and when eating food at school . . . that’s why this challenge is called Triple StaRs, because StaRs sounds like **Rs**.

In addition, you can print the Triple StaRs Pledge of Action (page 12) on the back of used paper and have each student sign it. Post it in a place where everyone can see it daily. Refer to it frequently throughout the year to check your pledge commitment to the action.

An effective way to reduce classroom waste is to buy food with less packaging and pack healthy foods in reusable containers. When you choose to teach the components of a healthy lunch and how to pack healthy waste-free lunches in your Triple StaRs Pledge of Action, everyone wins.
Here are some strategies to re-think ways to reduce the materials sorted into six of the seven categories of waste: beverage containers; paper; cardboard; cardboard; glass; and organics.

**Beverage Containers**
*Reduce:* Bring milk, 100 per cent fruit juice, water or other healthy beverages in a thermos or other reusable container.
*Reuse:* Wash containers well and refill them.
*Recycle:* Collect non-reusable containers for recycling. Remember you get your deposit back for all beverage containers, including milk.

**Paper**
*Reduce:* Hand in assignments done on the computer electronically via e-mail instead of printing them. Print or write on both sides of the paper you use.
*Reuse:* Keep paper that has been used on one side as paper to reuse.
*Recycle:* Collect paper for recycling.

**Cardboard**
*Reduce:* Discuss packaging, various kinds and uses, and think of ways to reduce its use.
*Reuse:* Cardboard boxes can be reused for a variety of purposes. Pieces of cardboard are useful for artwork, and can be made into clipboards which are useful for providing a writing surface for recording information on field trips.
*Recycle:* Collect cardboard for recycling.

**Plastic**
*Reduce:* Purchase items with less packaging. Pack healthy lunches in reusable containers instead of plastic wrap or baggies. Use reusable cloth bags for lunches and groceries and knapsacks to carry heavier items.
*Reuse:* Reuse plastic bags and containers.
*Recycle:* Collect plastic bags and containers for recycling.

**Glass**
*Reduce:* Think of other ways to purchase a product not packaged in glass.
*Reuse:* Wash and reuse dishes and bottles.
*Recycle:* Recycle unwanted glass. *Note: Be careful handling any broken glass.*
Organics

Reduce: Initiate healthy lunches as an important part of your waste reduction action plan. Visit some of the links below for information on healthy eating.

Recycle: Start a composting bin at your school or a vermicompost in your classroom. Request an education kit from Alberta Environment and Parks. See Resources Rodeo on page 8.

It All Adds Up
Students eating healthy + adopting waste reduction habits = a healthier environment.
Free Teacher Kits from Alberta Environment
Alberta Environment offers a variety of resource kits for teachers who want to add extra value to their lessons. The kits are designed to work with curriculum, particularly the Waste and Our World unit. All resources are free. Email: Env.Education@gov.ab.ca to order a copy.

Composting Goes to School
Set up your very own vermi-composter and complete graphs to track changes in volume of organics.

Get in the Loop
Activities, posters, and copy sheets about waste and the 3 Rs.

A Matter of Waste
Includes poster, teacher’s guide with lesson plans, copy sheets, and activities. Based on the waste-themed story called, The Minimizers.

Every Empty Counts
Fun, interactive website where children learn about environmental stewardship and beverage containers. Visit www.everyemptycounts.ca for more information.

More great information is available from Alberta Environment and Parks at aep.alberta.ca.
HEALTHY EATING LINKS

There is plenty of information available on nutrition and school lunches. If your class decides to incorporate healthy eating as part of their waste reduction Pledge of Action, check out the Packing Healthy Waste-free Lunches resource at https://recycle.ab.ca/rrr. It has everything you need: Healthy Eating Resource Links, Other Great Resource Links, Links for Waste-free Lunches, and Health Services contact information.

Further Information and Questions about Triple StaRs, contact:
Recycling Council of Alberta
Box 23
Bluffton, AB T0C 0M0

Phone (403) 843-6563
Email: wrw@recycle.ab.ca
Round up your results and make your report to Star. Have students complete the following questions. This is available as an activity sheet, refer to the website under Five Activity Sheets.

1. What units did your class use to measure the waste?

2. How much did you collect in each container? Using the unit your class used for measuring the waste, record the amounts below.

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverage containers</td>
<td></td>
</tr>
<tr>
<td>Paper</td>
<td></td>
</tr>
<tr>
<td>Cardboard</td>
<td></td>
</tr>
<tr>
<td>Plastic</td>
<td></td>
</tr>
<tr>
<td>Glass</td>
<td></td>
</tr>
<tr>
<td>Organics</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td><strong>Total Waste</strong></td>
<td></td>
</tr>
</tbody>
</table>

* Note: All classes must use the same recording measurement which is volume. For consistency, measure volume using a standard plastic grocery bag. Report the number of bags with mixed fractions or with decimals, e.g., 1 ½ bags or 1.5 bags. If you did not use bags, please estimate the amount of bags it could represent.

3. How Much?
   A. How much waste was kept out of the landfill?
   B. How much waste goes to the landfill?

4. What material created the most amount of waste you collected?

5. Do the math.
   A. Based on your results for one week, approximately how much waste will your class produce in one year?
   B. Based on your class results for one year, how much waste would all the class in your school produce in one year?

6. List some ways you and your classmates will reduce waste in the classroom.

Note to Teacher: Answers to How Much?, question 3, will vary from community to community. It depends on whether there are recycling opportunities available. Some communities may have only paper or leaf and garden waste collection and some may recycle just about everything. Discuss with students how their answers could be different if they could/could not recycle everything where they live.

An Ideas sheet is available for brainstorming; it is the last page of Five Activity Sheets.
**COMMIT TO ACTION**

Considering your results, have students decide on one action that the entire class will commit to doing for the remainder of the school year. Print your Triple StaRs *Pledge of Action* form on the reverse side of a used sheet of paper. Record your class’ pledge and circulate the form for everyone to sign. Post your Pledge of Action in a visible area in your room or outside your classroom door or in the hall for the rest of the school to see. Refer to it often throughout the school year to check the level of commitment.

**ONE SIMPLE ACT**

Add Your Voice to the *One Simple Act* program. Since you are already reducing waste and have made a Pledge of Action, let other schools see what you are doing and Add Your Voice to the One Simple Act website. There is a lot of good information suitable for schools. Visit [onesimpleact.alberta.ca](http://onesimpleact.alberta.ca)

**WASTE REDUCTION WEEK IN CANADA**

Celebrate Waste Reduction Week with other schools across Canada. There are many practical waste reduction tips for schools, businesses and communities. Download free resources, ideas for fun activities and see how the rest of Canada is reducing its “wasteline”! The world is “Too Good To Waste” so log on at [www.wrwcanada.com](http://www.wrwcanada.com) and start making a difference.
Pledge of Action

We promise to reduce our classroom waste for the rest of the school year by

________________________________________________________

Teacher and students sign below. Your signature means that you promise to do your best.