

Kindergarten to Grade 3 Lesson: Understanding Our Waste

CHAPTER 1: THE BLACK CART

[Slide 1] If you've ever wondered where your garbage goes after you throw it out, this lesson is for you! There can be three coloured waste carts outside of your home. Do you know what each is for? Do you know where they go after they are picked up by the shiny, red Loraas truck? This unit will help you understand, "Black, blue, green...What do they mean?"



[Slide 2] Did you know the average student makes 0.5lbs of waste per day. In a whole school year, that would amount to 100lbs of waste – that's the same weight at the average Grade 6 student, a Labrador retriever dog, or 10 cats! In Canada, this average is much higher and each person creates 6.4lbs of waste per day. As we will learn, not all of our "garbage" is actually garbage and can be reused to make something new!





[Slide 3] Imagine if garbage carts didn't exist and your only option was to throw all our waste out into the streets – gross! Not only would it smell really bad, but no one wants to play or live next to a pile of garbage. So instead we take it to a special place people don't live and safely bury it in the ground.

[Slide 4] So where is this place? You've likely seen it but didn't realize what it was. When you take out the trash in the black cart, it is collected by the shiny, red Loraas truck and taken to a place called a Landfill. A landfill site, also known as a garbage dump, is a place specifically used for the disposal of our waste materials. There are over 300 landfills in Saskatchewan and Loraas owns one of them right outside of Martensville, SK.



[Slide 5] Landfills have been around for many, many years. The first landfill was created in 1937, that's over 80 years ago! Before that time people placed garbage in piles or in holes in the ground. In present times, we still continue to dispose of garbage into special pits in the ground called Cells. The garbage will remain in the cell for the rest of its life safely so it doesn't pollute surrounding land, water, or animals.

[Slide 6] Incorrectly throwing away usable items like divertible waste (toys, clothing, or tires), recycling, and organics, take up space in the landfill cell, produce toxic gases, and sometimes do not break down at all. I know you're all thinking about it, wouldn't it just be easier to send out garbage into space or the sun? Well it's more complicated than we think and landfills are definitely our best option. Find out why in this video:

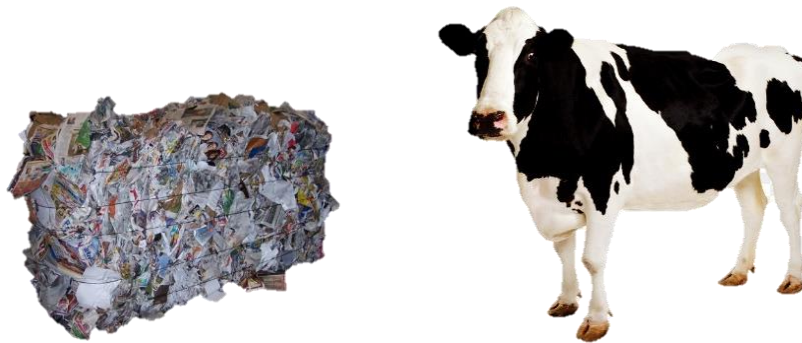
<https://www.youtube.com/watch?v=qWh7goEjkl>

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CHAPTER 2: THE BLUE CART

[Slide 7] Recycling is a great solution to reduce usable materials going to landfill and saves something called Natural Resources. Natural Resources are things like trees, car gasoline, and sand. By recycling materials like the paper we draw on or the cans our soup comes in, we can save our natural resources. Once our natural resources are used up, they are gone forever!

[Slide 8] Did you know that recycling recycling 1 tonne of baled paper could save 17 fully grown trees! For reference, a single bale of paper weighs 1200lbs or the same weight as a dairy cow. You may be thinking – Couldn't we just replant the trees once we cut them down to make our paper? We could, but in Saskatchewan it would take about 50 years for a single tree to grow big enough to cut down and sent to a paper making pulp mill.



[Slide 9 to 13] After recyclables are collected from your school or household from the blue cart or bin, they are taken by a Loraas red recycling truck to a place called a Materials Recovery Facility (MRF) in Saskatoon, SK. A MRF, or as we like to say it "Murf", is a sorting facility where recyclables are separated using people and machines and match up similar items; like sorting out coloured wooden blocks – red with red and blue with blue. The recycling bales are then shipped within North America to be made into something new. For example, a pop bottle can be turned into fibers for fleece sweaters.





See the Loraas MRF in action by clicking the link: <https://www.loraas.ca/facilities/recycle-facility/>.



[Slide 14 to 16] The Loraas Recycling program is designed for household food-packaging and paper or cardboard products. You can recycle: (1) Paper, (2) Cardboard, (3) Household Tin and Aluminum Packaging, (4) Plastics ♻️1 to ♻️7, and (5) Household Glass (For Saskatoon residents only). For helpful downloadable and printable guides and posters visit: <https://www.loraas.ca/facilities/recycle-facility/waste-widget/>

Let's test out your recycling sorting skills by pretending to be a Loraas pre-sort employee. Use our interactive game by going to: <https://www.loraas.ca/facilities/recycle-facility/recycle-game/>. It's a little tough, so make sure to get an adult's help to read the instructions.

Student Activity 1

The students now know that recycling paper is one way of reducing our ecological footprint by lowering the total amount of waste they produce. However, they may not know how paper is actually recycled. This activity will save the students create their own paper from recycled paper. Click here for instructions on how to create your own recycled paper: <https://www.youtube.com/watch?v=6VdQYRc5Dis>. Want to make the paper extra eco-friendly? Add some flower seeds and create plantable paper!



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CHAPTER 3: THE GREEN CART

[Slide 17 & 18] When our food scraps like banana peels, eggs shells, or corn cobs begin to rot, they turn into something called Compost. Compost looks a lot like soil, but it's packed full of rich nutrients. Compost can be used to help our trees and plants grow big and strong because they need to eat too! Healthy vegetation produces the fruits and vegetables we eat and provides us with the oxygen we breathe. Composting is a great way for you to avoid sending materials to the landfill, while creating soil for gardening.



[Slide 19 & 20] There are different ways to compost and finding out what type is the best for your household or school depends on where you live and the space you have available for the composting system. Apartments and classrooms can compost indoors using a small seal containers or vermicomposting systems with worms. Single houses can use outdoor compost bins or sign up for green cart programs. Large businesses or restaurants can use commercial systems like Loraas Organics where large amounts of food are taken away to be processed and turned into rich compost.



[Slide 21] Did you know we can compost almost anything that comes from the ground? A twig can be composted, but so can an apple core. In order for our food scraps to be turned into compost, they first need to rot. The rotting of certain foods needs extra help to be turned into compost and uses critters called Decomposers including teeny, tiny microorganisms, bacteria, fungi, and/or worms or insects all use our food scraps as a source of food for themselves and turn it into compost too. Find out more about composting decomposers here: <https://www.youtube.com/watch?v=Q5s4n9r-JGU>.



Student Activity 2

Let's turn our food scraps into rich soil! This experiment has the students create their own mini composting system. Students will patiently watch their food scraps decompose and be transformed into soil over the course of 30 days! Click the link for the instructional video: <https://www.youtube.com/watch?v=kA3q07paNbE>. Please note, experiment can also be completed using a plastic or glass sealed jar with holes punctured in the lid.

STUDENT QUIZ – KINDERGARTEN TO GRADE 3

For a passing grade, students must achieve a grade of 50% (4 out of 8 correct). Please read the instructions to the students and have them answer individually.

Please circle the correct photo or letter:

1. Circle the “Recycling” cart.



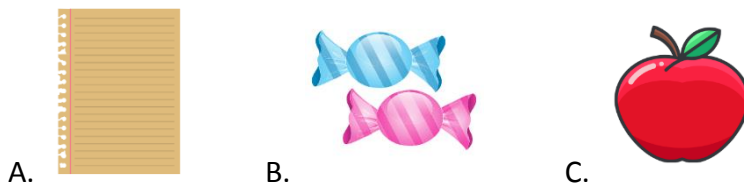
2. Circle the “Organics” cart.



3. What colour is the “Garbage” cart?



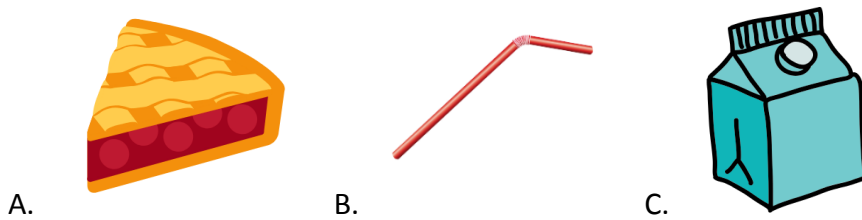
4. Circle the item you can Recycle.



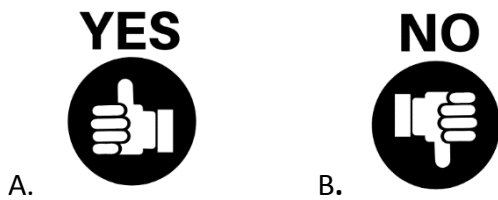
5. Circle the item you can Compost.



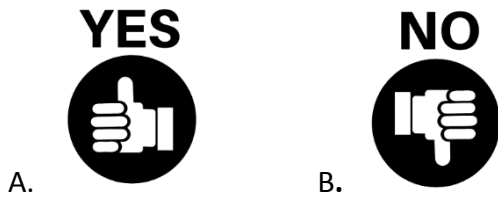
6. Circle the item that is Garbage.



7. Is it okay to litter our garbage in the street?



8. Recycling 1 tonne of paper saves 17 fully grown trees.



9. **BONUS:** Draw a picture of something you can Compost (not shown on this quiz).



QUIZ ANSWER KEY – KINDERGARTEN TO GRADE 3

For a passing grade, students must achieve a grade of 50% (4 out of 8 correct).

1. C
2. B
3. A
4. A
5. C
6. B
7. B
8. A
9. Answers include:
 - a. Any fruit or vegetable (banana peel, tomato, watermelon, carrot top)
 - b. Coffee beans/coffee grounds, tea bags
 - c. Any 100% paper or cardboard product (newsprint, pizza box, muffin liner)
 - d. Yard waste (grass, leaves, twigs)