

Wasteless Lunches

Lesson Summary - Kindergarten to Grade 6

SUMMARY

Students analyze their lunches and learn how to protect the environment by reducing waste and conserving natural resources by packing a wasteless lunch.

OVERVIEW

Students will:

- survey their lunch packaging and leftover food waste;
- determine the natural resource from which their waste was made;
- discuss environmental impacts;
- find ways to protect the environment by reducing, reusing, recycling and composting.

TIME

30-45 minutes of instruction

Materials Required:

- Wasteless Lunch Sheet (1 per student)
- Lunch discards from their lunch (or take some from the cafeteria)
- 4 containers or bags labeled: reuse, recycle, compost, waste

BACKGROUND

Earth is home to billions of people, animals and plants. Natural resources like water, sun, trees, oil and minerals come from nature and are made into things we want and need to survive. While some natural resources like the sun and wind can be used with little effect to the environment, the removal of other natural resources like trees and oil can have a not-so-positive impact on the Earth. Animal habitats can be destroyed or changed when we clear forests. Rivers and streams can become polluted. Air can become polluted from manufacturing. While it is impossible to not use some natural resources here on Earth, we have to be smart about what we do use and what we waste. It is important that we make the smallest amount of impact on our environment.

When we pack lunches for school, we can make smarter choices. By using reusable items and less throwaway products and packaging, we can reduce the waste we produce and protect the animal habitat. We can also choose products and packaging that can be recycled or composted to help produce less waste and help to divert it from landfill. For instance, instead of buying 'lunchable' products that contain plastic wraps that end up in waste, we can pack our lunches in reusable containers. We can also bring cloth napkins to school instead of using paper napkins, and pack our lunches in reusable lunch bags instead of paper bags. Drinks for our lunches can be stored in a thermos or a reusable container.

When we do our best to conserve the unnecessary waste of natural resources by reducing what we use, reusing what we have, recycling what can be recycled, and composting where items can be composted, we are doing our part to maintain a healthy environment.

Lesson Preparation

1. Set up bags or containers in your classroom with appropriate labels—Reuse, Recycle, Compost, Waste. If your classroom does not have a Waste Watch Sorting Guide, you can print one from the IWMC website at www.iwmc.pe.ca.
2. Before lunch, ask your students to bring everything left over from their lunches back to the classroom. This includes everything from uneaten food to packaging. Nothing should be thrown away.
3. After lunch, take a sample lunch which will be used to discuss the leftovers with the students. The sample should contain a disposable bag, leftover food of some sort, some plastic packaging, paper napkins, utensils or straws, an empty can from fruit, a milk carton, and a plastic beverage container.
4. Ask students what natural resources are. Explain that natural resources come from nature and are used or made into the things we want and need to survive.
5. Hold up your paper napkin and paper bag and ask what natural resource was used to make these paper items.
6. Discuss with students where trees are found and why trees are important to the environment. (Trees are found in the forest and make oxygen. They also help to keep the Earth cool by preventing global warming and provide habitat for animals all over the world.)
7. Hold up a plastic bottle or some plastic packaging. Ask the students where plastic comes from...what natural resource is used to manufacture plastic (oil or petroleum).
8. Ask students if they know where oil comes from. (It comes from fossils buried deep under the ground in places like the rainforest, the middle east, and under the ocean).
9. Talk to the students about some of the effects on the environment due to oil drilling. (Oil spills pollute land and water, animal habitat is cleared or destroyed for oil drilling equipment and pipelines, and burning oil creates pollution.)
10. Hold up the aluminum can and ask which natural resource was used to make the can (a mineral called bauxite).
11. Ask the children if they know where bauxite comes from and what effect on the environment might be noticed from mining bauxite. (Bauxite is mined from the forests which destroys many trees. It also destroys the natural habitat of animals.)
12. Hold up a scrap of leftover food (or peel from a banana/core from an apple, etc.). Ask which natural resources were needed to make this food. (Plants, sun, water, soil.)
13. Remind students that food is 'organic matter' meaning it was once a living thing and that it can be composted. (Composting is nature's way of recycling organic matter back into the soil so that it can grow more food).
14. Explain that on PEI, compostables such as food scraps are collected from green carts at home for the Waste Watch Program. At school sometimes dumpsters are used and the collection trucks come and empty them. They are taken to the composting facility to be made into compost that can be used in gardens and by farmers.
15. Remind the students that the sorting for the green carts must be very good. It is important to not contaminate the compost with plastic and glass because those items can not be made back into compost.
16. Introduce the concept of Reduce, Reuse, and Recycle. Explain to the students that we first try to reduce what we use. Then we try to reuse it. Lastly, we look for things that can be recycled. For food and a few other compostable items, composting is a way of recycling. The very last thing to consider is garbage, or waste. Diverting from landfill helps to save the environment.



17. Hold up the paper napkin or paper bag. Remind students that paper comes from trees and ask what they can do to save the trees and forests. (Reduce the amount of paper napkins they use. Bring cloth napkins to school and reuse them over and over again. If you are using paper napkins, be sure to put them in compost when they are soiled. Paper bags could be reused before they are composted, but cloth bags or reusable lunch cans or bags are the best option because they can be used over and over again.)
18. Hold up the plastic container or packaging. Remind the students that plastic is made from oil and ask them what they can do to reduce their use of oil. (Try to use less plastic. Bring drinks to school in a reusable container or thermos and use a cup that can be washed and reused. Don't buy products that have a lot of packaging but instead use reusable plastic containers for snacks. Don't use plastic utensils but instead bring some metal ones from home that can be used over and over.)
19. Choose a plastic container with a recycling symbol. Explain to the children that many plastic products have these symbols on them to help people understand what type of plastic it is made from. Depending on the type of plastic it can be recycled into many new items at a recycling facility. (As an example, a symbol with a number "1" that you would see on a water bottle, can be made into items such as polar fleece for jackets or lining for a sleeping bag. Carpet in their homes is likely made from recycled water bottles. At this point you could have the students wearing fleece stand up to give the class a good visual of the power of recycling).
20. Explain to the children that on PEI, plastics with symbols #1 through #5 should be recycled if they are clean, and at home it is important to rinse them out and put them into the blue bag. An easy way to remember this is to hold up your hand. We have five fingers (including the thumb) on our hand. We have 5 recycling symbols for blue bags on PEI. Hold up a straw or piece of packaging at this point. Explain that if the plastic does not have a symbol, or if it is not #1- #5, then, unfortunately it is waste (useless garbage).
21. Hold up the aluminum can again. Remind the students that aluminum is made from bauxite which is a mineral that gets mined from the rainforest. Knowing this, ask them how they can save the rainforests. (Use less aluminum. Drink out of reusable cups. Use a thermos. Pack food or drinks in reusable containers. Avoid using foil. And also recycle your cans so that they can be made into new aluminum cans instead of mining more bauxite.)
22. Hold up the milk container. Explain that the milk container is made from paper and can be recycled. At home it should be rinsed out and put into the blue bag. At school, it is difficult to clean the container, so at school it is composted if it cannot be rinsed out.
23. Hand out the Wasteless Lunch Sheets and instruct the students to go through each item leftover from their lunches and fill out the sheet. They should try to determine what type of material it is: Reusable, recyclable, compostable, or waste. For younger grades you could skip this part and do it on the whiteboard with each student sharing one item from their lunch can.
24. On the "Could Replace With Column" on the worksheet, ask the students to write down ideas on how they could reduce. Remind the students that reducing is the first priority. Then comes reuse, then recycle. If an item from their lunch is recyclable, would there be a better way? For example, if a student has an empty water bottle, would it have been better for the environment to take his/her water in a reusable and washable water container?
25. When the students have completed their forms, each of them should place their 'throw-away' items in the appropriate container or bag that you have previously set up at the beginning of the lesson.

Vocabulary Used

Habitat:

--- The environment where a particular organism lives or grows.

Natural resources:

--- Resources (actual and potential) supplied by nature.

Packaging:

--- The material used for packing a product for transportation or to be sold.

Pollution:

--- The act of contaminating the environment with harmful and unwanted substances

Divert:

--- To turn away.

Compost:

--- A mixture of decaying vegetation or manure to be used as a form of fertilizer.

Recycle:

--- To use something again after it is processed at a recycling factory. It might be used for the same purpose or for an entirely different product.

Plastic Recycling Symbol:

--- Three arrows that surround a number in a the shape of a rounded triangle on some plastic items. The number inside the symbol tells you what type of plastic was used to make the item.



Additional Assignments

- Count out each item in each container. Have the children assist you in multiplying by 5 to show just how many of each category would accumulate in a week, or even a school year.
- Ask the children to draw graphs of how many items could be reused, recycled, composted or simply would end up in waste. Or, depending on the grade level, you could do a big graph on the board for all students to see.
- Brainstorm with the children after analyzing the graphs and ask each child to write down 3 ways they could reduce the amount of waste from their very own lunch boxes.
- On a selected day the following week, ask the children to put into practice their suggestions. Then on that selected day, go through the sorting exercise again. Graph your findings and compare the results. Display these results in the classroom to help demonstrate to the children how they have made a big difference to the environment.
- Together with the children, come up with a way to celebrate your successes in reducing waste! Maybe give back to the Earth in some way, or at least pat yourselves on your backs for doing such a great job!
- Suggest a poster exercise, or a poem, or have the children write about what they've learned. Ask them to share their findings with their parents and maybe even plan a family waste reduction event right in their own homes.

