**ELECTRONICS UNPLUGGED**

**Grade 7 virtual Waste Workshop**

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| **Overview:** Today, many people have cell phones, and some even have two! The newest and coolest phones seem to come in and out of style as fast as you can say LOL. In this workshop, students investigate the life cycle of electronics to uncover the resources used to create them and where they go when we are done with them. Students will learn how to make the right call and reduce the impact of electronic and hazardous waste on the environment.  |
| **Grade Focus:** 7 | **Duration:** 60 minutes  |
| ***Curriculum Connections:*** *Science and Technology: Understanding Life Systems – Interactions in the Environment* 1.1 assess the impact of selected technologies on the environment1.2 analyze the costs and benefits of selected strategies for protecting the environment 3.8 describe ways in which human activities and technologies alter balances and interactions in the environment *Geography: Natural Resources Around the World: Use and Sustainability* B1.1 analyze interrelationships between the location/accessibility, mode of extraction/ harvesting, and use of various natural resources  B1.2 analyze natural resource extraction/harvesting and use in some specific regions of theworld including the sustainability of these practices B1.4 create a personal plan of action outlining how they can contribute to more sustainable natural resource extraction/harvesting and/or useB2.5 evaluate evidence and draw conclusions about issues related to the impact of natural resource extraction/harvesting and/or use around the world B3.1 identify Earth’s renewable, non-renewable, and flow resources B3.2 describe ways in which people use the natural environment, including specific elementswithin it, to meet their needs and wants (e.g., rock is quarried to make buildingmaterials, roads; trees are used for lumber for buildings, wood for furniture, pulp forpaper, logs for fuel; fossil fuels are used for heating and cooling, to generate energy for industry, to power vehicles, to make plastics...) |
| **Topics of Focus:** * Applying the 3Rs to reduce waste generation at home and school
	+ Through workshop activities, students will learn about the impacts of electronic waste, how to recycle electronic waste, as well as reduce and reuse strategies.
* Landfill
	+ In the introductory workshop discussion, students will learn about where garbage goes, the environmental impacts of waste, and what can be done to divert waste from landfills.
* Household Hazardous Waste
	+ Through workshop activities and discussions, students will learn about common types of Household Hazardous Waste and where they can be disposed or recycled properly.
* Community Recycling Centres
	+ Through workshop activities and discussions, students will learn about Peel CRC’s and the types of items accepted.
* Product life cycles
* Through activity #1, students will investigate the life cycle of various electronic items, learning about the resources and associated impacts of everyday electronic products.
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| **Key Messages:** * Landfills and the environment
* 3Rs of waste reduction
* Region of Peel waste sorting practices including CRCs
* Classification and reduction of electronic waste
* Life cycle of electronic products and natural resource and energy needed
* Impacts of electronic waste on the environment
* Region of Peel electronics recycling programs
* Benefits of recycling
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| **Platform(s) Used:**A Prezi presentation will be casted virtually for participants using Google Classroom.  |
| **Interactive Component(s):** * Follow along worksheet (optional)
* Virtual lifecycle ordering activity
* Sound guessing game
* Cellphone statistic game
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| **Preparation and Set-up:** Virtual workshops may take place in a classroom with access to a computer with internet as well as a Smartboard or projector. The virtual workshop may also take place from the homes of participants once a link to the Google classroom session is provided. Teachers will be provided with a follow along worksheet to distribute to all students prior to the start of the workshop. |
| **Outline:** *Introduction (5 mins)* * Introduction of Educator, Region of Peel, and Ecosource.
* Virtual workshop guidelines
* Review follow along worksheet with students

*Guided Questions (10 mins)* * Presentation about waste, 3Rs and landfills (focused on Peel Region)

*Activity #1 – “What Happens to Waste” Activity (15 mins)* * Students work as a class to uncover the lifecycle of a tablet by placing the images in order on the screen.
* Students discuss the hidden costs of technology, including waste and expense, and brainstorm alternatives to throwing electronics in the garbage.

*Activity #2 – “Sound It Out” Activity (15 mins)* * Students will be presented with many different sounds of outdated technologies and are encouraged to write down their guesses as to what items they might be.
* As the sounds are identified, the image of that technology will be displayed on the screen.
* The class will learn about planned obsolescence and how/why technology evolves quickly.

*Activity 3 – “From Tech to Trash” Sorting Activity (10 mins)* * Students are shown four statistics around cell phone use in Ontario and must come up with which group of cellphones accurately match the related statistics by ranking them accordingly on their worksheet.
* Class discussion about the role cellphones have in society and solutions to the issue of cell phone and electronic waste will be unveiled on the screen after the discussion.

*Debrief (5 mins)* * Recap of learning and question period
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| **Takeaways:** At the end of the presentation, each student will receive an activity sheet which challenges students to complete a map displaying where all of the resources are mined to make electronics, as well as the distance these resources take to be manufactured and then finally put into the market. Teachers will be provided with a lesson plan related to the workshop to extend learning.  |

*The components of this lesson may be modified during delivery at the discretion of our educators. To book with us, please visit:* [https://ecosource.ca/waste-reduction-workshops/](https://can01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fecosource.ca%2Fwaste-reduction-workshops%2F&data=02%7C01%7Claura.lane%40peelregion.ca%7C896441cd7daf4703b71708d838ad3ff1%7C356f99f39d8647a182033b41b1cb0c68%7C0%7C0%7C637321664057394866&sdata=uTbVeIL7qRWNxqIS0L%2BBzEff%2FH34v5OIddnBBXIekSs%3D&reserved=0).