WebQuest

Advanced Level - Bruised Not Broken

GRETA

Challenge-based Learning in Primary Schools for Climate Change Awareness

Co-funded by the
Erasmus+ Programme
of the European Union

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TITLE OF THE WEBQUEST:	Bruised not Broken
LEVEL OF THE WEBQUEST	Advanced Level

INTRODUCTION

How much energy can recycling save? Let`s give our school and community a helping hand

But what is waste? In basic terms waste is anything which you decide to throw away. Did you know that humans produce 2.01 billion tonnes of waste per year? We produce waste from the things that we use and no longer require in our daily lives. This includes; food, plastic, paper, wood, glass, used containers among many other things.

Reducing the amount of waste that we produce is an essential step in looking after our planet. We can use the concept of the 3 R's – *Reduce, Reuse, Recycle*. Every day we throw away kilos of material that ends up in landfill. We have become a generation of use and throw away, and now is the time to change that attitude. What's stopping us from changing our mindsets, to actively reuse products, give away old items that are not in use or donate them to charity? Why not give products another life cycle? This way we can all contribute to minimising waste and helping the environment.

By minimising waste, we can all contribute to lowering carbon emissions and improving the sustainability of planet earth. In order to achieve this, we must think of a "circular economy" when we think of waste. This will decrease the impact of our "take, make, waste" attitude towards waste. A circular economy promotes life-long products that can be reused, repaired upgraded and refurbished. This not only reduces the amount of waste sent to landfill, but it also saves resources and reduces air and water pollution.

TASKS

Your school is taking part in *Environment Week* and you are excited to get involved and make a difference and learn more. Your school decides to hold a competition. The winning group will be chosen to implement their eco-initiative in the school. Each group must prepare

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a presentation that will discuss a topic related to making a positive contribution towards the environment.

You think it would be a good idea to focus on waste, and its environmental impact. You know that everybody has digital devices, and you begin to wonder about electronic waste and the environmental cost of electrical manufacturing. Can electronic waste be reused or recycled? Let's find out!

To begin this activity, you will first need to do some research in order to understand what elements go into making smart devices, consoles and digital equipment. You will need to understand all there is to know about electronic waste to wow your classmates with your presentation.

In this WebQuest you are going to be guided through a series of tasks that will help you and your classmates to learn about electronic waste and how it affects the environment. You will complete the tasks in small groups of 2-3 people. When you complete this task, you can present your presentation to your class and help others to learn more about waste minimisation and the concept of the 3 R's *Reduce, Reuse, Recycle*. You know that this is bound to be a good way to positively contribute to saving the environment. Let's get started!

PROCESS

Step 1: Take, Make, Waste

The first step in preparing your presentation will be to start with some research. You want to understand the concept of waste, how it affects the environment and how electronical devices contribute to this. It is important to make sure that your presentation is full of reliable and trustworthy facts that emphasise the message behind your presentation.

For more information on **waste is**, click on the following links:

What is waste?: https://kids.kiddle.co/Waste

Solid Waste Management: https://www.youtube.com/watch?v=9KMMwHjJ9R8

Reduce your waste: https://kids.nationalgeographic.com/explore/nature/reduce-your-waste/

For more information on the **impact of waste on the environment**, click on the following links:

Land Pollution: https://www.ducksters.com/science/environment/land_pollution.php

Plastic Pollution: https://www.natgeokids.com/ie/kids-club/cool-kids/general-kids-club/plastic-pollution/

Impacts of waste: https://www.youtube.com/watch?v=9xZM03vaja8

For more information of the **reusing waste,** click on the following links:

Upcycling ideas for the classroom: https://www.weareteachers.com/23-upcycling-hacks-for-the-classroom/

Super guide to reusing waste: https://www.reusethisbag.com/articles/kids-guide-to-recycling

The circular economy: https://www.natgeokids.com/ie/discover/science/general-science/all-about-the-circular-economy/

Step 2: E-Waste. What is it?

Now that you have researched what waste is and how it affects the environment, you want to look into the concept of *e-waste* (electronic waste) and how it can be reduced, reused and recycled. You have read that e-waste is an ongoing concern due to the constant growth of technology in the 21st century. So, what can we do to tackle this? You decide that it's best to find out more about e-waste.

For more information on **what e-waste is,** click on the following links:

Electronic waste: https://kids.kiddle.co/Electronic_waste

What is e-waste pollution?: https://www.youtube.com/watch?v=MQLadfsvfLo

For more information on **how to recycle e-waste**, click on the following links:

How to recycle electronics: http://www.electronicstakeback.com/how-to-recycle-electronics/resources-for-kids/

Recycling of e-waste: https://www.youtube.com/watch?v=3s_ZNEFPiE0

What to do with my electrical waste: https://www.mywaste.ie/what-to-do-with-my-waste-electrical-and-electronic-equipment-weee/

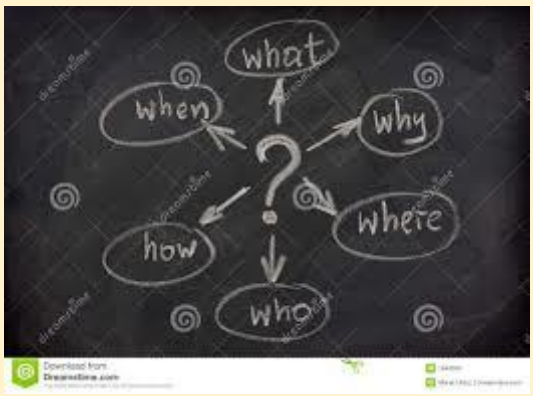
For some **infographics on e-waste and the circular economy**, click on the following links:

Linear vs. circular economy: https://techcollect.com.au/wp-content/uploads/2018/07/TEC3285-infographic-circular.pdf

How electronics become new again: https://techcollect.com.au/wp-content/uploads/2015/08/TechCollect-E-waste-Lifecycle-Infographic.png

The lowdown on e-waste: https://techcollect.com.au/wp-content/uploads/2015/08/TechCollect-Abby-Gives-E-waste-Lowdown.png

Step 3: Mind-map



Now that you have researched all the information you will need to deliver your presentation, it's time to brainstorm! The great thing about this step, is not only will you decide what you are going to present, but it will also help you to remember the information, with a visual representation it is always easier to remember things when you can see them. You can choose to decorate your mind map to help with this process too! You really hope that you can make a difference in your school and implement an eco-initiative that tackles e-waste.

With your group, why not draw out a mind-map of all the important points that you will cover in your class presentation? Don't forget to cover:

- What is waste?
- What is electronic waste?
- Why should we reduce waste?
- How can we reduce e-waste?
- How can we reuse electronic devices?
- How is this good for the environment?

For more information on **how to create a mind-map,** click on the following links:

How to make a mind map: https://www.lucidchart.com/pages/how-to-make-a-mind-map

The basic of a mind-map: https://www.youtube.com/watch?v=wLWV0XN7K1g

For **examples of mind maps,** click on the following links:

Mind-map examples: https://www.mindmeister.com/blog/mind-map-examples/

Mind map templates: https://venngage.com/blog/mind-map-templates/

Step 4: Presentation Preparation

Now that you have brainstormed with your team what aspects you will focus on in your presentation, it's time to get designing! The best thing about doing a presentation is that you can use visual aids and videos to reinforce your ideas and get your message across to the class. Or, you could also just use the information you have researched. Just remember to include some images to really captivate your classmates!

To learn **how to create an engaging presentation using Google Slides**, click on the following links:

Google Slides Tutorial:
https://www.brightcarbon.com/blog/how-to-make-an-interactive-presentation-in-google-slides/

How to create power point on Google Slides:
https://slidesgo.com/slidesgo-school/google-slides-tutorials

Advanced features of Google Slides:
https://www.youtube.com/watch?v=rIKd6glWeKs

20+ tips for a Google Slides presentation:
https://business.tutsplus.com/tutorials/using-google-slides-tips--cms-29321

When you have created your presentation, why not practice it with your team before you present it? Don't forget to give everyone a chance to speak, and more importantly, don't forget to smile!

Step 5: Competition Time

The day has come! It's time to deliver your eco-presentation to your class. You have put in so much work and are sure to let your classmates know all there is to know about e-waste and how we can do more to reduce, reuse and recycle it. You are really eager to develop the eco-initiative to bring the circular economy of e-waste to your school and hope that you have put in the work to win the competition! Make sure to remind everyone of the importance of extending the life-cycles of the things we buy and how good this can be to help protect our planet.

For more information on **how to deliver a presentation**, click on the following links:

Presentation tips: https://www.skillsyouneed.com/present/presentation-tips.html

Presentation skills: https://www.youtube.com/watch?v=8IbheB2-ixM

Tips for presenting: https://www.duarte.com/presentation-skills-resources/tips-for-kids-to-nail-presentations/

You've got this! Best of luck!

EVALUATION

As a self-assessment for this WebQuest, write a short self-reflection of 100 words to explain how you enjoyed this activity. You can use the following questions to help you reflect:

- What did you enjoy most from this activity? And why?
- Did you find that this activity was fun to do in small groups?
- Do you think it is a good idea to implement eco-initiatives in your school?
- Mention three things you learned through this activity that you did not know before?
- Do you think that this activity helped you to think about how waste affects the environment?
- Do you think that it is important to take measures that are good for the environment? Why? Why not?
- Do you think it's a good idea for others to think about e-waste and how they can reduce it?

Also, why not try and test your knowledge with the following questions to see how much you learned today:
https://forms.gle/GP3mJHExY4PTjbtUA

CONCLUSION

Congratulations! You and your team successfully delivered your presentation, and learned so much about waste, e-waste and its environmental impact. You inspired your classmates and teachers so much from your presentation that you won the competition! Now your school is looking at how they can implement a circular economy initiative for e-waste in your school. Well done!

Through completing this WebQuest you have learned all about electronic waste and how to properly reduce, reuse and recycle our smart devices. It is extremely beneficial for us all to learn more about how we can look to alternatives rather than always buying new. By preparing and delivering your presentation to your classmates, you have also let them know all about how to extend the life of our products and how this can have a positive impact on the environment.

By letting others know about how easy it is to correctly upcycle and reuse the products that we consume in our digital world, you are encouraging others to make smart choices with their smart devices. This can have a tremendous impact on how people view the concept of recycling, which can have a significant impact on climate change and global warming. It is important to discuss

with others why we should reduce consumption, reuse and recycle waste in order to protect our planet.

"Buy less, choose well."

– Vivienne Westwood,

https://pixabay.com/illustrations/save-protect-forward-obtain-rescue-4076853/

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