



102 - Climate Change Challenge WebQuests

EnviroHacks



**Building Problem-solving Skills of Youth to Address
Environmental and Climate Change Issues**

IO2 – Climate Change Challenge WebQuests

WebQuest Theme: EnviroHacks

TIME ALLOCATED:	6 – 8 hours
TITLE OF THE WEBQUEST:	Environmental Hacks in the Kitchen
INTRODUCTION	
<p>The kitchen will be our playground in this WebQuest!</p> <p>There are so many easy ways to become more sustainable. We are all creatures of habit, and changing our behaviour takes some time. Small steps are key. Once you find out how easy it can be to take a step, you will be surprised how quickly you can make a positive difference in protecting the environment for your family and for the planet.</p> <p>Your carbon footprint equals the total impact you have on greenhouse gas emissions, both directly and indirectly. A significant portion of our personal contributions to greenhouse gas emissions happen in our homes, i.e., heating, cooling, electricity and water usage, and yes, cooking. No matter how minute, every step you can take to waste less in your home counts.</p> <p>The kitchen is the heart of the home and also the best place to find greener alternatives to food, appliances, utility systems, and cleanliness. Reducing your carbon footprint at home is easier than you think; especially when you start in the kitchen. Eating green, using energy efficient appliances and cutting back on waste is only the beginning. The more environmentally friendly your kitchen, the more it benefits your family and Mother Nature. Given that it is a major activity hub in the home; it is fitting to build and keep up a sustainable kitchen. You don't need to be a genius eco-warrior to make a greener kitchen.</p> <p>For many people, the kitchen is the most important room in their home. After all, this is the place where food is prepared. And for homes without a dining room, we consume the food we prepare here as well. Moreover, the kitchen is usually the space where the whole household gathers, an oasis of peace after a long day.</p>	



This WebQuest Environmental Hacks in the Kitchen worksheet will challenge you to be critical of your own habits in the kitchen with regards to your carbon footprint. You will also be very creative and make a worksheet and playing cards to educate others! Be an inspiration for others!

TASK

Carbon footprint is a phrase that's often used when talking about the environment, pollution, greenhouse gases, etc. But what exactly does it mean? Simply put, carbon footprint refers to the amount of greenhouse gases produced to, directly and indirectly, support human activities. This is measured in units of carbon dioxide equivalent (CO₂).

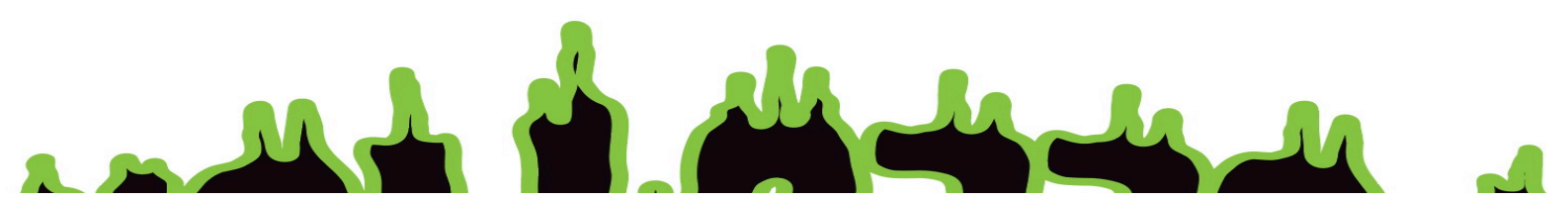
Greenhouse gases are bad, and it is already happening. Ultimately, the ones who will suffer the most, are us. The good news is that it's not yet too late to help fix it. Reducing your homes carbon footprint is the best and quickest way to help overcome this problem. After all, everything starts from your home — and you can begin in your kitchen.

In this WebQuest you will learn environmental hacks about how to create a green kitchen. In teams of four, you will create a working sheet on which you will find out how ecologically you behave in your own kitchen. Working together with the worksheet, you will create flashcards with symbols of environmental hacks, which you will present in your group. You can also challenge each of your classmates, by asking them to pick one card and try to apply an environmental hack from that card in the following week, into their own lives. After completing the challenge, you will evaluate how you did and whether you will continue to apply this environmental hack in your own life.

The below steps will help you lower your kitchen's carbon footprint so try to check each and every one of them. Have a fun with this WebQuest!

PROCESS

[Step 1: How Be More Environmentally Friendly in The Kitchen](#)



Carbon footprint refers to the number of greenhouse gases produced to support human activities. These gases can be produced directly or indirectly, and they often refer back to things like the environment and pollution.

But, what's so bad about the term "carbon footprint"? Well, homeowners, the answer to that question would be that it leads to global warming. And you don't want to be part of it! For guidance on where to start in the kitchen with researching the environmental hacks, the following links will be a good starting point for your research:

- How to reduce your kitchen's impact on global warming: <https://theconversation.com/how-to-reduce-your-kitchens-impact-on-global-warming-68484>
- When Food Waste at Home Causes Climate Change: <https://www.epicurious.com/expert-advice/food-waste-climate-change-article>
- How your fridge is heating up the planet: <https://www.bbc.com/future/article/20201204-climate-change-how-chemicals-in-your-fridge-warm-the-planet>
- Stopping climate change starts in the kitchen: <https://theweek.com/articles/813222/stopping-climate-change-starts-kitchen>
- Fight climate change by preventing food waste: <https://www.worldwildlife.org/stories/fight-climate-change-by-preventing-food-waste>
- To stop global warming, change how we eat? <https://www.csmonitor.com/Environment/Energy/2016/0408/To-stop-global-warming-change-how-we-eat>
- Cooking to Fight Climate Change: <http://www.ipsnews.net/2017/10/cooking-fight-climate-change/>
- Tips for Reducing Your Carbon Footprint in the Kitchen <https://www.postconsumers.com/2016/04/13/kitchen-carbon-footprint/>

Think about your last trip to the grocery store: How many plastic bags did you use? Did you shop for seasonal produce? Though many of us probably restock our kitchens on at least a bi-weekly basis, there's a lot of waste involved in the process of grocery shopping, from the plastic used to the products we choose. Fortunately, there are plenty of ways to be more eco-friendly when grocery shopping. Sure, it's only a trip that you probably make a few times a month, but a lifetime of making eco-friendly shopping decisions can make a large difference on your environmental footprint.



- 5 Simple Ways to Shop Greener at The Grocery Store: <https://www.greenmatters.com/p/eco-friendly-grocery-shopping>
- Decreasing the Carbon Footprint of Supermarket Shopping: Lessons From A Virtual Shopping Experiment: <https://environment-review.yale.edu/decreasing-carbon-footprint-supermarket-shopping-lessons-virtual-shopping-experiment>
- 7 Easy Tips to Reduce Your Carbon Footprint While Food Shopping: <https://www.theeagleonline.com/article/2019/06/7-easy-tips-to-reduce-your-carbon-footprint>

How are you getting on? Ready for next step? There are many ways on how to be more sustainable in the kitchen, one of the best hacks is to grow your own food, herbs. In the next step you will learn about that:

Step 2: Why Should I Grow My Own Herbs and Food and Compost?

Over 51 percent of the trash that goes to landfills (including food scraps, paper, yard trimmings and wood) is compostable. Globally, we throw away roughly 1.3 billion tons of food each year, an amount worth nearly \$1 trillion. Unfortunately, by throwing food in the trash, we're not only wasting valuable resources, we're also inadvertently contributing to climate change.

The environmental costs of food waste are quite staggering. 3.3 billion metric tons of carbon dioxide are released each year through the production, harvesting, transporting and packaging of (ultimately) wasted food. Once food reaches the landfills, the scraps begin to decompose and release methane gas into the atmosphere. Methane gas has a warming potential of roughly 21 times that of carbon dioxide, meaning it has an even larger impact on the global climate than CO₂.

This is where composting comes in. By composting our food and other organic scraps, rather than throwing them away, we can actually help the environment instead of hurting it.

Read in articles below:

- Why should I compost? <https://greenactioncentre.ca/reduce-your-waste/why-should-i-compost/>
- An Easy Guide to Start Composting At Home: <https://www.goodhousekeeping.com/home/gardening/advice/a23945/start-composting/>



- Sustainable and practical – composting on the balcony:
<https://www.gardena.com/int/garden-life/garden-magazine/sustainable-and-practical-composting-on-the-balcony/>

Even if you don't have space to grow your own food in your garden, maybe you might have some space on your kitchen window:

- Herb gardens beginners guide || how to || garden basics:
<https://www.youtube.com/watch?v=5mWH5ajGJF4>
- How Growing Your Own Food Can Benefit the Planet and Why You Should Consider It: <https://www.onegreenplanet.org/environment/how-growing-your-own-food-can-benefit-the-planet/>
- The Ultimate Guide to Survival Gardening & Growing Your On Food:
<https://www.changingworldproject.com/growing-your-own-food-survival-gardening-climate-change/>
- My Apartment Balcony Vegetable Garden | Container Gardening Beginner Tips, Set-Up & Tour: <https://www.youtube.com/watch?v=n1npjDChCF4>
- Grow your own herb garden to join the fight against global warming:
<https://www.sentinelassam.com/topheadlines/grow-your-own-herb-garden-to-join-the-fight-against-global-warming-486295>

You and your team are doing great! You are getting so much information. Don't forget to take notes!

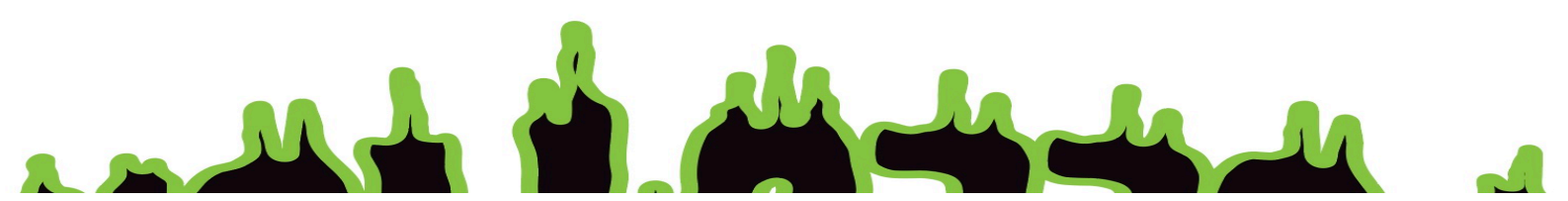
Step 3: Cleaning the Kitchen and Washing Dishes

Most of us use so many excuses to get out of cleaning our homes. People who are committed to living an eco-friendly lifestyle have an additional excuse – we don't want to hurt the planet by cleaning our house.

At first, this sounds like a ludicrous excuse. However, it makes a lot of sense when you break it down. The sad truth is that many cleaning products are bad for the environment. They have loads of toxins, which leech into the ground, kill insects and poison plants.

However, you can't rely on this excuse anymore. There are plenty of ways to clean your home in an eco-friendly way.

Make your house clean and safe with these simple hacks:



- 8 Tips for Green Cleaning: <https://www.thespruce.com/tips-for-green-cleaning-1708700>
- A Quick Guide to Sustainable Cleaning: Practices and Products: <https://cleanclassycreate.com/a-quick-guide-to-sustainable-cleaning/>
- 22 Cleaning Problems You Can Solve with Baking Soda: <https://www.goodhousekeeping.com/home/cleaning/tips/a25577/baking-soda-cleaning-uses/>
- 7 Common Household Products That Are Terrible for The Environment: <https://www.countryliving.com/uk/wildlife/countryside/a1583/household-cleaning-products-environment/>
- How to Wash Dishes by Hand in an Eco-Friendly Way: <https://www.marthastewart.com/7839012/eco-friendly-hand-dishwashing-tips>

Perfect, we think you and your team were very impulsive. Having had time to think about what you could have done better; you are now making better decisions in your kitchen. The way to sustainable living is not as difficult as it seems. Every small step counts. Maybe some of these hacks weren't considered as important as before. Do you want to know more? Let's move on!

Step 4: This Hack Works, Be Inspired and Create Your Own!

We know the satisfaction of a clean, well-organised kitchen. Often overlooked, however, is how much waste happens in this part of the home. More than just food waste, unnecessary, packaging paper towels, water waste and harsh chemicals are all seemingly small factors that can add up to make your kitchen the least sustainable zone of your home.

With increasing awareness about environmental issues, it's time to wise up (if you haven't already) and make conscious efforts to turn the kitchen into a more sustainable space. Knowing where to start can seem like a daunting task, though. And often, eco-friendly alternatives seem expensive and/or impractical. But you can change it!

In the articles below you can find plenty of tips and hacks which can be very inspiring for you and hopefully you will create your own hack!



- Eat Sustainably - 39 Hacks for Reducing Your Food Waste: <https://www.sustainablylazy.com/blog/food-waste>
- Reduce Your Carbon Footprint with These Food & Kitchen Hacks: <https://plantie.com/reduce-your-carbon-footprint-with-these-food-kitchen-hacks/>
- 8 Sustainable Cooking Hacks Every Cook Should Know: <https://feastbox.co.uk/blogs/news/8-sustainable-cooking-hacks-every-cook-should-know>
- 10 ways to cut your carbon footprint in the kitchen: <https://onehome.org.uk/lifestyle/21-food-and-drink/319-10-ways-to-cut-your-carbon-footprint-in-the-kitchen>
- 14 sustainable kitchen hacks to help you lead a greener life: <https://www.wellbeing.com.au/at-home/home/14-sustainable-kitchen-hacks.html>
- 20 Kitchen hacks to reduce food waste and save money: <https://www.sheknows.com/food-and-recipes/articles/1066589/kitchen-hacks-reduce-food-waste-save-money/>
- 14 ways to be an eco-friendly cook: <https://www.besthealthmag.ca/best-you/green-living/14-ways-to-be-an-eco-friendly-cook/>

Very inspiring, isn't it? Let's continue to the next step! It's time for you to think if you can create your own hacks.

Step 5: Create a Worksheet and Flash Cards

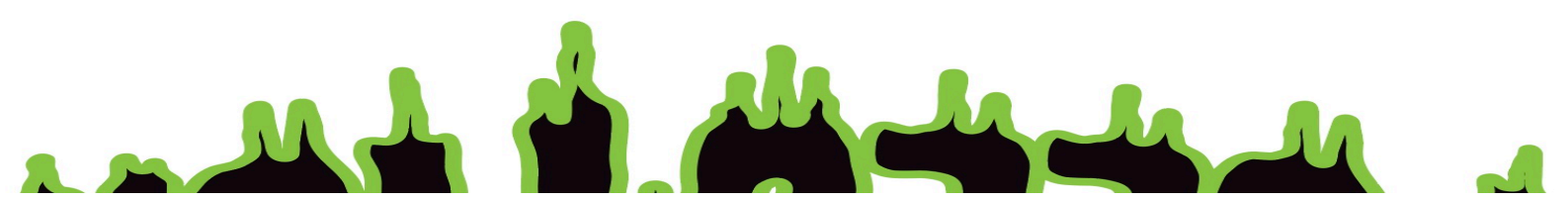
Now you will switch position with your tutors, and you will become one of them to spread what you have learned in this WebQuest through working worksheet and cards. In the previous steps, you learned a lot of information in relation to the following topics: buying food, cooking, storing food, composting, cleaning the kitchen, washing dishes.

Prepare worksheets with solutions for self-evaluation on eco behaviour in one's own kitchen. Based on the answers, you will find out what your habits are in the kitchen and whether they are ecological. At the end of the week, evaluate your outputs.

There are many ways how to make a worksheet, they can be digitally printed, crafted, online, online interactive.

Don't know how to create a worksheet? Read the links below:

- What is a Worksheet? <https://www.superteacherworksheets.com/what-is-a-worksheet.html>



- How to Create Worksheets for Your Students:
<https://www.youtube.com/watch?v=A2f-SuBSaNE>
- Design Ready-for-School Worksheets with Canva
<https://www.canva.com/create/worksheets/>
- How to make worksheets for your classroom:
<https://collaboratinginkinder.com/2017/03/23/how-to-make-worksheets-for-your-classroom-or-teacherpayteachers/>
- How to Create Digital Worksheets:
https://www.youtube.com/watch?v=R9L17YS_i00
- How to Create an Interactive Worksheet on Google Slides:
<https://www.youtube.com/watch?v=Xywm8BgKHgw>

Flashcards: Create flash cards with environmental hacks for the kitchen. Make them in your group, each teammate draws a few cards with hacks. Later each of you will pick one card and try to follow this hack next week.

Try to be ecologic in this part too. Collect cartoons from your cereal boxes and make shapes of card or just recycle paper you already own if is possible. Be creative – put symbols of environmental hacks you have learned in this WebQuest and add text to it. You can use a collage technique or simply draw it on.

What are flashcards? Flashcards are small note cards used for testing and improving memory through practiced information retrieval. Flashcards are typically two-sided, with the prompt on one side and the information about the prompt on the other. This may include names, vocabulary, concepts, or procedures.

Using flashcards can be a very effective self-testing approach. Even the act of making flashcards is a way to “work” the information, challenging you to think about which information to have on one side and the related description on the other. This also frees up some memory, since you will have a physical stack of cards with the information instead of trying to store individual facts, names, or terms in your mind. Flashcards are often part of spaced practice, and repetition helps you figure out what information you can remember easily and what needs additional effort. From a time-management perspective, flashcards allow you to take advantage of short amounts of time that become available throughout the day or week, in addition to during planned study sessions.

How to make them? Check these tips:



- 8 Better Ways to Make and Study Flash Cards: <https://collegeinfo geek.com/flash-card-study-tips/>
- How to use Flash Cards - Study Tips - Spaced Repetition: <https://www.youtube.com/watch?v=p3-o0pxDrL0>
- Online flash cards: <https://www.cram.com/>

EVALUATION

As a self- assessment exercise for this WebQuest, please answer the following questions and share your thoughts and insights with your teammates:

- If I had to share the most interesting points of this WebQuest, what I would tell them?
- How did I like working in a team? Am I a good teammate?
- Would I start to grow my own food? Would I start composting?
- Would I share this information with my family? Would I share it with other friends?
- Would I apply the principle of learning by flashcards to other subjects?
- How can I rethink my own kitchen? Am I committed to doing it to make a change?
- How can I, and will I, change my grocery shopping habits?

CONCLUSION

Most of us could stand to make a few changes to our daily habits to better serve the environment.

Environmental Hacks help to avoid rising temperatures that spur wildfires, reduce elevated sea levels causing catastrophic flooding, and the changing climate impacts that impact our lives. Scientists warn that we have a short window to transform energy sources and reduce greenhouse gas emissions to stave off the worst effects of global warming. Yes, it is the fight against climate change! The future of humanity may very well depend on our generation's response to this crisis. The good news is that we've learned a lot of new hacks. We can apply these hacks to our daily lives. Thanks to that, we can make our planet a better place. We have learned how to make a functional worksheet and flashcards. With these



tools, you can inspire other people to apply these hacks into their lives. Imagine that everyone who lived in your town / village made these positive changes.

In this WebQuest you have learned about environmental hacks in the kitchen, we believe that you will discover other hacks for other rooms.

My favourite room in the house is my kitchen. It's definitely the heart and soul of our home. It's where we gather in the morning as a family to start the day, and it's where we wind down at night over supper.

Kimberly Schlapman



Photo by Jimmy Dean on Unsplash

TUTOR SECTION

On completion of this WebQuest, young people will have achieved the following learning outcomes:

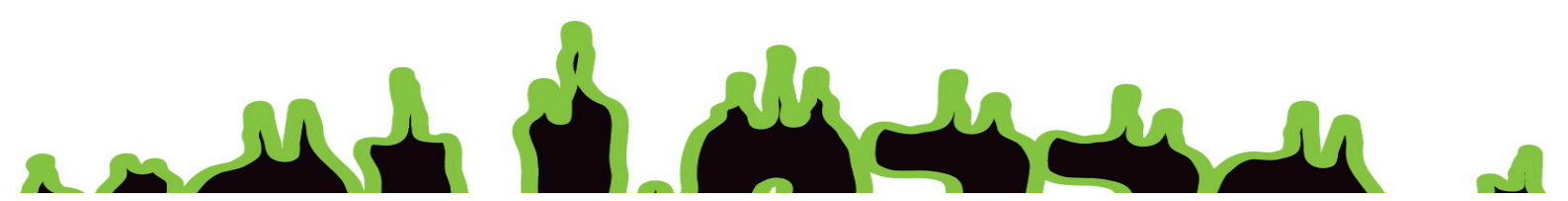
Knowledge	Skills	Attitudes
<ul style="list-style-type: none"> Basic knowledge of what an EnviroHack is. 	<ul style="list-style-type: none"> Discuss the benefit of environmental hacks to the environment. 	<ul style="list-style-type: none"> Willingness to create a sustainable home.



<ul style="list-style-type: none"> • Basic knowledge of Carbon Footprint. • Basic knowledge of growing herbs. • Basic knowledge of composting. • Basic knowledge of sustainable shopping. • Basic knowledge of how to clean a house sustainably. • Knowledge of what a worksheet and flashcards are. • Theoretical knowledge of how to apply an EnviroHack into everyday life. • Knowledge about how to clean a house in a sustainable way. 	<ul style="list-style-type: none"> • Discuss carbon Footprint. • Discuss growing herbs and vegetables. • Discuss composting. • Discuss sustainable shopping. • Discuss cleaning a house sustainably. • Develop a plan for one's own enviro-hack by worksheet and flashcards. • Develop a prototype for an enviro-hack. • Apply their enviro-hack and evaluate the success of their hack. 	<ul style="list-style-type: none"> • Willingness to avoid increasing your carbon footprint. • Willingness to grown one's own herbs & vegetables. • Willingness to compost. • Willingness to shop sustainably. • Willingness to clean a house sustainably. • Openness to sharing information about food waste. • Openness to sharing information about pollution by chemicals in homes. • Openness to sharing information on enviro-hacks with other. • Appreciation of the environmental damage that chemicals and pollutants can cause.
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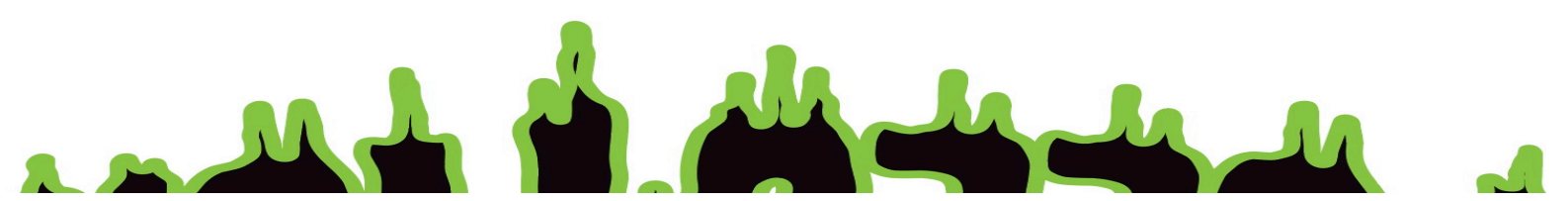
Questions that a youth worker or teacher might use in a whole class discussion to debrief this WebQuest:

- What hacks did you apply in your life, before completing this WebQuest?
- Which new hacks are you planning to apply in your own kitchen?
- Did you enjoy working on worksheets and flashcards?
- Are you proud of your work?
- Is it easier for you work in a team?
- What would you change if you had more time?





- Did you find anything that you did not like or not agree with?



SOLUTION NOT POLLUTION



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

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Project Number: 2019-3-IE01-KA205-065708