



# 102 - Climate Change Challenge WebQuests

*Low Plastic Diet*



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

## IO2 – Climate Change Challenge WebQuests

### WebQuest Theme: Low Plastic Diet

<b>TIME ALLOCATED:</b>	8 – 12 hours
<b>TITLE OF THE WEBQUEST:</b>	Creating your own plastic-free home – an artistic research poster presentation
<b>INTRODUCTION</b>	
<p>In this WebQuest we will learn how to turn our homes “plastic-free” and how to create an artistic research poster to present this issue. Plastic pollution is the introduction of plastic products into the environment which then upset the existing ecosystems in different ways. These pollutants cause environmental degradation and also affect different living organisms and their habitats negatively. 8.3 billion metric tonnes (9.1 billion US tonnes) of plastic have been produced since plastic was introduced in the 1950’s.</p> <p>When plastic products accumulate in the environment, they begin to cause problems for humans, wildlife, and other living organisms. Virtually every piece of plastic that was ever made still exists in some shape or form (with the exception of the small amount that has been incinerated). They create conditions that are not favourable for healthy living and proper growth. This is what is essentially referred to as plastic pollution.</p> <p>Plastic pollution is similar to any other type of environmental degradation, the only major difference here being that the major pollutants are made from plastic. Nearly two million single-use plastic bags are distributed worldwide every minute. One million plastic bottles are bought every minute around the world — and that number will top half a trillion by 2021. <i>Less than half of those bottles end up getting recycled.</i> There is more microplastic in the ocean than there are stars in the Milky Way.</p> <p>Would you be part of this? We don’t think so. Let's start by making small steps every day and let's do it from our homes. This can be prevented, and the effects minimised when the right measures are put in place. This WebQuest will help you rethink your daily habits and things that you use daily. Find your way how to be more friendly to the planet and unnecessarily add to plastic pollution levels.</p> <p><b>The world is changed by your example, not by your opinion. – Paulo Coelho</b></p>	



Congratulations! You have completed this short introduction. For more WebQuests, please visit the project website at: <http://www.solutionnotpollution.eu/EN/index.html>.

## TASK

Beep! Beep! The alarm on your phone woke you up from sleeping. You stumble to the shower, dress, brush your teeth, and run a comb through your hair, grab your snack, put your shoes on, and go to the bus.

You STOP and look back. You've been awake for barely an hour, but you've already used or touched plastic dozens of times. The material is a big part of our lives; it's in everything including electronics, food packaging and even medical devices. Most plastic is human made, produced using oil and other fossil fuels.

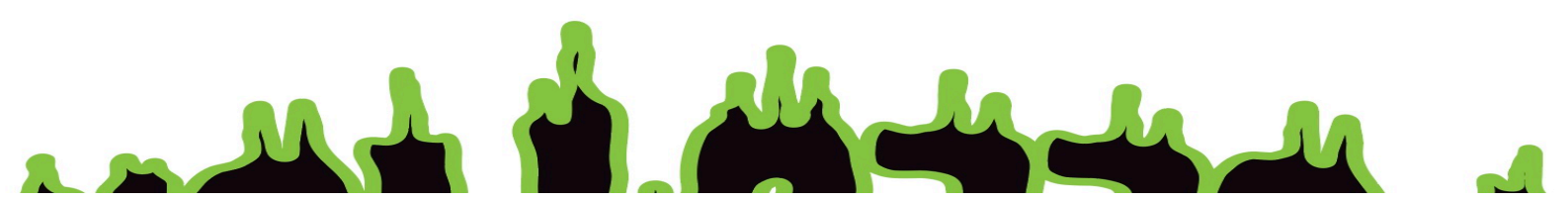
Did you know that every single plastic toothbrush ever made still exists? Life without plastic is very possible. It's just very hard. Going plastic-free starts with cloth bags and straws. Suddenly, you're ... making your own toothpaste? Maybe it has shocked you, but you are the one who can make a big change!

To create a plastic free home, you will complete this step-by-step task:

Firstly, you will learn as much information as you can about plastic pollution and solution. In your working group you will create an artistic research poster to present to your community about how to make your home plastic-free and how to avoid plastic in your daily life. You will present your knowledge through the poster and try to apply your findings to your daily routine. At the end of this task, you will inspire your friends with ideas on how to create a plastic-free home and you will present your artistic posters to them!

## PROCESS

STEP 1: Delve into the topic of plastic pollution – what is plastic and what plastic pollution means.



Before you are creative and work on the artistic poster, you will learn about the problems associated with plastic pollution.

**What is plastic?** Plastics are synthetic materials, which can be easily shaped or deformed, and are made from synthetic resins or organic polymers. Examples of these polymers include nylon, PVC, and polyethylene. Supermarkets and a lot of other retail stores also use them to package goods bought. Plastics are mainly composed of petrochemicals that when burned or melted, cause environmental pollution.

**How does plastic pollution occur?** These pollutants can build up in water sources and make it difficult for marine life to move around freely in their habitat. They can also reduce the flow of air within water bodies, a factor that endangers the lives of organisms that reside in these habitats. Some marine organisms ingest micro debris made of plastics and suffer from poisoning because of the chemical components. On the other hand, plastics can be an eyesore when they are thrown all over the place. They can also trap water and act as breeding places for disease-causing organisms like mosquitoes. Plastics that degrade in water sources can cause pollution by making the water obtained from such places unfit for human consumption.

Plastic pollutants can also be classified in terms of size. Follow the videos below and find out more information about plastics and plastic pollution:

- What are Plastics: <https://www.youtube.com/watch?v=2PAIQPLZgoI>
- Plastic Pollution: <https://www.youtube.com/watch?v=IA9O9YUbQew>
- Why We Need to Stop Plastic Pollution in Our Oceans: <https://www.youtube.com/watch?v=Yomf5pBN8dY>
- Microplastics explained: <https://www.youtube.com/watch?v=49OJoTsZY00>

In this article, you will read in detail about the issue, we suggest that you take notes:

- When the mermaids cry: the great plastic tide <https://plastic-pollution.org/>

In the next few steps, you will learn how to make your home more plastic-free and you will identify what you do wrong and which changes you can implement to your home.

**Step 2: Analyse your home and learn how you can start to live in plastic-free home**





Before you start, take this quick test to find out the size of your plastic footprint:

- Plastic Footprint Calculator: <https://www.omnicalculator.com/ecology/plastic-footprint>

Look around your home and ask yourself how you feel about using plastic in your daily life. There's no need to make a comprehensive list as plastic-free living can be taken to all levels of extreme, but these are some of the most effective key changes that can be made.

Write down all plastic items that you use from when you wake up until you fall asleep. How many of them did you use?

Plastics are everywhere. This light, durable material helps keep our food fresh and is used in everything from clothing fibres to medical supplies to paint. But the characteristics that make plastic useful also make it damaging to the environment.

Before you learn about the solution ask yourself: Are you using a product made from plastic out of comfort and ease? If yes when do you do this? Ask yourself if small efforts can make a big change for the planet. Small tips:

- Plastic-free goals? 5 easy tricks for lazy people: <https://medium.com/age-of-awareness/plastic-free-goals-5-easy-tricks-for-lazy-people-fda84b748997>

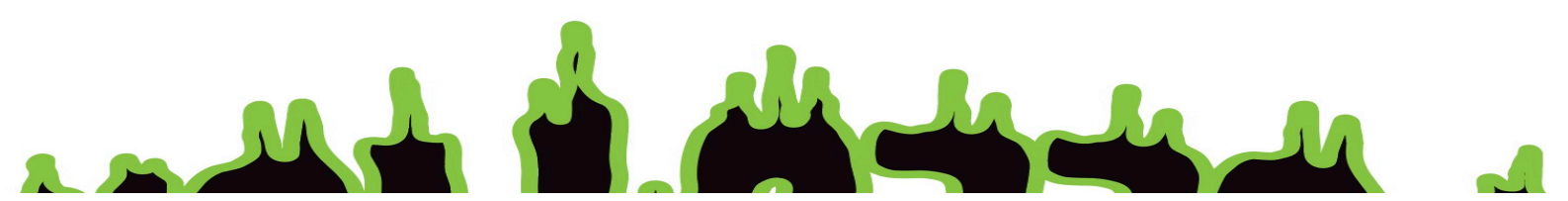
Do you make a shopping list before you go to the grocery store? Have you ever tried to shop zero-waste or plastic-free?

- Zero Waste Grocery Shopping // Living Waste Free: <https://www.youtube.com/watch?v=dortUnKnQ28>

Do you already know a solution you can apply to your life to improve a plastic-free home, but yet, you still have not started implementing it? Learn more:

- 100 steps to a Plastic-Free Life: <https://myplasticfreelife.com/plasticfreeguide/>
- 5 Simple Changes to Move You Closer to a Plastic-Free Home: <https://earth911.com/home-garden/plastic-free-home-5-simple-changes/>
- 10 Tips for Living With Less Plastic: <https://www.treehugger.com/tips-living-less-plastic-4858688>

Watch how this woman manages her plastic-free home:



- Plastic free living for beginners: <https://www.youtube.com/watch?v= bX0Umisr8c>

Take notes with other friends in the team and have a discussion about these notes. Don't worry in the next step you will learn how to implement a plastic-free home to your real home and spread this knowledge to others through artistic research poster presentation!

### Step 3: Focusing on Grocery shopping, packaging and plastic in your kitchen

Before we go to the kitchen, we stop in the grocery store. Some people love food shopping excursions, but between the lines and the ubiquity of plastic containers, bags, and wasteful packaging, the grocery store can become a Green Monster's worst nightmare.

Here you can read many tips about how to shop in an eco-friendly manner. It also means that you will bring home less plastic:

- 7 Tips for Eco-Friendly Grocery Shopping: <https://www.goingzerowaste.com/blog/7-tips-for-eco-friendly-grocery-shopping/>
- Plastic-Free Shopping: 3 Easy Tips for Waste Reduction: <https://utopia.org/guide/shopping-without-packaging-3-easy-tips/>

There are many opportunities to practice plastic-free life beyond the kitchen, too! Almost all opportunities fall into 3 categories: repairing, repurposing, and mindful shopping. You have already collected a lot of information regarding plastic pollution in this WebQuest. Let's take out plastic from our homes!

And now if you want to know how to make your kitchen plastic-free, read the following articles:

- How to go (almost) plastic-free in the kitchen: <https://friendsoftheearth.uk/sustainable-living/how-go-almost-plasticfree-kitchen>
- 10 Plastic-Free Kitchen Essentials To Help You Go Zero Waste On A Budget: <https://www.thegoodtrade.com/features/plastic-free-kitchen-essentials-on-a-budget>
- 18 Ways to Reduce Plastic in Your Kitchen on a Budget: <https://www.sustainablylazy.com/blog/plastic-free-kitchen>



Are there plastic bottles in your fridge? Do you bring them with you when are you leaving the house?

Read these articles about plastic bottles:

- A million bottles a minute: world's plastic binge 'as dangerous as climate change:  
<https://www.theguardian.com/environment/2017/jun/28/a-million-a-minute-worlds-plastic-bottle-binge-as-dangerous-as-climate-change>
- A whopping 91% of plastic isn't recycled:  
<https://www.nationalgeographic.com/news/2017/07/plastic-produced-recycling-waste-ocean-trash-debris-environment/>

You and your friends are learning a lot about the environmental impact of plastic in the kitchen, and how to shop more sustainably for the goodness of the environment. It is also important to do the same in bathroom!

#### Step 4: Bathroom and cleaning in the home

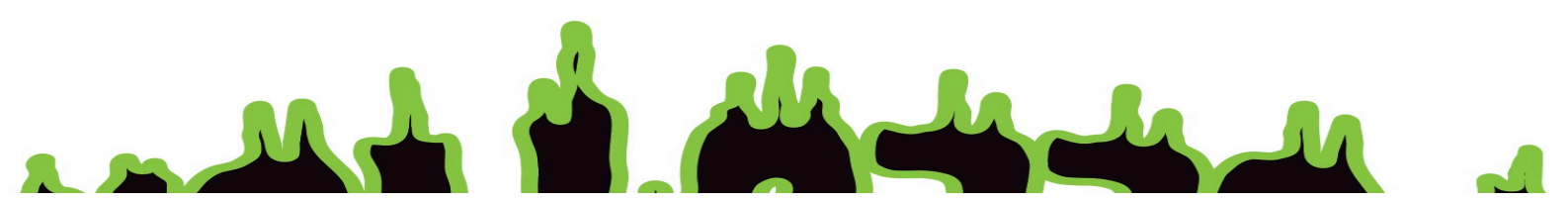
Before we continue, read about a plastic-free bathroom, check this article:

- 10 Plastic Pollution Facts That Show Why We Need To Do More:  
<https://www.globalcitizen.org/en/content/plastic-pollution-facts/>

It's time to shake up your beauty and grooming routine, this is the perfect opportunity to check out the new generation of plastic-free shampoo, razors and toothbrushes. You can even get your hands-on plastic-free versions of almost every skin product, from moisturisers and cleansing water to make-up and face masks.

Read about good tips how to make your bathroom plastic-free:

- Beauty and the beast: plastic-free bathroom:  
<https://friendsoftheearth.uk/sustainable-living/beauty-and-beast-plasticfree-bathroom>
- My Zero Waste Bathroom Essentials and Shower Routine:  
<https://www.youtube.com/watch?v=HJq-FXKgdrA>
- How To Clean Your Home With Plastic Free And Eco Friendly Cleaning Products:  
<https://www.friendlyturtle.com/sustainable-living/how-to-clean-your-home-with-plastic-free-and-eco-friendly-cleaning-products/>



Good job! Now it is time to be creative and with all of knowledge you have found, turn them into an artistic research poster which you can present to others to inspire them!

### Step 5: Create Your Artistic Poster

A poster is a great way to communicate your research or your understanding of a topic in a short and concise format. You will need to analyse and evaluate information, synthesise ideas and creatively demonstrate your understanding of a topic or the findings of what you have learned about having plastic-free home. Although many students view poster presentations as 'easy', they actually require a lot of thought and preparation. Creating posters develops your ability to communicate perceptively (matching your explanation to your audience) and concisely – which are important skills in the workplace. The purpose of your poster presentation will be shaped by how they are used in your discipline and by the assessment task itself. Make sure you learned all information carefully. Do they indicate the purpose of the poster? What is the poster expected to achieve?

- How to make a poster: <https://www.youtube.com/watch?v=nGDJI1vnMA>
- Making a better research poster: [https://www.youtube.com/watch?v=AwMFhyH7\\_5g](https://www.youtube.com/watch?v=AwMFhyH7_5g)
- What is an Infographic? Examples, Templates & Design Tips: <https://venngage.com/blog/what-is-an-infographic/>

Now that you have enough information from this WebQuest about why you are creating a poster, start to think about the content you want to include. The layout is the first thing you need to decide on. The layout refers to where you plan to place your information on the poster.

You have two options; you can create a poster on your computer or even create one by hand. It is up to you which method you choose.

- Poster Design Guide: How to Make an Eye-Catching Poster: <https://venngage.com/blog/poster-design/>
- How to Create a Research Poster: <https://guides.nyu.edu/posters>

Your poster should contain some writing, use images, graphs, tables and diagrams to convey your content. This is a chance for you to be creative and consider the best ways to visually present your information. Each visual should have a caption, briefly explaining what it represents.





If you create your poster on a computer, check out these links:

- Custom posters made easy with Canva's poster maker:  
<https://www.canva.com/create/posters/>
- How to Make Scientific Posters using Canva | Presenting Research Papers at Online Conferences: <https://www.youtube.com/watch?v=YiO4QPck7SE>

If you make your poster by hand, follow this link:

- How to make a poster: ArtSkills Poster Supplies  
<https://www.youtube.com/watch?v=hkkUe8sKsxs>

Have fun when designing your poster! Be creative, find new ways to present your ideas and don't be afraid to change them. Your sense of fun will carry into your poster and make it more appealing and interesting. In next step you will learn about presenting your poster.

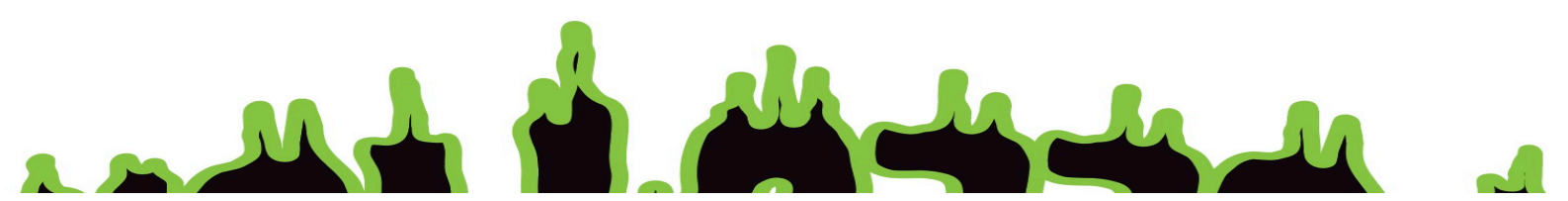
#### Step 6: Present your poster

Printing out a poster is not the last step in the process. A typical poster presentation session requires you to stand beside your poster and answer questions from a few viewers for a period of time. Most often, you will display your poster for an audience during a poster presentation session. Viewers will have limited time, so you will need to attract their attention, communicate your research engagingly, and be responsive to questions.

- How to present an academic research poster:  
<https://www.youtube.com/watch?v=0ozwCEeaVWE>

Remember, your poster and your presentation go together. The presentation should complement the information on the poster and engage the interest of your audience. Think carefully about the information you most want to communicate, and always practice presenting in front of your poster.

A massive congratulations is in order! You made it! You received lots of information and you have created an artistic research poster!



**“ I am only one, but I am one. I cannot do everything, but I can do something. And I will not let what I cannot do interfere with what I can do. ”– Edward Everett Hale**



Photo by Ocean Cleanup Group on Unsplash

## **EVALUATION**

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

- What was the most surprising information that I learned?
- How well did my team and I communicate together?
- What new skills did I learn?
- Did I enjoy the creative part? Am I more into computer or hand-made DIY? Why did I choose one method over another?
- How will I share knowledge about a plastic-free home with others apart from this poster?
- Did I discover anything about myself?
- How can I, and will I, change my behaving in my home to reduce plastic pollution? Am I committed to doing it to make a change? How do I feel about that?

## **CONCLUSION**



Congratulations! You have successfully finished this WebQuest and you have looked at developing an artistic research poster and gave a great presentation!

You have learned that plastic pollution has so many negative effects. They are not confined to one segment of the ecosystem. Different components of the environment are affected, and this causes biodiversity loss. The planet is much better when it's clean and pollution is kept away.

The most important thing is that, with thanks to this WebQuest, you will look at things you use daily in different ways and hopefully you will stop consuming plastic how you did before.

Inform your friends about plastic-free homes and how to make a great artistic research poster. Share your new knowledge!

### 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"> <li>• Basic knowledge of plastic and plastic pollution.</li> <li>• Basic knowledge of how to reduce plastic at home.</li> <li>• Basic knowledge of how to reduce plastic in the kitchen.</li> <li>• Basic knowledge of how to reduce plastic in the bathroom.</li> <li>• Basic knowledge of how to reduce</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss what is plastic and why plastic pollution hurts the planet.</li> <li>• Apply critical thinking to have a plastic -free home.</li> <li>• Discuss what can be done to reduce plastic pollution in the kitchen.</li> <li>• Discuss what can be done to reduce plastic pollution in the bathroom.</li> <li>• Discuss what can be done to reduce</li> </ul>	<ul style="list-style-type: none"> <li>• Awareness of plastic pollution.</li> <li>• Willingness to reduce one's own plastic consumption habits.</li> <li>• Willingness to change behaviours in a plastic-free kitchen.</li> <li>• Willingness to change behaviours in a plastic-free bathroom.</li> <li>• Willingness to change behaviours in the grocery store.</li> </ul>

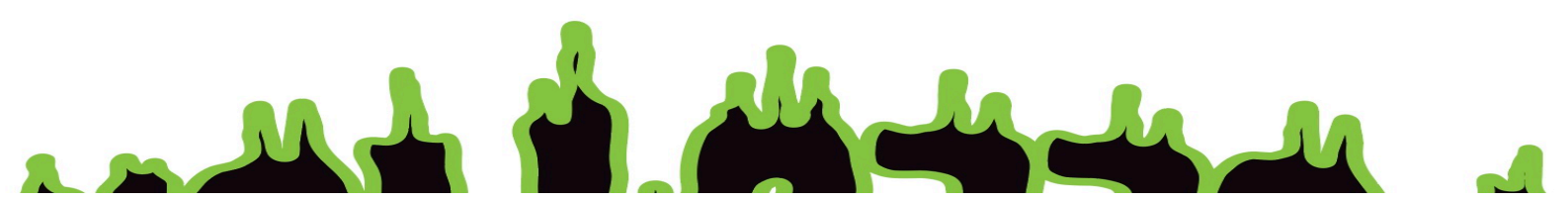




<p>plastic in the grocery store.</p> <ul style="list-style-type: none"> <li>• Basic knowledge of a sustainable way to clean your home.</li> <li>• Knowledge of what a research poster is.</li> <li>• Knowledge of good presentation of the research poster.</li> <li>• Factual knowledge of how much plastic is in our oceans.</li> <li>• Factual knowledge of how to give a good poster presentation.</li> <li>• Teamwork.</li> </ul>	<p>plastic pollution in the grocery store.</p> <ul style="list-style-type: none"> <li>• Discuss what can be done to reduce plastic pollution when cleaning the home.</li> <li>• Develop a research poster.</li> <li>• Give examples of a research poster can be done.</li> <li>• Participate in group work activities to produce a good presentation.</li> </ul>	<ul style="list-style-type: none"> <li>• Willingness to change behaviours in a sustainable way when cleaning homes.</li> <li>• Openness to being creative.</li> <li>• Awareness of presentations.</li> <li>• Appreciation of what can be done by a team</li> </ul>
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**Questions that a youth worker or teacher might use in a whole class discussion to debrief this WebQuest:**

- Can you say five things which stay in your mind after this WebQuest?
- Is there anything you were shocked about?
- How will you use the knowledge you have gained in this WebQuest?
- Did you enjoy the creative part of making posters? Are you satisfied with the results?
- Would you change anything if you had more time?





# SOLUTION NOT POLLUTION



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