



102 - Climate Change Challenge WebQuests

Sustainable Plate



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

IO2 – Climate Change Challenge WebQuests

WebQuest Theme: Sustainable Plate

TIME ALLOCATED:	6-8 hours (varies)
TITLE OF THE WEBQUEST:	Developing a Sustainable Three-Course German Menu
INTRODUCTION	
<p>Each and every day on our breakfast, lunch, and dinner plates, we have a “piece” of climate, biodiversity, and little part of an ecosystem. Every apple, steak, or cheese slice consequently produces greenhouse gas emissions. Almost half of our food emissions come from the production of food, but also from trading and transportation, as much as from shopping, cooling, and cooking. In Germany, everyone emits a total of 11 tonnes of CO₂ emissions per year, while food shares contribute around 14% of greenhouse gas emissions.</p> <p>What does sustainability mean and what is a ‘sustainable plate’? What does our diet have to do with climate change and global warming? Can we protect the climate by changing our daily routine and by following a sustainable diet?</p> <p>Every step in changing our habits and lifestyle could make a valuable contribution to fighting climate change. If we start making smart choices in our daily food consumption, we can pave the way for better environmental outcomes.</p> <p>If this power is channelled effectively, the very act of eating our meals or following sustainable and healthy recipes could lead to carbon levels being reduced, the lives of peri-urban farmers being improved, and waste being avoided.</p> <p>In this WebQuest, you will experience a distinctively sensual, playful, and cognitive journey on the topic of sustainable nutrition and its ultimate impact on climate change and our environment.</p>	
TASK	



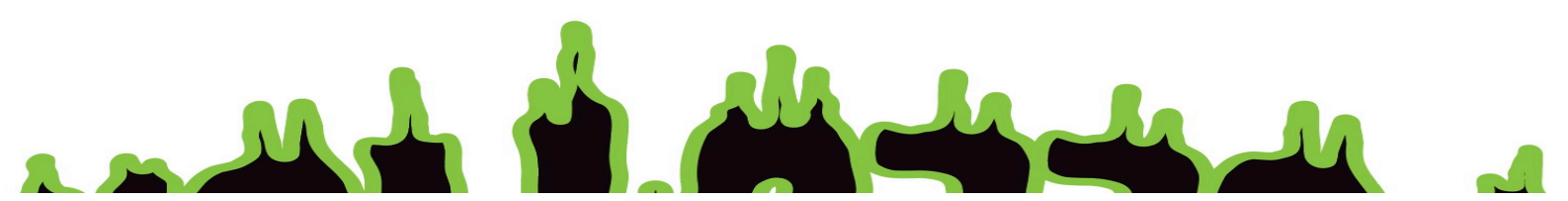
You and a friend have gotten an invitation to participate in an annual International Climate Change Bootcamp which gathers together thousands of young and passionate activists and change-makers from around the world. After reading the Bootcamp programme carefully, you have decided that you want to use your voice and make a valuable input by raising awareness regarding conscious and mindful nutrition choices and habits, in order to reduce the detrimental impact of food production systems and food consumption on our environmental footprint. As a preparation phase, you and your friend begin brainstorming of possible ideas on how you want to mobilise the attention of other participants of this bootcamp to this truly complex and important issue. You are both figuring out different ways of how you could potentially depict the impact of various food choices on climate change, in order to build a clear and broader picture that could have positive systematic implications on a global scale.

The preliminary idea that food is something that unites us in many ways; however, sustainably designed and mindfully prepared delicious food that could have a greater impact on the lives of the upcoming generations, is an utmost goal of yours. In order to make this concept work and attract as many visitors as possible, you decide to design a traditional, but experimental and innovative three-course menu which includes new sustainable cooking ideas coming from existing traditional German recipes. You think that this bootcamp is a great opportunity not only to inform the participants about the sustainable ways of producing daily meals, but also to inform them about traditional and contemporary food culture in Germany, policies which tackle sustainable goals, and measures to counter climate change.

To make this three-course menu visually pleasant and attention-grabbing, you and your teammate decide to develop an infographic that colourfully illustrates your innovative cooking ideas, inspires younger generations to pursue a sustainable lifestyle, and ultimately proves that eating a delicious wholesome yet traditional meal can have a positive impact on economy, society and environment.

PROCESS

Step 1: Do we eat sustainably?



The first step in the development of the final three-course menu in the form of an infographic is to dive deeply into research and learn more about sustainable food consumption and how it is linked to one's eating habits and preferences.

You and your partner start by exploring each other's eating habits by answering and taking notes on the following questions:

1. Do you stick to a healthy diet on a daily basis or you are more prone to eating 'junk food'?
2. What are the common products you tend to fall for?
3. Do you plan your meals beforehand or is your choice of food influenced by impulse or where you find yourself when you are hungry?

Now that you are more conscious about your eating preferences, start a discussion with your colleague regarding the eating habits of the people you know - friends and family - and come up with a grocery list that is common for you and your teammate and also for the people you know and the people that are going to participate in this bootcamp.

After you have made some notes regarding your daily food preferences and those of your acquaintances and the bootcamp participants, you might have already built an assumption whether all of you are following a nutritious diet, or whether you fall for unconscious unsustainable decisions. Therefore, in the next paragraphs you will learn, how to make smart shopping decisions and what characteristics are crucial for a sustainable lifestyle.

Take a look at some articles which provide a profound analysis of food production systems and consumption habits, along with their benefits in improving our health, as well as potentially decreasing substantial damage to the planet:

- Healthy Plate A Practical Aid For Healthy Nutrition: <http://www.healthyplate.eu/>
- Sustainability: <https://www.hsph.harvard.edu/nutritionsource/sustainability/>
- The Planetary Health Diet: <https://www.stockholmresilience.org/research/research-news/2019-01-17-the-planetary-health-diet.html>

After reading these articles, go back to your grocery list and think about what could be done to change the attitude of ordinary people regarding healthy dieting and sustainable ways of eating.

Step 2: What is a "Sustainable Plate"?



It is clear that what we put on our plates has a major impact not only on human health but also on the health of the planet. As it is widely known the production of animal-based foods tends to have higher greenhouse gas emissions than producing plant-based foods. By following a plant-based diet, you can reduce the carbon greenhouse gas emissions by 64%. Additionally, dairy products and red meat (especially beef) stand out for their disproportionate environmental impact.

Shifting towards a “planetary health diet”, a “sustainable plate” is more necessary than ever. The following links can provide you with more information on what a “sustainable plate” is:

- Plate and the Planet:
<https://www.hsph.harvard.edu/nutritionsource/sustainability/plate-and-planet/#planetary-health-diet>
- Sustainable, resilient food systems for healthy diets: the transformation agenda:
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6792143/>

Apart from the detrimental effect of greenhouse gas emissions, it is also important to mention that food production industries cause enormous pressure on natural resources, agriculture, and farming, leading in the long term to deforestation, species extinction, and freshwater contamination. Please take a look at this video which illustrates the traveling route of an avocado from a field straight to our plates and try to critically assess its impact on a planetary scale.:

- EAT ME avocado - from plant to plate:
<https://www.youtube.com/watch?v=g0DPZjdHORg>

When it comes to deciding what ingredients we are going to use in the plates we consume on a daily basis, it’s important to understand the term “Food Traceability” as it is closely related to sustainability and especially to our ecological footprint:

- Why traceability is essential for the food and beverage industry:
<https://www.nextecgroup.com/why-food-traceability/>
- Tracing sustainability in global food chains: <https://ecdpm.org/great-insights/sustainable-value-chains/tracing-sustainability-in-global-food-chains/>

In order to achieve sustainable development goals and shift to a sustainable and healthy food system, everyone needs to participate, and it starts at the very beginning from your personal choice. Defining healthy and sustainable food patterns are complex. To help you to understand and start your journey to a sustainable plate, here is a link which provides you with 12 amazing tips, which grasp the full picture of healthy and sustainable nutrition:



- The Amazing Twelve: 12 Recommendations For A Healthy And Sustainable Diet: <https://www.barillacfn.com/en/magazine/food-and-sustainability/12-recommendations-for-a-healthy-and-sustainable-diet/>

When you have completed your research about sustainable food production systems, planetary healthy diet, and personal choices, go back to your initial grocery list that you have prepared with your partner and assess to what extent it is healthy, and whether it considers crucially important aspects of the sustainable planetary approach. Make the necessary adjustments and continue to step 3!

Step 3: Can your favourite traditional dish also be sustainable?

Now you have a more sustainable grocery list in your hands that can be used to develop your three-course menu! In this step of your preparation for the International Climate Change Bootcamp, you are going to find out what traditional cuisine peculiarities exist in Germany and to what extent they are sustainable.

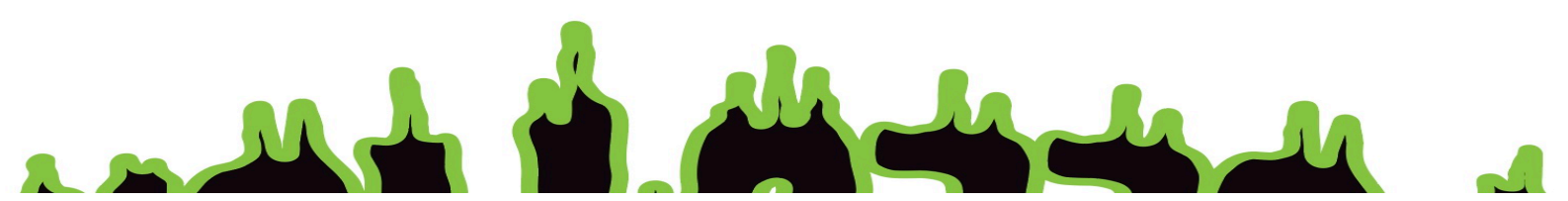
You and your partner have to conduct a little treasure hunt of the traditional 'grandma' recipes and surf through some web pages to find out interesting, unusual cooking ideas for your final transformative menu. Here is an online collection of various traditional recipes that could guide you and serve as an inspiration:

- 45 Old-World German Recipes Worth Trying Today: <https://www.tasteofhome.com/collection/german-recipes/>
- Authentic German Recipes: <https://germanfoods.org/recipes/>

Having discovered several inspirational ideas for your final three-course menu, you could think of how to transform them into new sustainable recipes whilst keeping the cultural authenticity and preserving traditions.

Here are some links which will help you to get acquainted with the new inspirational cooking trends rapidly developing in Germany. Berlin - a melting pot of cultures and tastes – takes a leading role in innovative cuisine:

- The most relevant food trends in Germany 2019: Sustainability, health and time management: <https://expansion.eco/the-most-relevant-food-trends-in-germany-2019-sustainability-health-and-time-management/>



- Berlin's food trends take over Germany: <https://www.dw.com/en/berlins-food-trends-take-over-germany/a-41318781>

A quick look through the dusty shelves of grandma's absolutely delicious traditional recipes and inspirational new food trends taking hold in Germany, you have probably sketched a full three course menu in your head already. Have you come up with some "sustainable plate" ideas? Write them down!

Before starting to experiment with your three-course menu and before finalising it, first explore other essential aspects of the food production and consumption systems. This can help you to make smart choices while picking the ingredients for the courses in your meal.

Step 4: " Farm-to-Fork" should be your first choice!

At this stage of creating your three-course experimental menu, you have probably already come up with plenty of ideas regarding your meal courses and which particular meals you are willing to present innovatively. But there are still several aspects you have to be aware of.

When buying fruit and vegetables, the season is particularly important. Fruits that have just been harvested are much tastier. In addition, the energy balance of seasonal products is better because energy-intensive storage in a warehouse is unnecessary, as are long transportation routes. Moreover, many farmers offer vegetable box schemes, which contain products that are grown locally and are seasonally appropriate.

"Farm-to-Fork" is a social movement related to fresh, locally sourced food sold to local consumers or/and restaurants. Learn more about the EU's "Farm-to-Fork" strategy at:

- From Farm to Fork: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/farm-fork_en
- Farm to Fork: <https://www.youtube.com/watch?v=jKKztahx8aI>

Check out also some articles which highlight the numerous potential benefits of being 'locavore', as well as common vegetables and fruits available at the local markets in different seasons:

- Heisse Tage Leicht Geniessen: <https://www.5amtag.de/genuss/das-hat-saison/sommer/>



- Der Saisonkalender: https://www.bzfe.de/data/files/3488_2017_saisonkalender_posterseite_online.pdf
- Eating Christmas: Three Traditional German Dishes for December: <https://www.deutschland.de/en/topic/life/eating-christmas-three-traditional-german-dishes-for-december>

What do we mean by locavore? Find out here:

- Locavore: <https://www.dictionary.com/browse/locavore>

If you want to be kept updated about recent seasonal food trends, follow some social networks which source and sell food directly to consumers. Additionally, you could check out these links where you can download apps which are available for free from the Apple Store and Google Play Store:

- Top 5 food apps for sustainable eating: <https://sustainablefoodtrust.org/articles/top-5-food-apps-sustainable-eating/>
- Say yes to local food: <https://sustainablefoodtrust.org/articles/local-food-assembly/>

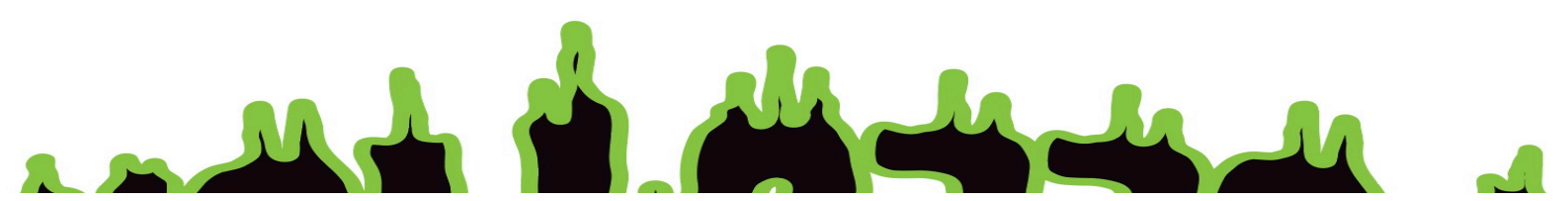
Find out more about the local producers in your area; what seasonal products they are offering? Have you taken the “farm-to-fork” idea into consideration while developing your grocery list?

Step 5: Are you an ethical consumer?

Let’s talk about food ethics and fair-trade goods, as an undisputable component of the sustainable plate.

Typically, when you go to supermarket, you encounter the products labelled as ‘organic’ and ‘eco’. In principle, they do not differ. Both are legally protected terms, and these labels mean that the production and processing of the goods took place in accordance with the EU legislation on organic farming. Read more about these labels at:

- 10 years of the EU organic logo: https://ec.europa.eu/info/food-farming-fisheries/farming/organic-farming/organics-glance/organic-logo_en
- Wie erkenne ich Bio-Lebensmittel? <https://www.oekolandbau.de/index.php?id=14519>



- Egg labelling: <https://www.eierhof-hennes.de/egg-labeling/?lang=en>

Nonetheless, fair-trade products are also very popular among many consumers. How often do you check whether the product is fair-trade? By buying fair-trade bananas, coffee, tea, chocolate, and sugar, you will be supporting producers in developing countries. The purpose of promoting fair trade is to improve the living and working conditions of people in the countries of the Southern Hemisphere. Fair trade benefits small-scale family farms and their self-help initiatives. Learn more about the initiatives here:

- Essen und Trinken: <https://www.nachhaltiger-warenkorb.de/themenbereiche/essen-und-trinken/>
- Ethical Trade And Fairtrade: <https://www.ethicaltrade.org/issues/ethical-trade-and-fairtrade>
- What's The Difference Between Fairtrade, Ethical And Handmade? <https://www.euronews.com/living/2019/05/12/what-s-the-difference-between-fairtrade-ethical-and-handmade>

After a very detailed exploration of sustainable criteria for your daily shopping preferences, learning about the implications of global food production and consumption on economic, social and environmental realms, you are all set to apply what you have learned and to change your behaviour.

Be ready to make smart choices whilst doing your grocery shopping to prepare an innovative three-course meal menu for the bootcamp.

Keep in mind that your sustainable shopping basket should ultimately comprise the following list:

1. healthy products,
2. organic products,
3. seasonal fruit and vegetables grown locally,
4. less meat and fish,
5. fair trade products, as well as drinks in recyclable packaging units.

Now it is time to go back to your grocery list and remove any ingredient that doesn't match the list above.

Step 6: Creation of a three-course sustainable menu!



You have been on an interesting yet complex journey of exploring the term, and essence, of sustainability in relation to food production and consumption.

The learning process of unleashing the term 'sustainability', its diverse aspects, and implications onto economic, social and environmental realms uncovered existing realities, as well as your personal attitude to the systems of food production and consumption. We often buy the things we need every day, such as food and drink, without giving them much thought.

We, as human beings, tend to make intuitive and emotional decisions, and when it comes to bargaining, make an unpredicted and unplanned purchase. Everyone develops personal routines and preferences. It also means that by falling into this routine, we may buy products that are altogether too fat, too sweet, too expensive, and insufficiently sustainable. Therefore, it is extremely important that we try and practice every day "new sustainable routines".

What was new for you? What is challenging in the concept of developing a "sustainable plate"? Reflect on these aspects with your partner and proceed with deciding which three plates you are going to present in your final menu, which will be presented in the form of an infographic.

Complete the grocery list, based on the selected plates and decide from where you are going to get the ingredients. Cook them and experiment as much as you can so as to make your final decision on the three-course menu that is going to be presented in the form of an infographic and will be served during the bootcamp.

Step 7: Prepare your Infographic Menu!

The time has come to create a delicious traditional, yet innovative and sustainable, three-course menu in the form of an infographic. Keep in mind that your final menu has to represent an experimental spirit, and also don't forget to apply the recommendations on the sustainability of the ingredients, and to use products and ingredients corresponding to all the above-mentioned findings.

In order to catch the eye of the audience and visualise the colourfulness of the ingredients and the flamboyant fusion of tastes, your menu will be presented in the form of an



infographic. That will entice your potential audience, by using colourful images and patterns, to see, compare, and experience by themselves the whole process of preparing the meal.

In order to learn how to develop your infographic step by step, the following links will guide you:

- What Is an Infographic: <https://blog.adioma.com/what-is-an-infographic/>
- How to Create a Great Infographic with No Design Skills: <https://www.poweredbysearch.com/blog/how-to-create-great-infographic-design-skills/>

Some free tools to create an eye-catching infographic efficiently and effectively can be found at:

- 12 Tools to Create an Infographic in 30 Minutes (Design Skills or Not) <https://buffer.com/library/infographic-makers/>

While developing your infographic don't forget: be creative and have fun!

Print the final material, share with your family members, friends and acquaintances and get their feedback. Make any necessary adjustments and finalise your infographic menu!

EVALUATION

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

- What were some of the most interesting discoveries I made while working on this project? About the problem? About myself? About others?
- What were some of my most challenging moments and how did I manage to overcome them?
- What were some of my most powerful learning moments and why?
- What skills did I acquire through this activity?
- How well did I and my team communicate overall?



- Were my milestones and goals mostly met, and how much did I deviate from them if at all?
- What would I do differently if I were to approach the same problem again?

CONCLUSION

Congratulations! You have managed to successfully accomplish all your tasks and prepare an impressive experimental menu for the International Climate Change Bootcamp!

Through this learning journey you have been able to unleash the hidden aspects of 'sustainability' and understand its global, national, and local implications in economic, social and environmental realms. You have been able to reflect on human nature; how we are emotionally biased in making our daily food decisions. These diverse perspectives gave you an idea and starting point to act towards changing your daily routines, acknowledging ecological, ethical, fair-trade, health, regional/seasonal factors while enjoying your daily breakfast, lunch or dinner.

Now you are ready to support your friends and to undertake the same journey, so that all together you can fight climate change through more conscious and informed food consumption decisions and actions!

“To eat is a necessity, but to eat intelligently is an art “.

Francois de La Rochefoucauld



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 how to eat seasonally. • Basic knowledge of how to reach local food producers. • Basic knowledge about menu ideas that combine local/seasonal food. • Factual knowledge about the impact of food production, processing, transportation, and consumption on the planet. • Theoretical knowledge of sustainability and the 'sustainable plate'. • Factual knowledge about combating global warming and climate change by following a sustainable lifestyle. • Theoretical knowledge of 	<ul style="list-style-type: none"> • Define the meaning of the term "sustainable plate". • Define the term "sustainability". • Define the term "Farm-to-Fork". • Define the term "planetary health". • Discuss the environmental benefits of eating locally sourced and seasonal food. • Discuss the health benefits of eating locally sourced and seasonal food. • Design a local/seasonal menu. • Follow a cooking recipe. • Combine diverse regional, local, ethically correct ingredients in a menu. 	<ul style="list-style-type: none"> • Willingness to be more creative and adventurous when planning and cooking food. • Openness to eat local and to support local food producers. • Awareness of the environmental and health benefits of eating locally sourced food. • Willingness to share and promote sustainable ways of life with others, by following aspirations to combat climate change causes. • Openness to combine, mix, and experiment with diverse tastes. • Feeling of social responsibility and belonging by contributing to the



<p>essential components of sustainable nutrition.</p> <ul style="list-style-type: none"> • Theoretical knowledge about the term 'traceability' on a global scale. • Factual knowledge about modern/digital sustainable food consumption networks, apps, movements. • Factual knowledge of European and local eco - food production and distribution policies and initiatives. • Theoretical knowledge about food systems ethics, moral, fairness. • Basic knowledge about how to develop an infographic. 	<ul style="list-style-type: none"> • Reflect on personal food consumption decisions. • Evaluate and use data regarding food production systems and consumption effectively. • Analyse and use data regarding the economic and environmental benefits of a sustainable plate diet. • Use digital tools for finding out/purchasing local/regional products. • Experiment with diverse tastes in the process of creating a menu. • Design an infographic. • Apply ideation methods. • Apply certain communication techniques 	<p>greater global cause.</p> <ul style="list-style-type: none"> • Self-empowerment and confidence about health, social, environmental benefits of eating locally/regionally. • Eagerness to be creative and innovative by using digital means/tools to stick to sustainable way of life.
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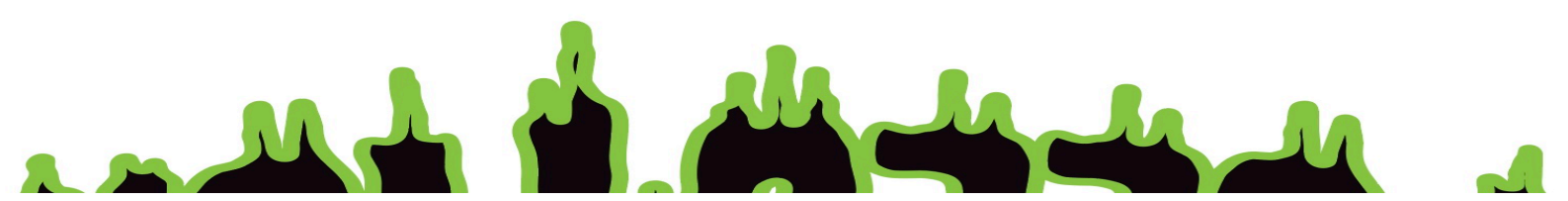
Questions that a youth worker or teacher might use in a whole class discussion to debrief this WebQuest:

- What new knowledge and skills did you gain? Name the 3 most important ones.
- Did you enjoy the whole process of dealing with this WebQuest and developing your end product?
- What would you improve in your work if you had more time?





- Can you imagine using what you have learned in the future?
- Are you proud of your work?



SOLUTION NOT POLLUTION



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