IO3 – ICE-CAP WebQuests

WebQuest – Back to School
Developed by SRC

ice-cap

THEME ALLOCATED:	180 minutes
LEVEL:	Advanced
TITLE OF THE WEBQUEST:	Bringing the Circular Economy to Back to School

INTRODUCTION (It involves giving background information on the topic and, often introduces key vocabulary and concepts which learners will need to understand in order to complete the tasks involved. It should present a scenario and context for playing out the tasks in the WebQuest and it should be a fun, engaging and creative so as to draw the learners in):

It is September, and it is time for you to return to school. Over the summer months, you have been following the Fridays for Future movement online and hearing the message that Greta Thunberg and other activists are sharing. You are now aware that the #FridaysForFuture movement began as a campaign in August 2018, when then-15-year-old Greta, supported by other youth activists decided to raise awareness about climate change and inspire young people to take climate action, by staging a sit-in in front of the Swedish parliament building in Stockholm on each school-day for 3 consecutive weeks. This protest gained supporters online, as activists promoted their protest through Instagram and Twitter, and the #FridaysForFuture movement has grown ever since. You find this story inspirational.

As a result of following this movement during the summer, you are now more aware of the environmental consequences of your actions. There is no Planet B, and you are committed to doing your part to protect the environment.

TASKS (explains clearly and precisely what learners have to do, it should be motivating and interesting and where possible, it should include activities that contribute to the development of skills that they will use in their daily lives. Guidance should be given on how to present findings; for example, maps, graphs, essays, wall displays and diagrams):

You have decided that this year in school, you want to try to reduce your carbon footprint and be more conscious of the amount of waste you produce. You raise these issues with your teacher and express your concerns that the school is not doing enough to reduce waste, upcycle old books and uniforms, and raise awareness about environmental issues with students in your year group.

Your teacher has listened to your concerns and shares your fears over the future of our planet. He considers what can be done in the school and sets you a task:
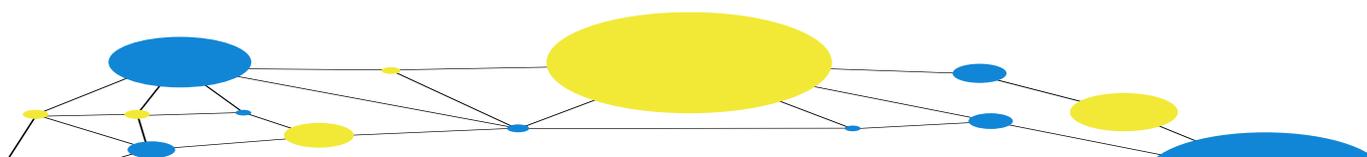
Your teacher would like to raise this issue with the school principal but needs to have a series of ideas and proposals for the principal to review before he can speak to her. Your teacher asks you to research 3 ideas that could be implemented in your school to adopt some circular economic practices in the school and reduce the amount of waste that the school produces.

Your teacher asks you to develop a set of presentation slides that he will use when talking to the principal, and also to design a poster that can be used to raise awareness about the circular economy among students in your year group.

To complete this task, you will have to follow the steps outlined in the process below.

PROCESS (set of steps and research tasks using predefined sources that are predominantly web-based usually in a clickable form. This stage has usually one or more "products" that learners are expected to present at the end. These products form the basis of the Evaluation stage.

Step 1 – What is the Circular Economy and how can it be adapted to your school?

Have you ever thought about how the circular economy can be brought into everyday activities in your school? Do you even know what the circular economy is? Why not complete some online research to gain insight into CE practices. You might consider looking at some CE ideas for post-primary schools, including setting up a 'swap-shop' for books and clothes, where students can swap clothes and books that they no longer need or want with others in their year group; or maybe check out how your school can get involved in taking the 'paper challenge'. Find out more information in the links included in the 'Resources' section below or conduct your own online research and see what you can learn about adapting your school policies form linear to circular!

Step 2 - How waste products produced in a school can be re-used or re-purposed?

Now that you understand a little more about the circular economy and how different CE practices can be introduced in your school, it is time to dig a little deeper and investigate how the waste your school produces in a 'linear model' can be recycled and re-used in a 'circular model'. For this step, you will be asked to consider the waste products that your school produces, and then to take some time to brainstorm and research how these waste products can be re-used, re-purposed or recycled in your school. After you conduct some initial research, you should make a list of all of the waste products produced in your school, before researching again to find ways that these waste products don't just end up in the bin, and then landfill!

Step 3 - List all measures that can be implemented in your school and find the 3 most suitable ideas!
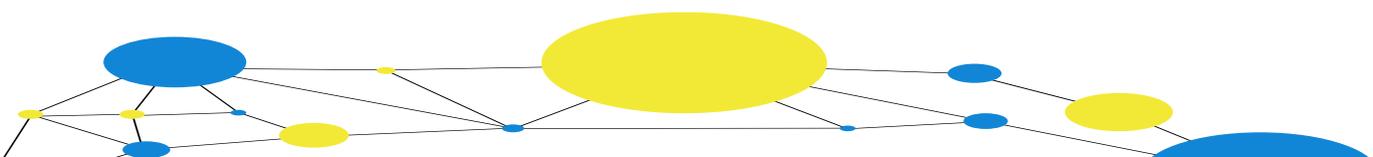
Following on from your research in step 2, you should have a better idea now of all of the waste that is generated in your school. With this in mind, make a list of all of the ideas that you could implement to reduce waste, to increase recycling and to apply circular economy practices like re-purposing and upcycling to your school – all the time, helping to reduce your school's carbon footprint and to make it a more environmentally-friendly place to be. When you have listed all ideas, use an idea evaluation technique to select the best 3 ideas that you will put forward to your school principal. For some advice and tips on how to undertake an idea evaluation assessment, check out the web-links included in the step 3 Resources below.

Step 4 - Evaluate the cost-benefit of your ideas!

Now that you have a list of 3 good ideas that you think will help to bring CE practices to your school, the next thing you need to do is evaluate and estimate the benefit that these ideas will have to the school, the impact that the changes will make to the carbon footprint of the school and how much these changes will cost. While we all want to do our bit to save the planet, the changes need to be feasible within the school's annual budget; so you will need to show your teacher and principal that you have costed the changes you are proposing to make. Your projections will, hopefully, show that the benefits of making these changes far outweigh the financial and material cost of making the changes. For some support on conducting your cost-benefit analysis, and for guidance on how to estimate the environmental benefit of these changes, visit some of the sites that are listed in the Resources section below, or conduct your own online research on the topic.

Step 5 - Develop a presentation for your teacher using PowerPoint or Google Slides!

Congratulations, you have generated, evaluated and costed some really good ideas that can be introduced to your school to reduce waste, lessen the school's impact on the environment and so your part to tackle climate change. Now, you need to develop a set of presentation slides so that your teacher can use this in his pitch to your school principal. Think of the structure for your presentation – you should include approximately 12 slides:

- 2 slides presenting the current level of waste in the school
- 2 slides for each of your 3 ideas to highlight the changes you will make, the justification for these changes and the environmental impact of these changes.
- 2 slides to present the cost-benefit analysis of this idea.
- 2 slides on the next steps and how you will get started – do you need to set up a committee or fundraise? These are questions that you will answer in these two slides.

For tips and advice on how to make a compelling argument through your presentation, and how to make presentations engaging and interesting, check out some of the links included below.
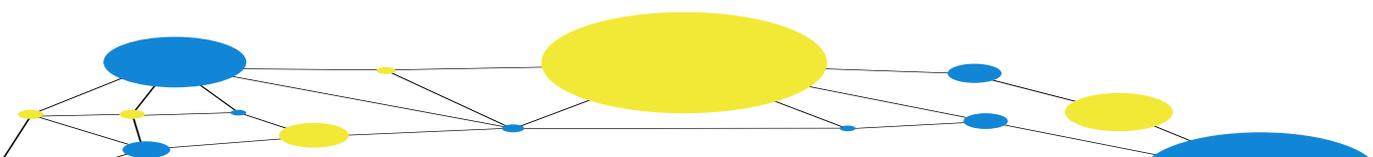
Step 6 - Create a flyer on Canva to raise awareness about environmental issues among students in your class!

Well done, you have done a great job putting forward your ideas for how you can change practices in your school and achieve a positive environmental impact. You have learned so much through this task about how waste in generated in your school, and what you and your classmates can do to reduce, reuse and recycle what you typically consider to be waste. So that the message reaches your classmates, why not finish this task by creating a flyer or poster using Canva, so you can share what you have learned wit other students in your year. For some advice and tips on how to create an attractive flyer on Canva, feel free to access some of the links that are included in the Resources section below – or alternatively, just log on to www.canva.com, create an account and get creative! Canva is very intuitive to use, and there are a lot of templates already available, so I am sure you will have a nice design in no time!
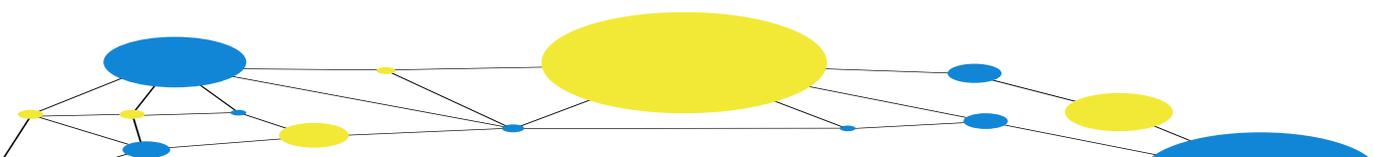
RESOURCES: For each step in the process, there should also be a series of links included (3-4 per step). These links should be fore videos, articles, blogs, webpages, etc. that the learners can visit to help them to complete the task. Links should be embedded in the WebQuest to sites, pages, databases, search engines and so on.)**:**

Resources for Step 1:
- Ellen MacArtur Foundation, Circular Economy in Schools and Colleges - https://www.ellenmacarthurfoundation.org/our-work/activities/schools-colleges
- The Circular Economy goes to School - http://www.greatrecovery.org.uk/resources/the-circular-economy-goes-to-school/
- Paper Challenge at School! - https://circulareconomy.europa.eu/platform/en/good-practices/paper-challenge-school
- How to make the circular economy part of the national education system – Tips from Finland - https://www.sitra.fi/en/articles/how-to-make-the-circular-economy-part-of-the-national-education-system-tips-from-finland/

Resources for Step 2:
- Waste from Eco-Schools NI - https://www.eco-schoolsni.org/cgi-bin/generic?instanceID=19
- Millions of Dollars' worth of food ends up in the school trash every day. What can we do? - https://ensia.com/features/school-food-waste-solutions/
- Plastic Free July – What can you do at School? - https://www.plasticfreejuly.org/get-involved/what-you-can-do/at-school/

- Recycling and Waste Reduction Tips for Schools - https://harmony1.com/recycling-waste-management-schools/
- How to Take Care of Your Clothes - https://www.mywaste.ie/news/how-to-take-care-of-your-clothes/

Resources for Step 3:
- How to Evaluate Ideas - https://innovationmanagement.se/imtool-articles/how-to-evaluate-ideas/
- Idea Evaluation Matrix: Step-by-Step Guide - https://ideadrop.co/idea-evaluation-matrix-step-by-step-guide/
- 7 Criteria to Select the Best Idea: Justifying your innovative choice - https://www.inc.com/samuel-bacharach/7-criteria-to-select-the-best-idea.html

Resources for Step 4:
- Cost-Benefit Analysis – MindTools - https://www.mindtools.com/pages/article/newTED_08.htm
- How to Do Simple Cost Benefit Analysis - https://www.purchasing-procurement-center.com/cost-benefit-analysis.html
- The Benefits of Being Eco-Friendly For Your Students & School - https://docere.co.uk/the-benefits-of-being-eco-friendly-for-your-students-school/
- Impact of Environmental Education on Students - https://www.greenschoolsalliance.org/why
- Top 10 Benefits of Environmental Education - https://www.plt.org/educator-tips/top-ten-benefits-environmental-education/
- Top 5 Advantages of Being an Eco-Friendly School - https://www.scriptapp.com/administration/top-5-advantages-eco-friendly-school/

Resources for Step 5:
- Become a Google Slides Artist With These 7 Tricks - https://www.bettercloud.com/monitor/the-academy/become-a-google-slides-artist-with-these-tricks/
- 25 Things You Didn't Know Google Slides Could Do - https://shakeuplearning.com/blog/25-things-you-didnt-know-google-slides-could-do/
- 10 easy ways to make any PowerPoint presentation awesome - http://hughculver.com/10-easy-ways-make-powerpoint-presentation-awesome/
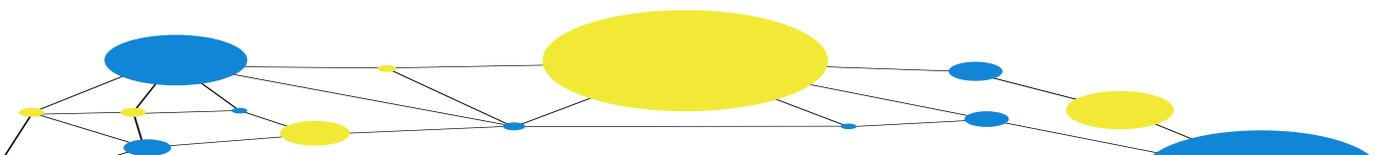- 8 Ways to Create Engaging PowerPoint Presentations for Your Project - https://www.brightwork.com/blog/8-ways-create-engaging-powerpoint-presentations
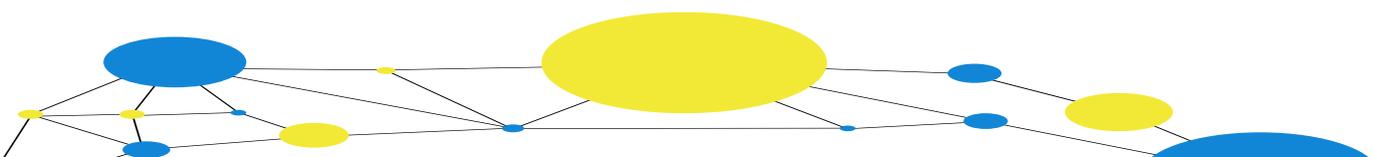
Resources for Step 6:

- How to get the most out of Canva - https://www.canva.com/learn/all-the-features-on-canva/
- 5 tips from Canva designers on creating better looking designs – https://www.canva.com/learn/5-tips-from-canva-designers-on-creating-better-looking-designs/
- 5 smart ways to use Canva for social media - https://www.canva.com/learn/5-smart-ways-to-use-canva-for-social-media/
- 5 Clever Canva Hacks - https://www.nicholettestyles.com/blog/5-clever-canva-hacks

EVALUATION (self-evaluation, comparing and contrasting of what the learners have learned, giving feedback to the trainer on how they feel, what they have learned):

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

| Knowledge	Skills	Attitudes
- Factual knowledge about the circular economy. - Basic knowledge about circular economic activities in the school. - Factual knowledge about waste management in schools. - Factual knowledge of how recycling is implemented in the school. - Factual knowledge of how to conduct a waste audit. - Theoretical knowledge of what changes can be made in the school.	- Describe the benefits of the circular economy. - Recognise opportunities to introduce circular economic activities into the school. - Analyse waste management procedures in the school. - Evaluate the success of the waste management strategies of the school. - Recommend improvements to the recycling and waste management	- Awareness of waste management in schools. - Awareness of the circular economy and how it can apply to different aspects of our lives. - Appreciation of the importance of reducing waste and recycling in a school setting. - Increased regard for the role that individual students can play in reducing waste and recycling. - Openness to changing personal habits and

• Factual knowledge of what a cost-benefit analysis is. • Factual knowledge of how to use online tools like Canva and GoogleSlides.	processes in the school. • Combine CE ideas and strategies to develop a plan for the school. • Evaluate the most suitable ideas for the school. • Apply digital skills to create a flyer using Canva and a presentation using GoogleSlides.	behaviours to benefit the environment.

As part of the assessment of this WebQuest, all young people will be expected to show their presentation slides and Canva poster to their teacher in school; and also, to their parents if they are completely this WebQuest outside of school. The aim of producing these slides and the poster is so that the young person has the opportunity to review everything they have learned and to distil it down, into short bullet points and compelling arguments – demonstrating that they have really gained new knowledge on what the circular economy is, and how it can be adapted to fit a school-setting.

As a self- assessment exercise for this WebQuest, young people can complete a short self-reflection exercise and write 300-350 words on how they rated their performance in the task, what elements they enjoyed or didn't enjoy and what they would do differently, if they were to repeat the activity again. The following questions will guide this self-assessment:

- What did I learn about the circular economy?
- What did I learn about waste management, climate change, carbon footprint, etc. that I didn't know before?
- Why did I pick those ideas to put forward to bring about change in the school?
- Did I enjoy this activity?
- What elements of this activity did I enjoy best?
- What aspect did I find most challenging and why?
- What skills did I acquire through this activity? Is there something I was good at that I did not think I would be?
- If I was to do this activity again, would I do things differently next time? What and why?
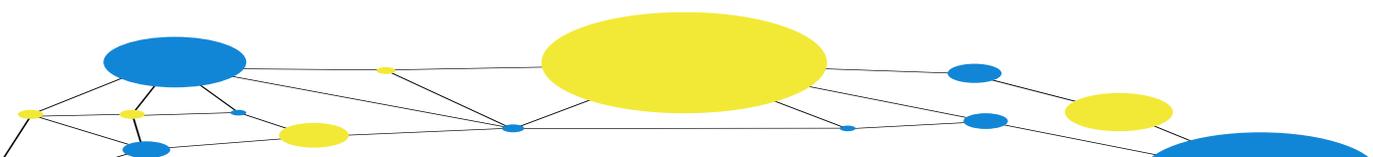
Questions that a parent or teacher might use to start a discussion with young people about the environment and to debrief this WebQuest:
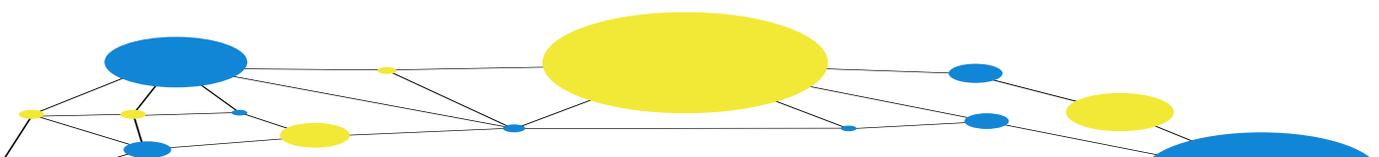
- What do you think you have learned through this challenge?
- Are there things you learned in this WebQuest that would make you want to change your habits? If so, what are they?
- Are there lessons from this WebQuest that can be applied to your home? If so, what are they?
- How would you rate the over-all experience? Did you enjoy learning through completing a WebQuest challenge?
- Did you enjoy the scenario? Are there other scenarios that you would have preferred to work through? Why?
- Do you have a sense of accomplishment on completing this challenge?

CONCLUSION (provides an opportunity to summarise the experience, to encourage reflection about the process, to extend and generalise what was learned, or some combination of these. Suggest questions that a trainer might use in a whole class discussion to debrief a WebQuest):

The circular economy model focuses on reducing the amount of waste we produce, reusing the materials we have already created, and recycling materials that can be repurposed. An expert in *sustainism,* Michiel Schwarz said "as the 'circular' approach to sustainability begins to gather ground, we humans are finding ourselves within the circle, not without." How can we put ourselves, our households, and our schools in the middle of the circular economy circle?

In order for the circular economy to be successful, every individual in the community needs to take part. That includes the schools and universities where we are educated, the supermarkets we buy our food from, the shops we buy our clothes in, the bank that holds our money... Try to incorporate some of the things you have learned today at home too. Can you spare some time to repair your clothes instead of throwing them away? Can you start separating your waste properly at home? Can you commit to not buying fruit and vegetables that comes in a plastic wrapping? Can you influence your parents, siblings, or grandparents to change the products they use or buy to reduce packaging?

Every little change you make can have a greater impact on the environment – remember, small steps make a big difference!

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