

Global Learning Unit

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COUNTRY:	Basque Country – Euskal Fundoa -
TITLE:	What's for lunch?
STUDENTS' AGE:	10-12
SUBJECTS:	Mathematics, Natural Science, Social Science and Arts (or tutorial)
DURATION:	9-10 ours
TOPICS	Critical consumption Food waste Food environmental impact
SDGS	11 / Make cities and human settlements inclusive, safe, resilient and sustainable 12/ Ensure sustainable consumption and production patterns

Knowledge and understanding on Global Learning:

Social justice and equity	Fairness between groups	Inequalities within and between societies	Causes of poverty	Understanding of global debate
	Causes and effects of inequality	Basic rights and responsibilities	Different views on eradication of inequalities	
Globalisation and interdependence	Trade between countries	Awareness of interdependency	Power relationship North/South world economic and political systems	Complexity of the global issues
	Fair trade	Awareness of our political system and others	Ethical consumerism/ consumption	
Sustainable development	Relationship between people and environment	Different views of economic and social developments - locally and globally	Global imperative of sustainable development	Understanding of key issues of sustainable development
	Awareness of finite resources	Understanding the concepts of possible and preferable futures	Lifestyles for a sustainable world	
Diversity	Contribution of different cultures, values and beliefs to our lives	Nature of prejudice and ways to combat it	Understanding of issues of diversity	Deeper understanding of different cultures and societies

Skills and competences on Global Learning

Critical thinking	Detecting bias, stereotypes and	Media literacy	Critical analysis information	Handling contentious and
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	opinions			complex issues
	Assessing different viewpoints	Making informed decision	Making ethical decisions	Dealing with complexity and dilemmas
Ability to argue effectively	Finding and selecting evidence	Learning to develop/change position through reasoned argument	Arguing rationally and persuasively from informed position	Political literacy
	Beginning to present a reasoned case	Participation in relevant societal and political processes	Connect local and global context & experiences	
Cooperation and conflict resolution	Accepting and acting on group decision	negotiation	compromising	mediation

Values and attitudes on Global Learning

Empathy and sense of common humanity	Sense of importance of individual worth	Open-mindedness		
Commitment to social justice and equity	Growing interest in world events	Concern for injustice and inequality	Commitment to social justice and equity	Commitment to the eradication of poverty
	Sense of justice	Willingness to take action against inequality	Integrity	Solidarity
Concern for the environment and to sustainable development	Sense of responsibility for the environment and the use of resources	Concern about the effect of our lifestyles on people and the environment	Concern for the future of the planet and future generations	Commitment to sustainable development
Belief that people can make a difference	Belief that things can be better and that individuals can make a difference	Willingness to take a stand on global issues	Willingness to work toward a more equitable future	Role as Global Citizen
Respect for people and things	Making choices and recognizing the consequences of choices	Growing ability to take care of things	Following a personal lifestyle for a sustainable world	
Ability to challenge injustice and inequalities	Recognizing and learning about alternatives to mainstream	Starting to challenge viewpoints which perpetuate inequalities	Selecting appropriate action to take against inequality	Campaigning for a more just and equitable world

European lifelong learning key competencies

1. communication in the mother tongue
2. mathematical competence and basic competences in science and technology
3. learning to learn
4. social and civic competences
5. sense of initiative and entrepreneurship



Learning objectives:

- To explore waste production in relation to food and the different alternatives available for reducing it.
- To learn how to gather and compare information.
- To develop mathematical skills and basic competences in the fields of science and technology.
- Learning to learn.
- To develop social and citizenship skills.
- To develop initiative and entrepreneurship.
- To learn about and internalise environmentally-friendly habits.

Methodologies: experimental research, guided debates, thinking about alternatives, sewing workshop.

Activities:

Lesson	Time (minutes)	Activity description	Tips for teachers
Session 1 - one week before starting the first teaching unit (Tutorial)	10' every day, for one week	<p>1/ The teacher explains the dynamics of the activity: for a whole week, students will be asked to calculate how much waste is generated by their lunch, and to think about whether or not their habits are environmentally-friendly.</p> <p>2/ To this end, the teacher should set up a series of rubbish bags in the classroom, into which students should place the waste material they generate throughout the course of the week.</p> <p>There should be five different bags:</p> <ul style="list-style-type: none"> 1/ plastic and packaging (aluminium foil, etc.) 2/ organic waste 3/ paper 4/ non-recyclable material 5/ glass <p>*Note: the bags can be shared by the whole class, or the activity can be done separately in groups or even individually.</p>	1. Students will use the table entitled: 'WASTE GENERATED BY OUR PACKED LUNCH DURING ONE WEEK'.
Sessions 2 and 3 (Mathematics)	15'	1/ The teacher should briefly go over the various different units of measurement and then introduce the measurement instruments.	



	45'	2/ The students examine the bags and analyse the waste material they have generated, in accordance with the 'WASTE GENERATED BY OUR PACKED LUNCH DURING ONE WEEK' table. They fill in the table (in groups) using different units of measurement.	*Students complete the table using different units of measurement: 1/ kilograms: using a pair of scales. 2/ cubic metres: using, for example, a half-cubic-metre box. 3/ individual elements: containers, paper, etc. per unit. 4/ money: assigning a value to each element and calculating the sum in order to see how much money they have thrown away.
	30'	3/ After the class or group has calculated how much waste has been generated, each student should calculate their own individual figure and finally, the class should calculate how much waste is generated in the whole school over the course of a year (extrapolation).	* There are 52 weeks in a year.
	30'	4/ Providing there is time and the students have studied this previously, they can calculate the percentage of each different type of waste and express the result in a simple graph. * Note: optionally, you can also ask students to repeat the exercise at home, over the course of another week.	
Session 4 (Natural Science)	20'	1/ During maths class, each group should present to the rest of the class the results of their analysis of the table.	



	20'	2/ The teacher should prompt and guide a debate/process of reflection on environmentally-friendly habits. <ul style="list-style-type: none"> • Why is it important to generate less waste? • What are we doing right? • What could we do better? How? 	
	20'	3/ The teacher should set students a challenge: bring an environmentally-friendly lunch to school every day; and students must work in groups to determine how they can do this. <p>* Note: if you think students may have problems coming up with solutions, you can give them some hints: composting, making reusable lunch bags, etc.</p>	
Session 5 (Social Science)	20'	1/ Based on the questions outlined below, the teacher should give a brief introduction to the issue of food-related waste production: <ul style="list-style-type: none"> • How much waste is generated in the world? Does this amount differ from country to country? Why? 	* On average, each citizen of the Basque Country generates 1.4 kg of waste every day. * On average, each European citizen generates 95-115 kg of food-related waste every year; in Sub-Saharan Africa, on the other hand, the figure is just 6-11 kg.
	30'	2/ Each group should present its ideas regarding how to reduce the amount of waste generated as a result of their lunch to the rest of the class. After every group has presented its ideas, the class as a whole should discuss the following questions: <ul style="list-style-type: none"> • By how much will these measures reduce the amount of waste generated? What type of waste will they reduce (plastic, organic, etc.)? • What will be easy to do, and what will be hard? • Would we be willing to try them out at home? 	



	10'	3/ The teacher should propose that students use a reusable cloth lunch bag.	
Session 6 (Tutorial or Art)	20'	1/ The teacher should bring in a ready-made cloth bag, by way of example, and should explain what it can be used for, and how.	* During this first activity, teachers may need to show their students how to sew.
	40'	2/ The teacher should hand out the materials and students should work individually, with the teacher's help. During this first sewing session, students should choose their pieces of cloth, cut out the pattern and do at least a few stitches. The aim is for students to clearly understand the concept, so as to render the following steps easier.	
Session 7 (Tutorial or Art)	60'	1/ Students should work individually, with the teacher's help.	*Note: during the second sewing session, we recommend that students sew by hand. However, if the class is fairly far behind, the teacher can use a sewing machine (with students) to do some of the trickier parts.
Session 8 (Tutorial or Art)	40'	1/ Students should work individually, with the teacher's help.	* Note: the aim of this final sewing session is to attach the drawstring or velcro fastening. Students should therefore have finished sewing their bags. You may need to ask students to finish their bags at home, with their parents' help, before the start of this final



			session.
	15'	2/ Once students have finished making their bags, they should put their lunch inside (so they can see how it works). *Note: before doing this the bags should be washed, or else students should be advised to put their lunches in without removing their current wrappings.	
	5'	3/ The teacher should challenge the students to use their new lunch bags over the following week, and should set up some empty rubbish bags once again in the classroom. (see session 1)	
Session 9 (Mathematics or Social Science)	40'	1/ Students should repeat the activity described in session 2, and then compare the two sets of results (repeating activities 1, 2, 3 and 4).	
	20'	2/ After gathering the results, the class should discuss the following questions: <ul style="list-style-type: none"> • By how much was the amount of waste generated increased or decreased? Why? • Which types of waste were reduced? And which were not? Why? • Will we be able to keep up these habits? 	
Session 10 (optional)	60'	Students should present the results of their research and discussions to their fellow students and parents, in an attempt to raise awareness among their community. 1/ The class should divide up into groups and each group should choose a topic: initial research, alternative solutions, use of the cloth bags, end-of-school-year research or general conclusions. 2/ Each group should prepare their presentation at home. 3/ Each group should give their	



		presentation.	
At the end of the school year (optional)	60'	You can, if you wish, repeat the whole experience at the end of the school year (following the instructions provided in session 9), in order to explore whether or not the new habits introduced have been maintained, and if not, why students have stopped using their lunch bags.	

Materials and equipment:

- For the research phase:

Rubbish bags (different colours), cardboard and marker pens for drawing up the table.

- For the measurement phase:

A pair of scales, a box or container measuring one cubic metre (or half or a quarter of a cubic metre).

- For the explanation:

Computers, Internet connection, overhead projector (at the teacher's discretion).

- For making the cloth lunch bag:

Patterns (one for each student). You can use a range of different patterns if you like, and students can choose the one they like best.

Cloth. Each student will need two equal-sized pieces of cloth, one colourful, normal one (for the outside) and another plain, waterproof one (for the lining).

Piece of string or cord.

Velco.

Scissors.

Thread.

Needles.

Sewing machine (if possible). Students can learn to use it with the teacher's help.

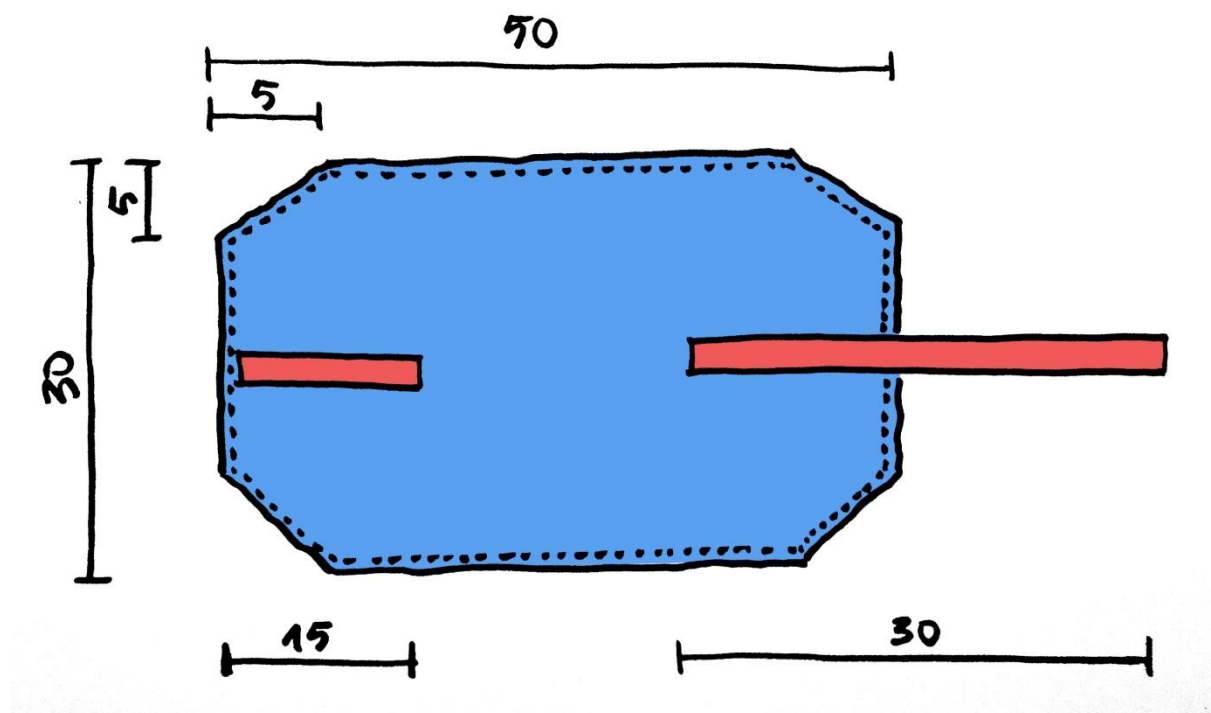
Teaching tools:

1/ 'WASTE GENERATED BY OUR PACKED LUNCH DURING ONE WEEK'

	PLASTIC	ORGANIC	PAPER	NON-RECYCLABLE	GLASS
Kilos					
Cubic metres					
Units					
Money					



Annexes:



Evaluation tools suggested:

Students' evaluation of the activity:

	Totally disagree	Agree	Totally agree
I enjoyed the activity about avoiding waste generation.			
I think the bag we made is useful.			
The activity helped me improve my habits (environmentally-friendly habits)			
The activity helped me improve my habits (healthy habits)			
The activity made me think about environmentally-friendly habits.			

Sources:

Waste generation in the Basque Country: <http://www.argia.eus/blogak/zero-zabor/2007/11/28/euskaldunok-sortzen-ditugun-hondakinak-zenbakitan/>

Food-related waste (FAO): <http://www.fao.org/save-food/resources/keyfindings/en/>



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Different types of reusable lunch bags:

<http://www.kitchenstewardship.com/2016/09/07/reusable-sandwich-snack-bags-review/>

<https://uk.pinterest.com/explore/reusable-sandwich-bags/>

<http://www.deskstore.com/Food-Bag-Bocn-Roll>

<https://www.youtube.com/watch?v=FzRzhQAFyI0>

<https://www.youtube.com/watch?v=XOUssR6amHc>



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