



# THE ENVIRONMENTAL CHALLENGE

## Teacher's notes

### RATIONALE

The role of youths from all parts of the world should be to be actively involved in the protection of the environment at all levels, from accessing information and participating as much as possible in decision-making processes to being socially mobilized within their own context. This is due to the fact that this issue affects their present lives and has strong implications for their future.

It also offers an opportunity for reflection upon their contribution as citizens and represents a challenging learning experience in CLILL.

**SOME OF THE IMAGES, WEB PAGES AND INFORMATION USED IN THESE MATERIALS ARE TAKEN FROM THE INTERNET AND ARE FOR EDUCATIONAL PURPOSES ONLY.**

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## **TEENAGERS IN A INTERCULTURAL EUROPE**

PART B: LEARNING MORE ABOUT YOUNG EUROPEAN'S CHALLENGES.

### UNIT 2: THE ENVIRONMENTAL CHALLENGE







1<sup>st</sup> level ESO ETHICS/CITIZENSHIP (ALTERNATIVA A LA RELIGIÓ).






CONTENT

TIMING: 6 Lessons

- Considering the main environmental problems, causes & effects,
- Reduce, reuse, recycle
- Carbon footprint
- Recycling processes
- Sustainable and active environmental behaviour.

### PROCEDURE

<b>SYMBOLS USED IN THE ACTIVITIES</b>			
	INDIVIDUAL WORK		EXPERTS GROUP WORK
	PAIR WORK		LEARN
	GROUP WORK		CHECK

	ORAL ACTIVITY		WRITING ACTIVITY
	LANGUAGE TIPS		ASSESSMENT
	LISTENING / WATCHING		

**LESSON 1**

**Warm up:** Let students know and remember some environmental accidents in Europe (power point). General Overview of the unit. Guess their **previous knowledge** about the main environmental problems. Let students pay attention to the sustainable development, to the differences in natural resource consumption between developed and developing countries, and ask students what are their attitudes to environmental issues.

• **ACTIVITY 1** 


- Ask students to discuss in pairs A,B,C parts and write down using the language tips provided – practice and write your reasons-. Write students’ ideas on the board to give them writing models and also give them oral models.
- **Handout worksheet activity 1.**

**Whole class:** Learn about 3 Rs (**REDUCE** , **REUSE**, **RECYCLE** ) household waste (power point)

• **ACTIVITY 2** 

- Ask students to choose the correct **container** for the following


**household waste:** Give students the **Handout worksheet activity 2.**

- **Check the answers**  . All the solutions are on the power point.

1. ORGANIC WASTE	2, RUBBISH	3. PAPER	4. GLASS	5. PLASTIC & METAL	6. RECYCLING FACILITY
sandwich banana peeling eggshells an apple core fish bones coffee grounds tea bags	baby nappies pet poo cigarette butts ash dirty paper bags	newspaper toilet roll tube cardboard	a bottle of wine	pot of yoghurt aluminium foil packet of crisps can of coke milk drink carton	mobile phones batteries clothes CDs

- **Glossary:** review the new vocabulary used in the lesson and ask them to write it down in their notebooks.

## LESSON 2

- **Quick starting routine:** orally review the content and vocabulary from the last class.
- **ACTIVITY 3**  ask students to decide in pairs which R is each action given. Add one more action in each R. **Handout worksheet activity 3.**

- **Check the activity results:**  All the solutions are on the power point

**REDUCE:** Making less **rubbish** and not using much **energy**

- Refuse plastic bags at shops and take the old plastic ones from home



- Avoid a single use plastic cups
- Download music or films from the internet
- Buy large containers for drinks
- 


**REUSE:** To find others uses for things instead of **throwing** them **away**

- Use libraries and rental shops
- Buy refillable containers for drinks
- Use rechargeable batteries
- Take clothes you no longer need to a charity shop or try to shop at these places too
- Wash empty water bottles and fill them up again

**RECYCLE:** Turning the **rubbish** into something else rather than just **throwing** it **away**

- Make a present yourself without buying anything new
- Sort household waste at home and at school and putting it into the correct recycling facility



### LESSON 3

- **ACTIVITY 4**  ask students to look at the website the plastic recycling process and write two key words for each slide. **Handout worksheet activity 4.**



<http://rethink.sita.co.uk/the-fun-stuff/the-green-team>

Once you are at Site UK's green team , click Suzie and choose plastic recycling ( yellow duck).

- **ACTIVITY 5**   let students review the images and get them to guess the meaning of the vocabulary list. **Handout worksheet activity 5.**

**TEACHER'S  
NOTES****UNIT 2: THE ENVIRONMENTAL CHALLENGE**

<http://rethink.sita.co.uk/the-fun-stuff/the-green-team>

Once you are at Site UK's green team , click Suzie and choose plastic recycling ( yellow duck).


1	To be collected
2	To be sorted
3	To be baled
4	Bale shape
5	To be shredded
6	Tiny pieces
7	To remove
8	To de-dust
9	To be melted
10	To be filtered
11	Wire mesh
12	Strands
13	To be spun
14	Fleeces
15	Sleeping bags



- : **Check the answers:** give students enough time to revise their answers and write down the correct ones. See on the power point.

1. To be collected: to bring **things together**
2. To be sorted: to separate things of one type from other type of **similar things**
3. To be baled: a large amount of a **light material pressed tightly** together and tied up
4. To be shredded: to **cut** something **into small pieces**
5. Tiny pieces: **very small** in size
6. To remove: to **take** something/somebody **away**
7. To de-dust: to **remove dust**
8. To be melted: make something **become liquid** as a result of heating.
9. To be filtered: to **pass liquids through a special device** to remove something that is not wanted
10. Wire mesh: similar to a thin **net**
11. Strands: a single thin piece of thread, wire, or hair, etc.
12. To be spun: to **turn round** and round **quickly**
13. Fleeces: a type of **soft warm cloth** that feels **like sheep's wool**
- 14.



- **ACTIVITY 6**  give each pair of students the plastic recycling process cut into slips. Ask them to put in the right order and justify it.



**Handout worksheet activity 6.**



- **Check the answers:** Review the animation if necessary.

PLASTIC RECYCLING PROCESS

PLASTIC FOR RECYCLING IS COLLECTED FROM HOMES, BUSINESSES AND RECYCLING SITES

COLLECTED PLASTIC MUST BE SORTED INTO DIFFERENT POLYMER TYPES

THE PLASTIC IS BALED (COMPRESSED BY A MACHINE) INTO A BALE SHAPE

THEN IT IS SHREDDED INTO TINY PIECES

THE SHREDDED PLASTIC IS WASHED

THEN PASSED UNDER A METAL DETECTOR TO REMOVE ANY METAL

A DE-DUSTING UNIT REMOVES ANY LIGHTER PARTICLES

THE PIECES ARE MELTED AND FILTERED THROUGH A FINE WIRE MESH

THIS PROCESS FORMS THE MELTED PLASTIC INTO SPAGETTI-LIKE STRANDS

THESE CAN BE SPUN INTO FIBRES TO MAKE FLEECE, SLEEPING BAGS OR SKI JACKETS





- **Assessment** (performance evidence): Compare and contrast the results with the whole class. Ask for justification if different order appears.

## LESSON 4



- **ACTIVITY 7 Calculate the Carbon footprint.**
  - make heterogeneous groups of six students and ask all the members of the group to calculate their carbon footprint by using a website calculator.
  - In order to improve the work group and get their work more efficiently, you can give roles to each student of the group. See a model in the supplementary materials & resources.

<http://www.meetthegreens.org/features/carbon-calculator.html>

Once on the website, Get started- I'm new- Each student has to do the registration. Ask your students to remember their user names and passwords and write the same school name, town and country. At the end they can compare their results. After the registration is done, they have to answer a quiz with questions about travel, what they eat, home, what they use, what they throw away.

See a copy of the teacher's notes website in supplementary materials for further information.

- After that, ask students to answer the **questions in activity 7**:

- What's your personal score on Tonnes of CO<sub>2</sub>?*
- What's the average of your group? Of your school? Of your country?*
- Discuss your scores and give reasons explaining the results.*

✓ *What would be the Carbon footprint of these kids? Explain the differences in terms of solidarity and sustainability.*




photo: Sarah Fobes



photo: Andrew Heavens

- *Think in what they eat, how they travel, things they have or use at home, what they throw away.*

*Explain the differences in energy and natural resources consumed .In which countries are there over consumption of natural resources? Is it fair? Is equitable development all over the world promoted? Can we continue in the same way? Why?*

-  Ask students to explain their points and conclusions to the whole class. **Handout the activity 7 worksheets -language scaffolding tips-**.

## LESSON 5

- **ACTIVITY 8**  **Jigsaw activity**

- Ask students to work in experts groups of six. Make six different groups of experts, for example by giving each student a number from 1 to 6. Then form the expert group joining all 1s,2s ...6s in a separate group of six .Each expert group works on a different environmental problem. Each member has a worksheet with a text or a page of a book related to an environmental problem, they have to read it and discuss the content with the six members of the group to ensure that they all understand the problem. Ask them to fill in the framework given and be sure that each member has



completed it and written it down. Then they have to find 5 possible personal actions for helping the planet related to the environmental problem they have worked on. A written example is given to them. See supplementary materials: **Let's have a party at home!** .

- **Hand out the activity 8 worksheets:** Framework for an easy understanding of the content and personal actions you can do in your everyday life that helps the environment. Be careful, each group has a different problem.
- **Materials:** the book: 'Why should I bother about the planet'. Usborne editions.

A short text from this book is also available at the supplementary materials.

Book: Why should I bother about the planet. Usborne editions

Web sites

[www.usborne.com](http://www.usborne.com)

<http://www.meetthegreens.org/>

tips for helping the planet at home:

[http://wwf.panda.org/how\\_you\\_can\\_help/at\\_home/](http://wwf.panda.org/how_you_can_help/at_home/)

tips for helping the planet at school

[http://wwf.panda.org/how\\_you\\_can\\_help/at\\_school/](http://wwf.panda.org/how_you_can_help/at_school/)

tips for helping the planet with green shopping and interesting clips.

[http://wwf.panda.org/how\\_you\\_can\\_help/out\\_shopping/](http://wwf.panda.org/how_you_can_help/out_shopping/)

## LESSON 6

### • **ACTIVITY 9**

- Send the students back to their home group. Invite them to explain to their classmates the environmental problem they have worked on using the 'understanding framework' and to present the actions they propose to help the planet and to reduce household waste. Agree and write down two actions for each environmental problem. They have to write two lists, one with actions they can do at school and other for the actions they can do at home.



- **Writing activity :** ask students to write an essay for the school magazine about their actions for helping the planet and also getting people to know about '350.org' and 'agenda 21'.  
Give them websites for finding some further information:

<http://www.350.org/es/nuestra-misi%C3%B3n>

<http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=52&ArticleID=73&l=en>

- **Handout activity 9 language tips:** tips for writing and list of connectors.

### **INSTRUMENTS FOR ASSESSMENT**

Peer, group and self-assessment portfolios.

Evidences: performance, process and materials evidences.

### **SCAFFOLDING TIPS**

- See language tips in some activities

### **RESOURCES**

- Computer with internet connection
- Projector
- Worksheets and extra materials
- Students notebook

### **NOTES**

There are lots of activities related to the topic at this websites:

[www.usborne.com](http://www.usborne.com)

<http://www.meetthegreens.org/>

There are interesting clips about environmental issues at:

[http://wwf.panda.org/how\\_you\\_can\\_help/out\\_shopping/](http://wwf.panda.org/how_you_can_help/out_shopping/)