
YOUR ECOLOGICAL FOOTPRINT

SUSTAINABLE DEVELOPMENT

Type of module	Using the Internet
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Target group	14–17-year-old learners
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Level	A2
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A kiadvány az Educatio Kht. kompetenciafejlesztő oktatási program kerettanterve alapján készült.

A kiadvány a Nemzeti Fejlesztési Terv Humán erőforrás-fejlesztési Operatív Program 3.1.1. központi program (Pedagógusok és oktatási szakértők felkészítése a kompetencia alapú képzés és oktatás feladataira) keretében készült, a sulinoVA oktatási programcsomag részeként létrejött tanulói információhordozó. A kiadvány sikeres használatához szükséges a teljes oktatási programcsomag ismerete és használata.

A teljes programcsomag elérhető: www.educatio.hu címen.

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INFORMATION TABLE

TYPE OF MODULE	Using the Internet
DESCRIPTION OF MODULE	This module is on sustainable development. Ls learn about how human behaviour affects the environment. They calculate their own ecological footprint size, have a parliamentary debate, create and accept school/class rules for responsible behaviour.
AIMS AND OBJECTIVES OF MODULE	<ul style="list-style-type: none"> ■ Ls know what sustainable development is. ■ Ls are familiar with the ecological footprint idea. ■ They calculate their own ecological footprint size and compare it to the national average. ■ They can use fractions, decimals and percentages in context. ■ They can make arguments and use them in a debate.
TIMEFRAME	5 lessons
TARGET GROUP LANGUAGE LEVEL	15–17-year-old learners B1
SUGGESTED LANGUAGE COMPETENCE	<p>Ls can:</p> <ul style="list-style-type: none"> ■ say numbers (ordinals, decimals, fractions) ■ talk and ask about their daily routine ■ compose sentences using data from a chart. <p>Ls know the vocabulary of</p> <ul style="list-style-type: none"> ■ food, preparing food, ingredients ■ kinds of energy (solar, wind, water, etc.) ■ basic household appliances (freezer, vacuum cleaner, toaster, etc.). <p>Ls are familiar with conditionals 0, 1 and 2.</p>
LINKS OF THE MODULE	
Cross-curricular links	Environmental and Social Studies, Physics
Links with other modules	There are 2 other Internet modules suggested for this level. It does not matter in what order you use them.

FOCI OF SKILLS- DEVELOPMENT

Communicative language skills

- Taking part in interactions
- Analyzing data (given in a chart and collected during group work), dealing with numbers (Version A is more demanding from this point of view.)

General, educational skills

- Developing awareness and social responsibility
- Connecting to the UN Decade for Education for Sustainable Development (2005–2014).
- Research skills

EVALUATION

The main form of evaluation in this module is informal, personal teacher comment. It means that the teacher should keep track of the personal performances of learners during the module and all the comments he/she gave to each L. All the comments are to serve personal development and must therefore be helpful, encouraging and concrete. Formative evaluation to take place during the learning process, should be frequent and interactive; never taking the form of marks or points. Learners are given 2 evaluation sheets to fill in, as well as the possibility to express their opinion of the lesson in movement.

SUGGESTIONS

A computer is needed in lesson 1 while lesson 4 is designed for individual or pair Internet use. Always check the websites you want to use in advance and switch on the computers before starting. If you want to keep the attention of Ls while working on the computers, ask them to switch off the monitors.

BACK UP SYSTEMS

This module is connected to the UN Decade for Education for Sustainable Development (2005–2014). *“The United Nations Decade of Education for Sustainable Development is a complex and far-reaching undertaking. The environmental, social, and economic implications are enormous and touch many aspects of life of the world’s population. The overall goal of the DESD is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning. This educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations.”*

(UNESCO – Education for Sustainability: http://portal.unesco.org/en/ev.php-URL_ID=1216&URL_DO=DO_TOPIC&URL_SECTION=201.html)

The above site gives a general introduction to the importance of this topic.

Eartheasy, Ideas for Environmentally Sustainable Living: <http://eartheasy.com/homepage.htm> KidsFootprint Lesson Plans concerning food, energy, and waste issues. Some ideas are included in the module.

<http://www.kidsfootprint.org/lessonplans.htm>

MAP OF THE MODULE

LESSON	FOCI OF SKILLS DEVELOPMENT	MAIN ACTIVITIES	LANGUAGE INPUT	MATERIALS AND RESOURCES
1	<p>Ecological Footprints</p> <p>Developing awareness and social responsibility</p> <p>Dealing with data in reading, writing and talking</p> <p>Setting self-responsible learning</p> <p>Vocabulary building</p>	<p>Version A (no Internet):</p> <p>Text completion</p> <p>Writing numbers while watching a video animation</p> <p>Version B (with Internet):</p> <p>Doing an online quiz as a group, reading</p> <p>Version A/B:</p> <p>Brainstorming, mind mapping</p> <p>Talking about daily routine as a chain activity</p>	<p>Using numbers: fractions, decimals and percentages (A)</p> <p>Talking and asking about daily routine (A/B)</p> <p>Reading and making choices, considering the consequences (B)</p>	<p>Version A</p> <p>1.1 Indian saying;</p> <p>1.2 Ecological Footprint Worksheet A;</p> <p>1.4 Ecological footprint picture</p> <p>1.5 Allegorical Apple Video Animation</p> <p>A computer with a projector</p> <p>Version B</p> <p>1.1 Indian saying;</p> <p>1.3 Ecological Footprint Worksheet B;</p> <p>1.4 Ecological footprint picture</p> <p>Bobbie BigFoot Quiz</p> <p>http://www.kidsfootprint.org/</p> <p>A computer with a projector, internet access; loudspeakers (optional)</p>

LESSON	FOCI OF SKILLS DEVELOPMENT	MAIN ACTIVITIES	LANGUAGE INPUT	MATERIALS AND RESOURCES
2	Food and You – Sustainable Table Developing awareness and social responsibility Vocabulary and creativity building Communication: food Creative writing	Brainstorming eating and food related words, categorizing words, playing odd word out, talking about favourite food (ingredients, preparing), creating fake recipes, voting, evaluating the lesson	Talking about food, ingredients, food processing and packaging Comparing and contrasting the resources (energy) which go into different foods Developing ideas of which foods are sustainable or environmentally friendly.	2.1 Food and You Worksheet 2.2 Evaluation Sheet
3	Energy and You Developing awareness and social responsibility Communication skills: Talking about present and past habits, contrasting ways of life Vocabulary building	Miming, guessing household appliances; finding early substitutes for them; group discussion; reading and talking about energy resources/ types; pair dictation; evaluating the lesson in movement.	Describing ways in which technology affects the environment Talking about life with and without household appliances (contrasting present and past habits, way of life) Identifying different forms of energy Evaluating the work done so far with TPR (Total Physical Response)	3.1 Household Appliances 3.2 Energy and You Worksheet A 3.3 Energy and You Worksheet B 3.4 Information Sheet 3.5 Sustainable Development Definition
4	Your Ecological Footprint Developing awareness and social responsibility Reading: Giving and getting personal information on ecological issues by filling in an online test Vocabulary building	Vocabulary competition, ordering and matching as preparation for the online quiz, doing an online quiz, discussing and evaluating the results	Measuring own ecological footprint in an online quiz Practising frequency words and numbers Raising social awareness	4.1 My Ecological Footprint Worksheet; 4.2 About the Footprint Quiz Ecological Footprint Quiz: http://www.earthday.net/footprint Technical: Individual Internet access for each learner. (Version B is for the case when there are only enough computers for pair work.)

LESSON	FOCI OF SKILLS DEVELOPMENT	MAIN ACTIVITIES	LANGUAGE INPUT	MATERIALS AND RESOURCES
5	<p>We Are All Responsible</p> <p>Developing awareness and social responsibility</p> <p>Vocabulary building</p> <p>Creating school rules in a structured discussion and debating about them</p> <p>Evaluating the work done</p>	<p>Word search, brainstorming, creating rules, writing arguments, debating</p>	<p>Talking about the interdependence between humans and nature</p> <p>Raising the awareness of personal responsibility for sustainability</p> <p>Raising or strengthening the willingness to take on this responsibility</p> <p>Creating and accepting sustainability rules for the class</p> <p>Having a parliamentary debate</p> <p>Evaluating the work done in the module</p>	<p>5.1 Parliamentary Debate Worksheet</p> <p>5.2 Class rules</p> <p>5.3 Evaluation Sheet</p>

PROCEDURE

LESSON 1: ECOLOGICAL FOOTPRINTS

AIMS OF THE LESSON

- To get acquainted with the ideas of ecological footprint and sustainable development
- To practice saying numbers (ordinals, decimals, fractions etc.) – in Version A (no Internet)
- To watch a video animation and fill in the text with numbers by listening – in Version A (no Internet)
- To experiment with an ecological footprint calculator – in Version B (with Internet)
- To speak about daily routines and related sustainability issues

MATERIALS AND RESOURCES

Version A (Groups with a computer, a projector but no Internet available in class)
1.1 Indian saying; 1.2 Ecological Footprint Worksheet A; 1.4 Ecological footprint picture; 1.5 Allegorical Apple Video Animation; computer + projector

Version B (Groups with a computer, a projector and Internet available in class)
1.1 Indian saying; 1.3 Ecological Footprint Worksheet B; 1.4 Ecological footprint picture, Bobbie BigFoot Quiz <http://www.kidsfootprint.org/>; A computer with a projector, Internet access, loudspeakers (optional)

STAGE 1 Indian Saying – Warmer

TIME 5 mins

SKILLS AND COMPETENCIES IN FOCUS

Learning skills, focusing attention on task

ORGANISATION

Class work

AIDS AND MATERIALS

1.1 Indian saying (for Variation)

TEACHER'S ACTIVITIES

1. "Only when the last tree has died and the last river been poisoned and the last fish been caught will we realise we cannot eat money."

(Cree Indian saying)

Write or project this saying on the board, but leave out the underlined parts. Put the missing words under the sentence in random order:

fish, tree, money, river. You might want to get your Ls to volunteer the missing words before providing them.

Complete the text when Ls have guessed correctly.

LEARNERS' ACTIVITIES

1. Ls guess individually what the solution could be. They propose their solutions and discuss as a whole group.

VARIATION

AIDS AND MATERIALS

1.1 Indian Saying copied and distributed in suitable numbers for pair work

DESCRIPTION

Distribute 1.1 Indian saying, Ls work in pairs and check their solutions by reading out loud.

STAGE 2 Ecological Footprint – Understanding the Concept

TIME 10 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Learning skills
Focusing attention on task

ORGANISATION Individual work, class work

AIDS AND MATERIALS 1.4 Ecological footprint pictures; 1.2 / 1.3 Ecological Footprint Worksheet A or B (depending on Stage 3)

TEACHER'S ACTIVITIES

1. Display or project the ecological footprint pictures. Tell Ls what these footprints are called. Ask Ls if they know what they symbolise.
2. Ls do 1.2 or 1.3 Worksheet (A or B) Task 1 to understand the concept. They choose the words that fit the text.

For checking Ls read out the sentences. Be prepared to clarify the meaning of the sentences and ask for Ls' opinions.

Solution: limited, can, consume, hectares, land, calculate

LEARNERS' ACTIVITIES

1. Ls make guesses.
2. Ls read the text and underline the correct words. Ls might ask for certain words or clarification.

STAGE 3 A	Numbers, Factual Information
TIME	10 mins
TARGET GROUP	Groups with a computer and a projector, but no Internet available in class
SKILLS AND COMPETENCIES IN FOCUS	Revising the ways of using numbers Preparation for the next tasks Fractions Decimals Ordinals Percentages and depth are included Focus on fractions Decimals and percentage
ORGANISATION	Pair work, class work
AIDS AND MATERIALS	1.2 Ecological Footprint Worksheet A, Task 2

TEACHER'S ACTIVITIES

1. Walk around to see if individual help is needed.
Check the solutions with the whole group; call out a number and ask for the term.
Note: this way you can give examples of using the numbers.

LEARNERS' ACTIVITIES

1. Ls in pairs match the terms with the numbers in 1.2 Ecological Footprint Worksheet A, Task 2 a)
Ls can ask for the meaning of new words.

TEACHER'S ACTIVITIES

2. For the next turn say the terms first and Ls are expected to say the numbers correctly.

Make sure that Ls take notes if necessary. Focus on fractions and decimals.

Note: 'one thirty-second', 'o point o eight five'.

Ls do 1.2 Ecological Footprint Worksheet A Task 2 b) and 2 c)

Solutions:

a)

1	2	3	4	5	6	7	8	9	10	11	12
K	C	M	B	G	A	H	D	F	I	J	E

b) It's the fraction (No 6).

c) It cannot be a single apple, there are too many pieces.

LEARNERS' ACTIVITIES

2. Ls say the corresponding number when their hear the teacher say the term.

Expected reading of numbers:

a) $1/32$ - 'one thirty second'

b) 100 mph - 'one hundred miles per hour'

c) 0171 895 7056 - 'o one seven one, eight nine five, seven o five six'

d) 0.087 - 'o point o eight five'

e) 100 years - 'one hundred years'

f) 75% - 'seventy-five percent'

g) 28 C - 'twenty-eight Celsius, 72 F - 'seventy-two Fahrenheit'

h) 24 billion tons - 'twenty-four billion tons'

i) 5 feet, 1.5 metres - 'five feet, one point five metres'

j) \$60, £25, 360 Ft - 'sixty dollars, twenty five pounds, threehundred-sixty forints'

k) 2 - 1 (or: 2:1) - 'two - one'

l) 1st, 2nd, 3rd, 4th - 'first, second, third, fourth'

m) 12/04/65 - 'twelfth of April, sixty five'

STAGE 4 A	The Allegorical Apple – Video
TIME	10 mins
TARGET GROUP	Groups with a computer and a projector, but no Internet available in class
SKILLS AND COMPETENCIES IN FOCUS	Listening skills Thinking skills Understanding numbers by listening Gap-filling with numbers (figures)
ORGANISATION	Individual work, checking on class level
AIDS AND MATERIALS	1.2 Ecological Footprint Worksheet A, Task 3; 1.5 Allegorical Apple Video Animation; computer + projector

TEACHER'S ACTIVITIES

1. Before watching and listening

Ls read the text individually.

Ls can help each other with unknown words.

While watching and listening

Ls watch the video animation twice, during the second listening they fill in the gaps.

Solution:

“This is an Allegorical Apple. This apple represents the Earth. Saltwater oceans occupy 75% of the Earth. This part is not suitable for living, for example it is desert or ice. So now we have 1/8 of the Earth. But I cut it into 4, because 3/4 of the remaining part is too rocky, too steep or too cold to produce food. We have 1/32 now. The Earth’s topsoil is only 1.5 metres deep. (Show the crust.) This is where people can produce food. Over-farming and erosion take away 24 billion tons of topsoil per year. 2.5 cm of topsoil requires 100 years to form.”

(Text based on “What is Sustainability”, www.kidsfootprint.org)

LEARNERS' ACTIVITIES

1. Before watching and listening

– Ls read the text individually.

– Ls can help each other with unknown words.

While watching and listening

– Ls watch the video animation twice,

– during the second listening they fill in the gaps.

TEACHER'S ACTIVITIES

2. Check the solution by calling out the numbers. Pay attention to the accurate way of saying the fractions and decimals.

While Ls are doing 1.2 Ecological Footprint Worksheet A Task 3 b), walk around and give helpful comments, ask personally if Ls are confident about the verbal forms. Where needed, give personal help.

Solutions:

1	2	3	4	5	6	7	8
75%	1/8	3/4	1/32	1.5	24	2.5	100

LEARNERS' ACTIVITIES

2. Task 3 a) gap-filling with numbers
Task 3 b) Ls write down 2 fractions and the 2 decimals in letters.

While checking the solutions, Ls practice saying the numbers correctly.

Expected answers:

1 'Seventy-five percent'

2 'One-eighth'

3 'three quarters'

4 'one thirty-second'

5 'one point five'

6 'twenty-four'

7 'two point five'

8 'one hundred'

STAGE 3–4 B **Bobbie BigFoot – Online Footprint Quiz**

TARGET GROUP Groups with a computer, a projector and Internet available in class

TIME 20 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Reading
Making choices
Understanding the consequences and talking about them
Personalising new information

ORGANISATION Class work

AIDS AND MATERIALS 1.3 Ecological Footprint Worksheet B; Bobbie BigFoot Quiz <http://www.kidsfootprint.org/> A computer with a projector, Internet access, loudspeakers (optional)

TEACHER'S ACTIVITIES

1. Project the website and tell Ls that Bobbie is an American boy with a typical American lifestyle. Ls will be able to make choices together to calculate how big his ecological footprint is.

Ls make their choices.

Note: This is an interactive decision making task. Bobbie's ecological footprint gets its final size according to Ls' choices. There are 9 questions about breakfast, going to school; 5 school related issues then dinner and keeping cool for the night.

Note: the result comes in small print, but everyone should read and understand it. However there is another version (A), we strongly recommend making efforts to have Internet access and do this task with all Ls.

2. Make Ls understand the results. Ask some questions:
'How many worlds would we need if everyone led the same lifestyle?'
'What made Bobbie's footprint so big?'
'What could he do to shrink it?'

LEARNERS' ACTIVITIES

1. Choices should be made together.
'I think an American boy goes to school by car.'

Ls take turns to read the feedback. There is time to comment.

2. Expected considerations:
'Bobbie uses too much energy.' *'He always goes by car.'* *'Air conditioning needs a lot of energy.'* etc.

TEACHER'S ACTIVITIES

3. If time allows, Ls can experiment with the quiz. They should try to shrink Bobbie's footprint by giving different answers.

Ask Ls (after experimenting with Bobbie) about their own ecological footprint sizes. *'Do you think your ecological footprint is bigger/smaller/the same size?'*

4. Ls should compose a sentence about Bobbie's and their own ecological footprints in Task 2 a) and b) of 1.3 Ecological Footprint Worksheet B.

LEARNERS' ACTIVITIES

3. Expected answers:

'I think my ecological footprint is about the same size (bigger, much smaller, because.....'

4. Expected sentences are like in step 2 and 3.

STAGE 5 Our Ecological Footprint – Group Statistics

TIME 10 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Asking questions
Making calculations

ORGANISATION Group work, class work

AIDS AND MATERIALS 1.2 or 1.3 Ecological Footprint Worksheet A or B; 1.4 Ecological footprint pictures;

TEACHER'S ACTIVITIES

1. Make sure that Ls do Task a) individually, by circulating the suitable answers in the first table.

If not earlier, display the big footprint pictures on the board.

2. Make sure that all questions are covered. If there are only 4 Ls in the group, ask someone to choose two questions. (Task b)

3. Note: the questions should be altered time to time; give patterns.

'How did you clean yourself in the morning?'

'Did you wash yourself in the morning?'

'Did you have a shower in the morning?'

'Did you have a bath in the morning?'

'Yes, I did.' *'No, I had a bath.'*

Make sure that Ls use the questions and give spoken answers. (Avoid their filling in the chart for themselves and copying, or using only numbers.)

4. Walk around and ask for a score keeper in each group, who leads the process. Ls are supposed to report the sentences, not the numbers. The score keeper translates the sentences into numbers.

LEARNERS' ACTIVITIES

1. Ls read and answer the questions of Task a) about themselves by circling the suitable response individually

2. Ls in groups of 4 or 5 distribute the questions of Task 4 so that everyone has one question to ask.
They copy their own question to the line of 'Your question'. (Task b)

3. They ask everyone in the group one by one and everyone takes notes in the second chart on their own. (Task c)

4. Ls summarise the answers on group level, by filling in the whole chart. There is a score keeper who always gives the code after the answer. (Task d)
Laci took a shower in the morning.' *'Two'*

TEACHER'S ACTIVITIES

5. Key for personal statistics (available in the worksheet):

Small: max. two of 2, all the others are 1s.

Medium: more 1s than 2s, max. one 3.

Large: All other cases

Key for group statistics (available in the worksheet):

Small: max two medium footprints, all the others have small.

Medium: more small than medium footprints, max 1 big.

Large: All other cases

6. Point at the different sizes of ecological footprints displayed. Ask Ls what size the group's ecological footprint is.

Ask if they are satisfied with the result. Tell them that the class is going to learn about how to shrink our ecological footprint and what sustainable development is.

LEARNERS' ACTIVITIES

5. Ls calculate their own footprint size and when ready, they do the same for the group. (Task e, f)

6. Expected answers: *'Fortunately our group has a (quite/really) small ecological footprint.'* *'Our ecological footprint is medium.'* *'We have a (bit/quite/really) big ecological footprint.'*

LESSON 2: FOOD AND YOU – SUSTAINABLE TABLE

AIMS OF THE LESSON	<ul style="list-style-type: none"> ■ To talk about food, ingredients, food processing and packaging ■ To compare and contrast the resources (energy) which go into different foods ■ To have ideas which foods are sustainable or environmentally friendly
MATERIALS AND RESOURCES	<p>Food and You: http://www.kidsfootprint.org/lessons/Social%20Studies/Food%20and%20You%20-%20ES.pdf</p> <p>Sustainable table: http://www.sustainabletable.org/home/</p> <p>2.1 Food and You Worksheet; 2.2 Evaluation Sheet</p>
STAGE 1 A	Word Chain – Warmer
TARGET GROUP	L groups with a large vocabulary and fast reactions
TIME	5 mins
SKILLS AND COMPETENCIES IN FOCUS	Learning skills Speaking
ORGANISATION	Ls sit in a circle
AIDS AND MATERIALS	Ball

TEACHER'S ACTIVITIES

- Tell Ls to say words with the last SOUND of the previous word.
Hamburger → raspberry → ingredient → table → lunch → chocolate → toast → tea → eat → temperature → raw → waffle → lemonade → diet, etc.
 Tell them to try and say as many food and eating related words as they can.

LEARNERS' ACTIVITIES

- Ls choose the next speaker by throwing the ball to them. If someone cannot say anything, his/her neighbours are supposed to whisper help into his/her ears.
 In case of no idea, the first SOUND comes again.

 When a word belongs to the preferred category (food, eating) Ls clap their hands or stamp with their feet.

STAGE 1 B	Brainstorming Words – Warmer
TARGET GROUP	L groups with a small vocabulary and slow reactions
TIME	5 mins
SKILLS AND COMPETENCIES IN FOCUS	Learning skills Speaking Writing
ORGANISATION	Individual work, group work
AIDS AND MATERIALS	Copy book

TEACHER'S ACTIVITIES

1. Tell Ls to collect as many food and eating related words in 2 minutes as they can.
2. Suggest some words of the individual collections that are very important to include.
Note: you might make Ls use larger sheet of papers for completing the task in a mind-map form, visible for everyone.

LEARNERS' ACTIVITIES

1. Each L takes individual notes.
2. Ls in groups of 3-4 share their collection and build a larger vocabulary together. Ls tick the words they have and take notes of those that are not in their lists.

STAGE 2 Odd Word Out – Finding Category Labels**TIME** 10 mins**SKILLS AND COMPETENCIES
IN FOCUS** Learning skills
Vocabulary building**ORGANISATION** Individual work, group work**AIDS AND MATERIALS** 2.1 Food and You Worksheet; Task 1**TEACHER'S ACTIVITIES**

1. Tell Ls to find the odd word and to name the category of the majority of the words in their 2.1 Food and You Worksheet. Then ask them to create 3 new categories.
- 2.

No	Category	Odd word
1	Fruit	Peas
2	Bakery products	Sugar
3	Fast food	Vegetable
4	Vegetable fat	Fat
5	Vegetable	Egg
6	Meat	Pancake
7	Seasonings (herbs and spices)	Flour
8	Cutlery	Plate
9	Cooking verbs /activities	Pan

Give only personal help when needed and do not check the solution.

LEARNERS' ACTIVITIES

1. Ls write Xs next to the odd words individually
2. Ls check their solutions in groups of 3-4.
Ls read out their categories after each other, say the odd word and name the category. The others approve and complete their notes where needed.

Ls add the new vocabulary items to the list or mind map they created on previous stage.

STAGE 3	Your Favourite Food
TIME	15 mins
SKILLS AND COMPETENCIES IN FOCUS	Speaking Social
ORGANISATION	Groups from previous task stay together.
AIDS AND MATERIALS	2.1. Food and You Worksheet Task 2a and b

TEACHER'S ACTIVITIES

1. Tell Ls to agree on a dish that they all like, for example pizza, hamburger, breaded chicken, pancakes, etc. Ask them to list all the ingredients they can.
2. They should fill in the chart for three ingredients according to the pattern given in their 2.1 Food and You Worksheet Task 2b.
Ls decide which ingredient needs the most energy to produce.
3. Ask the groups to present their ideas through a spokesperson.

LEARNERS' ACTIVITIES

1. Ls are allowed to use a dictionary if they know less than 3 ingredients.
2. Ls agree on the ingredient that needs the most energy before ready to use (helpful information on the worksheet).
3. Expected solution:
'We all like pizza. To make a pizza you need flour. Flour comes from wheat. Farmers produce wheat in many places throughout the country. Wheat is harvested, dried and then transported to mills. In mills they make flour out of the wheat. Flour is packaged and distributed to shops. We buy the flour there and take it home.'

STAGE 4	Fake Recipes
TIME	15 mins
SKILLS AND COMPETENCIES IN FOCUS	Writing Speaking skills Creativity
ORGANISATION	Groups from previous task stay together
AIDS AND MATERIALS	2.1 Your Food Worksheet Task 3

TEACHER'S ACTIVITIES

1. Tell Ls to choose if they want to create a sustainable dish or something that is against sustainability. Make sure that there are groups for both choices. They fill in a chart similar to the previous stage.

Note: the task can be fun, it is not a problem if the food does not exist.

2. Elicit the vocabulary: *peel, cut, chop, wash, steam, cook, bake, fry, etc.*
3. Have the class listen to the recipes, at least to an environmentally friendly one and to another causing more harm to nature.

LEARNERS' ACTIVITIES

1. Ls decide on the ingredients, place of origin, way of processing and packaging, type of transportation, etc.

2. Ls agree on the steps of making the food.
Ls give the food a name.

3. Ls choose the most sustainable dish; and say if they would like to taste it. They write down their opinions, some can also express them orally.
Expected considerations:
'It does not need much energy, the vegetables come from the garden, and it doesn't need cooking or frying.' It is very bad for nature: the ingredients are from far away countries, some are pre-processed, it takes a long time to bake.'

STAGE 5	Evaluation
TIME	5 mins
SKILLS AND COMPETENCIES IN FOCUS	Writing Reading Learning skills
ORGANISATION	Individual work, class work
AIDS AND MATERIALS	2.2 Evaluation Sheet

TEACHER'S ACTIVITIES

1. Distribute 2.2 Evaluation Sheets and ask Ls to think and give valuable advice. Tell them that you can only adapt to their learning needs if they provide useful information.
Collect the evaluation sheets from the students and use them for self-reflection. It means that you can make any necessary changes in the learning process to serve Ls individual needs. Give some short feedback next time.

LEARNERS' ACTIVITIES

1. Ls are supposed to help the teacher

LESSON 3: ENERGY AND YOU

AIMS OF THE LESSON	<ul style="list-style-type: none">■ To describe ways in which technology affects the environment■ To talk about life with and without household appliances (contrasting present and past habits, ways of life)■ To identify different forms of energy■ To evaluate the work done so far with TPR (Total Physical Response)
MATERIALS AND RESOURCES	3.1 Household Appliances; 3.2 Energy and You Worksheet A; 3.3 Energy and You Worksheet B; 3.4 Energy Information Sheet; 3.5 Sustainable Development Definition
STAGE 1	Miming – Warmer
TIME	5 mins
SKILLS AND COMPETENCIES IN FOCUS	Miming Guessing
ORGANISATION	Pair work, class work
AIDS AND MATERIALS	3.1 Household appliances

TEACHER'S ACTIVITIES

1. Cut up and distribute the names of household appliances on paper slips to Ls. Each pair gets two gadgets. They decide which one to act out. The others guess what it is. They can give sounds, but are not allowed to say words. The whole body should act.

LEARNERS' ACTIVITIES

STAGE 2 Life with and without Electricity – Finding Substitutes for Household Appliances

TIME 10 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Talking
Making suggestions and agreements

ORGANISATION Pair work, group work (of two pairs) class work

AIDS AND MATERIALS 3.2 or 3.3 Energy and You Worksheet A or B depending on Stage 3 choice.

TEACHER'S ACTIVITIES

1. Ask Ls if they know all the gadgets. Help them with some words if they need it.
Ask for a couple of substitutions for the appliances to show how to talk about them:
'Instead of washing machines they did hand-washing.'
'When they did not have refrigerators people used ice for keeping their food fresh.'
'People sang and talked more before TV was invented.'
2. Note: in case of slow groups you can give less than 10 gadgets
3. Two groups sit together to discuss their solutions.

LEARNERS' ACTIVITIES

2. Ls choose 10 gadgets and write substitutions for them.

STAGE 3 A Energy is Everywhere – Reading and Talking about Resources

TARGET GROUP Fore more independent L groups who know a lot about renewable energy resources in their mother tongue.

TIME 20 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Reading for information
Summarizing

ORGANISATION Individual and group work, preferably in groups of 5, 6 or 7 (There are seven kinds of resources, but one is done as an example.)

AIDS AND MATERIALS 3.4 Energy Information Sheet, 3.2 Energy and You Worksheet A, Task 2

TEACHER'S ACTIVITIES

1. Give a copy of the 3.4. Information Sheet to everyone. Ask them if they know about all the energy resources. (They have learnt about them.)
Choose one for doing together as an example.
2. Tell Ls who is supposed to work with which resource of 3.4 Information Sheet. (You might want to give them the choice, but make sure that all are covered.) Ls read the particular piece of information and fill in the chart in their 3.2 Energy and You Worksheet A, Task 2. Encourage them to recall their knowledge of Physics, Chemistry or Geography.
3. Ls in groups fill in the whole chart while having short conversations.

LEARNERS' ACTIVITIES

1. Example: Solar energy
A: ,the power coming from the Sun'
B: ,renewable, but solar systems are expensive'
3. Expected forms:
'Who knows/has written about wind energy?' *'It's me.'*
'What is positive/negative about it?'

STAGE 3 B Energy is Everywhere – Reading and Talking about Resources

TARGET GROUP For less independent L groups having less information on renewable energy resources in their mother tongue.

TIME 20 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Reading for information
Matching information

ORGANISATION Pair work

AIDS AND MATERIALS 3.4 Energy Information Sheet, 3.3 Energy and You Worksheet B, Task 2

TEACHER'S ACTIVITIES

1. Give a copy of 3.4 Information Sheet to everyone. Ask them if they know about all the energy resources. (They have learnt about them.)
Have them only read parts for information according to their needs.
2. Tell Ls to work on their 3.3 Energy and You Worksheet B, Task 2.
3. Solutions:

1 e H	2 f J	3 d I	4 b L	5 g F	6 a G	7 c K
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LEARNERS' ACTIVITIES

1. Ls are not supposed to read about all the forms of energy, but only about those with which they are not familiar.
2. They can refer to the Information Sheet when they need it.
3. Ls check the solutions in groups of two pairs or as a class.

TEACHER'S ACTIVITIES

4. Ask Ls what Sustainable Development issues you have already dealt with in the module. Ask if they know what Sustainable Development is.

Tell them that you are in the middle of the module and you want to know how they feel about their own improvement. Ask in which area they have learnt more: using English or the topic. Ask them to vote using movements. (use TPR: Total physical response).

'Stand up if you think you have learnt quite a lot of new things about Sustainable Development.'

'Touch the top of your head if you have learnt quite a lot of English.'

LEARNERS' ACTIVITIES

4. Ls give their ideas; recall previous and recently gained knowledge.

Ls act according to the questions. They remain seated or do not move when their answer is 'no'.

STAGE 4	Sustainable Development Definition – Pair Dictation
TIME	5 mins
SKILLS AND COMPETENCIES IN FOCUS	Reading Writing
ORGANISATION	Pair work
AIDS AND MATERIALS	3.5 Sustainable Development Definition (paper or projected format). If paper, suitable copies for pair work.

TEACHER'S ACTIVITIES

1. Tell Ls that they are going to read and write the following definition (read it to them)
‘Sustainable development is a process of developing land, cities, business, communities, etc, that *“meet the needs of the present without compromising the ability of future generations to meet their own needs”* (Brundtland Report, United Nations, 1987)

Note: It does not matter at this stage if they know all the words or understand the idea.

2. Distribute one 3.5 Sustainable Development Definition to each pair or project it. They read and try to understand.
Ls sitting back to back dictate the definition to each other from the projector or using 3.5 Sustainable Development Definition Sheet.

LEARNERS' ACTIVITIES

1. Ls are supposed to listen carefully, they are just to familiarise with the sentence.

2. After reading and understanding the definition, Ls sit back to back and take turns in pairs to dictate and write the definition on their 3.2 or 3.3 Energy and You Worksheets. Then they check each others' work.

VARIATION THE ABOVE VOCABULARY COMPETITION CAN BE PLAYED IN GROUPS OF 3 LS.

AIDS AND MATERIALS	Same
DESCRIPTION	Each group sits together and has a definition sheet somewhere quite far in the classroom. Group members take turns in running to the definition, remembering the next part and running back to dictate it to the others. When the 2-minute time is up, they take the definition sheet and correct their solutions. The group with less overall mistakes is the winner. They groups might want to correct each other's solutions.

LESSON 4: YOUR ECOLOGICAL FOOTPRINT

AIMS OF THE LESSON

- To measure own ecological footprint by an online quiz
- To practise frequency words and numbers

MATERIALS AND RESOURCES

4.1 My Ecological Footprint Worksheet; 4.2 About the Footprint Quiz
 Ecological Footprint Quiz: <http://www.earthday.net/footprint/index.asp> Technical: Individual Internet access for each L.
 (Version B is for the case when there are only enough computers for pair work.)

STAGE 1 Words to Remember – Warmer

TIME 10 mins

SKILLS AND COMPETENCIES IN FOCUS Recalling vocabulary

ORGANISATION 3 groups

AIDS AND MATERIALS All the worksheets and materials used so far

TEACHER'S ACTIVITIES

1. Divide the class into three groups and ask them to find as many important new words or expressions that they have learnt so far in the module as they can in 2 minutes. Group 1 revises Lesson 1, Group 2 gets Lesson 2, Group 3 deals with Lesson 3.

LEARNERS' ACTIVITIES

1. Important vocabulary items, among others:
 - Lesson 1:
 - A: *fraction, decimal, allegorical apple, percentage, ecological footprint, soil, consume, calculate, suitable for living, etc.*
 - B: *leading a lifestyle, air conditioning, consume, calculate, frozen pre-packaged meal, garbage, generating waste, sugar puffs cereal, etc.*
 - Lesson 2: *vegetable fat, cutlery, process, pastry, roll, poultry, packaged, grained, preserved, fake, etc.*
 - Lesson 3: *sustainable development, solar energy, renewable energy, fossil fuels, household appliances, electronic razor, bulb, birds beware, stream, current, etc.*

TEACHER'S ACTIVITIES

2. Lead the competition. Keep track of the correct answers by groups on the board. The group that has given the most correct answers in total is the winner. (1 minute for summing up the results)

LEARNERS' ACTIVITIES

2. Group 1 calls out their first words for a minute, any member of the other groups can slap their desk for the right to say the other language equivalent. (Ls decide if they call out the E or the H versions). Then it is Group 2's turn for a minute and then Group 3.

VARIATION THE ABOVE VOCABULARY COMPETITION CAN BE PLAYED IN GROUPS OF 3 LS.

AIDS AND MATERIALS

Same

DESCRIPTION

Ls collect the words or expressions individually; they run the competition within their own groups. They announce the 3 winners in the end. (2 minutes for collecting the words, 1-1-1 minutes for calling out the words, 1 minute for summarizing the results)

STAGE 2 Ordering and Matching Exercises – Preparation for the Quiz

TIME 10 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Vocabulary building for understanding the quiz

ORGANISATION Individual and class work

AIDS AND MATERIALS 4.1 My Ecological Footprint Worksheet, Task 1 a) b) and c)

TEACHER'S ACTIVITIES

1. Tell Ls that in the quiz there are some words they might not know. The following tasks (2 a, b and c) will help them understand the text.
In Task 1 a) Ls order 10 frequency words. Most of them occur in the quiz.

Solutions (First is given):

Never B – 1; Seldom F – 2; Infrequently G – 3; Occasionally – C – 4; Sometimes A – 5; Often D – 6; Very often J – 7; Most of the time E – 8; Almost always I – 9; Always H – 10

Note: F, G and C, as well as E and I are interchangeable.

2. Task 2 b) is about matching fractions and their picture representations. They will need $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ in the quiz.

Solution (First is given):

1 – D 2 – B 3 – C 4 – E 5 – A

LEARNERS' ACTIVITIES

1. Ls are supposed to write down not only the corresponding letters, but the words. When checking the solution they should point out that some words are interchangeable.

2. Learners match some fractions with their picture representations individually, then check the work in class.

TEACHER'S ACTIVITIES

3. Task 2 c) is about types of housing.

Note: Green-design means that the building was designed to use little or renewable energy.

Solutions (First is given): 1 – C – ii); 2 – D – iii); 3 – A – iv); 4 – B – i)

4. Quickly check the solutions with the whole class; hopefully these exercises were easy to do.

LEARNERS' ACTIVITIES

3. Ls have to match the American words with the pictures and the British English versions.

4. Ls check the solutions in class.

STAGE 3 A	Ecological Footprint Quiz – Online Task
TARGET GROUP	For a class where there are enough computers with Internet access for individual work
TIME	15 mins
SKILLS AND COMPETENCIES IN FOCUS	Making choices Reading Social awareness
ORGANISATION	Individual by the computers
AIDS AND MATERIALS	Ecological Footprint Quiz: http://www.earthday.net/footprint/index.asp ; 1 computer with Internet access for everyone; 4.1 My Ecological Footprint Worksheet, Task 2

TEACHER'S ACTIVITIES

1. Tell (and if possible project) the Ls how to get to the quiz. (After typing in the URL, it is obvious.)
Tell them that Questions 13–16 are probably not for them, but they should choose the answer closest to reality.
2. Walk around to give some responses to the personal objections that have come up while dealing with the quiz.

LEARNERS' ACTIVITIES

1. Ls do the quiz and take notes of their answers in their Worksheets, Task 2 a)
2. Ls fill in the chart provided in Task 2 b)

STAGE 4 A Ecological Footprint Quiz Results – Discussion and Evaluation

TARGET GROUP For a class where there are enough computers with Internet access for individual work

TIME 10 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Speaking
Social awareness

ORGANISATION Pair work, class work

AIDS AND MATERIALS 4.1 My Ecological Footprint Worksheet, Task 2 b)

TEACHER'S ACTIVITIES

1. Give communication patterns if needed.
'How many hectares does your lifestyle require?'
'What about your food/goods/shelter/mobility footprint?'
'Why is your mobility footprint so big/small?'
'Is your footprint bigger/smaller than the national average?'
2. Ask Ls about their ecological footprint sizes. *'Who has the biggest/smallest ones and why?'* *'Did you expect that you would be above/on/below the national average?'*

Note: Tell Ls that they can read about the quiz on the same website if they are interested in how it was designed.

Further information is at the end of the quiz under the following titles:

About the Footprint Quiz

Frequently Asked Questions

LEARNERS' ACTIVITIES

1. Ls in pairs compare their results and try to find the reasons for possible differences.
2. Ls can say if they have any reservations about the quiz.
Expected answers: Questions 13–16.

STAGE 3 B	Ecological Footprint Quiz – Online Task
TARGET GROUP	For a class where there are enough computers with Internet access for pair work
TIME	20 mins
SKILLS AND COMPETENCIES IN FOCUS	Making choices Reading Social awareness
ORGANISATION	Pair work, taking turns by the computers
AIDS AND MATERIALS	Ecological Footprint Quiz: http://www.earthday.net/footprint/index.asp ; 1 computer with Internet access for everyone, 4.1 My Ecological Footprint Worksheet, Task 2

TEACHER'S ACTIVITIES

Tell (and if possible project) the Ls how to get to the quiz. (After typing in the URL, it is obvious.)
Tell them that Questions 13–16 are probably not for them, but they should choose the answer closest to reality.

LEARNERS' ACTIVITIES

L1 does the quiz while Learner 2 takes notes of his/her answers and results on Learner 1's Worksheet; they may discuss in order to clarify some questions.
Task 2 a)
They change roles.

STAGE 4 B Ecological Footprint Quiz Results – Discussion and Evaluation

TARGET GROUP For a class where there are enough computers with Internet access for pair work

TIME 5 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Speaking
Social awareness

ORGANISATION Class work

AIDS AND MATERIALS 4.1 My Ecological Footprint Worksheet, Task 2 b)

TEACHER'S ACTIVITIES

1. Ask Ls about their ecological footprint sizes. *'Who has the biggest/smallest ones and why?'* *'Did you expect that you would be above/on/below the national average?'*

Note: Tell Ls that they can read about the quiz on the same website if they are interested in how it was designed.

Further information is at the end of the quiz under the following titles:

About the Footprint Quiz

Frequently Asked Questions

LEARNERS' ACTIVITIES

1. Ls can say if they have any reservations about the quiz.
Expected answers: Questions 13–16.

STAGE 5 Homework – Ecological Footprints of Countries

**SKILLS AND COMPETENCIES
IN FOCUS** Reading charts
Using data in sentences

ORGANISATION Individual

AIDS AND MATERIALS 4.1 My Ecological Footprint Worksheet, Homework task

TEACHER'S ACTIVITIES

Tell Ls that all the information is given to solve the task, however sometimes they should be creative.

LEARNERS' ACTIVITIES

Ls are to think about the questions and then compose at least 5 statements using the data.

LESSON 5: WE ARE ALL RESPONSIBLE

AIMS OF THE LESSON

- To talk about the interdependence between humans and nature
- To raise awareness of personal responsibility for sustainability
- To raise or strengthen the willingness to take on this responsibility
- To create and accept sustainability rules for the class
- To have a parliamentary debate
- To evaluate the work done in the module

MATERIALS AND RESOURCES

4.1 My Ecological Footprint Worksheet, Homework task; 5.1 Parliamentary Debate Worksheet; 5.2 Class Rules; 5.3 Evaluation Sheet

STAGE 1 **Checking Homework**

TIME 5 mins

**SKILLS AND COMPETENCIES
IN FOCUS** Learning skills
Using data in sentences

AIDS AND MATERIALS 4.1 My Ecological Footprint Worksheet, Homework task

TEACHER'S ACTIVITIES

1. Ask Ls to say a couple of their sentences.
Draw their attention to typical mistakes and give correct versions on board.

LEARNERS' ACTIVITIES

STAGE 2 Word Search – Warmer**TIME** 5 mins**SKILLS AND COMPETENCIES
IN FOCUS** Learning skills
Focusing on task**ORGANISATION** Individual work, class work**AIDS AND MATERIALS** 5.1 Parliamentary Debate Worksheet, Task 1**TEACHER'S ACTIVITIES**

1. Solution:
litter, garbage, dust, mess, rubbish, trash, junk, wastage, waste
2. Check the solutions as a class.

G	J	U	N	K	W	R	R
A	D	S	B	L	A	T	T
R	V	B	B	I	S	H	R
B	S	A	H	T	T	K	A
A	T	M	E	T	A	A	S
G	T	E	E	E	G	R	H
E	T	S	S	R	E	V	W
W	A	S	T	E	T	J	R

LEARNERS' ACTIVITIES

1. Ls find the alternative words for litter in the word search puzzle.
2. Ls take turns by reading out each word.

STAGE 3	Organising Teams, Distributing Topics, Explaining Tasks
TIME	5 mins
SKILLS AND COMPETENCIES IN FOCUS	Learning skills
ORGANISATION	Class work
AIDS AND MATERIALS	5.1 Parliamentary Debate Worksheet, Task 2

TEACHER'S ACTIVITIES

1. Create 3 groups which means 3 parties. Ask Ls to choose a topic from 5.1. Parliamentary Debate Worksheet Task 2 (recycling, littering, polluting, and wasting materials, wasting electricity or water, canteen food) and tell them they will create rules about the chosen topics, write and discuss arguments for the rules and have a parliamentary debate before accepting or refusing the rules.

LEARNERS' ACTIVITIES

1. Ls check the topics on their Worksheets and may ask for clarification.

STAGE 4	Preparation for the Parliamentary Debate
TIME	10 mins
SKILLS AND COMPETENCIES IN FOCUS	Learning skills
ORGANISATION	Class work
AIDS AND MATERIALS	5.1 Parliamentary Debate Worksheet, Task 2, 3, 4

TEACHER'S ACTIVITIES

1. Go around and help them to have a nice distribution of nouns and verbs.
2. Help Ls to choose important rules. It is not a problem if they have less than 3. If more, try to get them combine some of their rules under a bigger concept.
3. If there is uncertainty about using the conditionals, write some patterns on the board.

LEARNERS' ACTIVITIES

1. Ls in their party groups brainstorm all the ideas related to their topics. Each L takes notes on his/her worksheet, Task 2
2. Ls propose 3 school/class rules related to their topics. Each L takes notes on his/her worksheet, Task 3..
3. Ls write arguments to prove that their rules would contribute to sustainability. They create these arguments in a discussion.
Give individual help where needed. Each L takes notes on his/her worksheet, Task 4.
Ls should use Conditional 1 and 2.
'If we accept the rule of not dropping litter on the floor but collecting it selectively, we will produce less waste.'
'Even if we accepted this, no one would keep the rule.'

STAGE 5	Parliamentary Debate
TIME	10 mins
SKILLS AND COMPETENCIES IN FOCUS	Argumentation skills
ORGANISATION	Class work
AIDS AND MATERIALS	5.1 Parliamentary Debate Worksheet, Task 5; 5.2 Class rules

TEACHER'S ACTIVITIES

1. Have Ls sit in a circle; open the parliamentary session. *'Ladies and Gentlemen, let me open today's session of the Parliament. We are here to promote a more sustainable lifestyle within the school/class. I give the floor to the first MP to announce his party's proposals.'*
2. Close the parliamentary session.

LEARNERS' ACTIVITIES

1. Ls from each group announce their proposals.
The other parties should say if they have objections and why. They use the same argumentation patterns as in Stage 3.
Ls vote on each proposal.
Ls take notes on the accepted rules.
- Ls decide who will write up the accepted rules in a nice format for the next lesson.
Give the (possibly) enlarged format to him/her.

STAGE 6	Evaluation
TIME	10 mins
SKILLS AND COMPETENCIES IN FOCUS	Learning skills
ORGANISATION	Individual
AIDS AND MATERIALS	5.3 Evaluation Sheet

TEACHER'S ACTIVITIES

Ask Ls to fill in the Evaluation Sheet for the module. Reflect on these evaluations individually next time. It means that while Ls work on a task individually, you can go and talk to them about their reflections and you can provide some feedback on their work.

LEARNERS' ACTIVITIES

Ls fill in the evaluation sheet individually and if time allows, they also reflect on the module and the work done orally.

