

Learning Unit / Module

Title CLIMATE CHANGE	Proff. Aresta Sabrina – Patrioli Alice
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Class Third Class	
Subjects involved	Science Geography
Number of lessons	5 (10 h. of 55 minutes)

TEACHING AIMS including	<i>What learners will know</i> <i>by the end of the lesson/unit.</i>	LEARNING OUTCOMES <i>What learners will be able to do</i> <i>the end of the lesson/unit</i>	<i>What learners will be aware of</i> <i>the end of the lesson/unit</i>
<ul style="list-style-type: none"> ● culture ● language communication ● cognition <ul style="list-style-type: none"> ● <i>To present the content of the unit</i> ● <i>To introduce the concept and main features of the content</i> ● <i>To make learners aware and build on prior knowledge</i> ● <i>To help learners understand that learning can be achieved in a second language</i> ● <i>To help learners understand that keeping a record of new words is important</i> 	<p><i>Learners will know about</i></p> <ul style="list-style-type: none"> ● Earth's climate change ● Greenhouse effect ● The role of carbon dioxide as a greenhouse gas 	<p><i>Learners will be able to</i></p> <ul style="list-style-type: none"> ● Answer questions (in oral and written form), fill in the gaps, find information about climate change ● Use the specific vocabulary related to the climate change and its effects ● Realize a group output product exploring and offering insight into the Earth's climate 	<p><i>Learners will be aware of</i></p> <ul style="list-style-type: none"> ● The impact of climate change on the Earth ● The impact of human beings on the environment (pro/cons) ● Different solutions about climate change and why it is an increasing problem

		<p>change</p> <ul style="list-style-type: none"> ● Explain the results of an experiment that shows what the greenhouse effect is 	

Content

The Clil theme in terms of knowledge, skills and understanding we wish our learners to access

- Geography: enviromental concerns, location of the areas exposed to climate change, solutions and future goals to reduce Earth’s pollution
- Science: climate change and greenhouse effect, solutions and future goals to reduce Earth’s pollution
- English: conditionals, should, will etc.

Communication *interaction, progression in language using and language learning*

LANGUAGE OF LEARNING

Vocabulary: words related to the characteristics and the problem of the climate change (ecosystem, climate change, global warming, adaptation, greenhouse effect, ecological footprint)

Structures: present/past/future tenses; second conditional; comparatives; preposition of place

Functions: describing things, asking for and giving information/directions, predicting

LANGUAGE FOR LEARNING

Vocabulary: geographic and scientific topics

Structures: it is/they are + adj., present/past tenses, comparatives, prepositions of place

Functions: describing things, asking for and giving information, predicting, expressing possibility in the future (may /might), expressing obligation (should/have to)

Cognition: *Thinking skills development (LOTS and HOTS)*

Understanding concept (climate change) and making connections (causes/effects, resources vs disadvantages); deducing and comparing information, making conclusion, giving reason, searching for information

Culture: *Awareness of topic relevance to daily life*

Awareness of connection between territory, culture and environment
Awareness of the effects of the human behaviour on the environment (ecological footprint)

Materials and Resources

Video, worksheets, whiteboard, LIM, computer, specialized articles and websites

Assessment

Formative: on-going observation, homework check and feedback, writing questions and answers on the topic

Summative: group work, peer to peer activities, realize a group output product

PROCEDURE: LEARNING UNIT STEPS

-teaching and learning activities in the whole unit with tasks subdivided in single lessons-

- Warm up and Activating prior knowledge
- Find out (tasks)
- Sort out (tasks) } subdivided in various lessons
- Assessment

LEARNING UNIT STEPS	
TEACHING/LEARNING ACTIVITIES WITH TASKS SUBDIVIDED IN SINGLE LESSONS	
<p>LESSON 1</p> <p>(2 h. of 55 m.)</p>	<p>Title: CLIMATE CHANGE</p>
<p style="text-align: center;">● WARM UP OF THE UNIT</p> <p>T shows Ss a slide with some pictures linked to the climate change to introduce the topic.</p> <p><u>Brainstorming</u> on what Ss already know about climate change. T writes a spidergram on WB with the information from the Ss.</p> <p>Feedback: oral interaction and discussion about what the Ss have said. (15 m.)</p> <p>Materials: slide with pictures (Ciresola_s_Activity1_Slide brainstorming)</p>	
<p style="text-align: center;">● NEW INPUT / FIND OUT TASKS:</p> <p>Video (5 min.): https://www.youtube.com/watch?v=SzcGTd8qWTg</p> <p>T plays video then leads a discussion on causes - effects of Climate change in an ecosystem with the help of the Ss. T makes a spidergram to summarize the contents. (10 m.)</p> <p>T plays video again (5 min.).T hands out the gaps worksheet to fill in the gaps. Ss have to fill in the gaps with words from the video, that may already be in the spidergram. Ss work in pairs (15 m.)</p> <p>T gives to Ss a wordbank with the specific words related to climate change and explains that</p>	

some of the words are not needed to fill in the gaps. (10 m.)

Feedback: Class correction. In pairs, Ss check thier gap activity. (10 m.)

Resources: video

Materials: gaps (Ciresola_s_Activity2_gaps)

wordbank (Ciresola_s_Activity3_Wordbank)

- **INPUT PROCESSING / SORT OUT TASKS:**

Jigsaw reading: Ss work in groups of 4. Each S receives a strip from the article (eg. S1 → Effects of climate, S2 → The impact of climate change). Each S receives a grid (Article grid). Each S writes the key words/concepts in the corresponding cell of the grid. In groups, Ss compare and pass their information until everybody's gris is complete (40 m.).

Output: Oral class feedback on the key concepts of the article. (10/15 m.)

Resources: Wwf website <https://www.worldwildlife.org/>

Materials: article grid (Ciresola_s_Acitivity4_Article_strips_reading_comp)

questions about WWF article (Ciresola_s_Activity5_Questions)

- **OUTPUT**

Speaking: discussing in pairs about climate change, using new vocabulary; reading and writing: HW – answering questions about climate change effects.

- **ENDING EACH LESSON**

At the end of every part of the lesson there will be a feedback between T and Ss.

HW: Reading comprehension: Ss answer the questions and study the contents.

LEARNING UNIT STEPS

TEACHING/LEARNING ACTIVITIES WITH TASKS SUBDIVIDED IN SINGLE LESSONS

LESSON 2

Title: Greenhouse effect

● WARM UP OF THE UNIT

Homework correction: Answers correction (reading comprehension). (10 m.)

T writes a warm up question on WB: what produces carbon dioxide gas?

Brainstorming on what Ss already know about this topic. A S writes a spidergram on the WB with the information.

T shows Ss a pie chart carbon dioxide sources and discusses it with Ss: Ss compare their answers with the data from the pie chart. (15 min.)

Materials: pie chart of sources of carbon dioxide (Ciresola_s_Activity9_Pie chart_Greenhouse emissions)

● NEW INPUT / FIND OUT TASKS:

T prepares an experiment to show Ss the greenhouse effect: T shows and explains Ss the materials necessary for the experiment. Ss interact and participate in the experiment conduction. T gives Ss the Lab report they are going to complete during this lesson. (10 m.)

Before starting, T asks Ss to make hypothesis on the experiment: What will happen in the two bottles? / Will the bottles have the same temperature or not? If not, why?

Ss write the hypothesis in their Lab report. Ss work in pairs. (10 m.)

Materials: Teacher's guide to make the experiment (Ciresola_s_Activity10_Experiment_Teacher's guide), Students' Lab report (Ciresola_s_Activity11_Lab report)

● INPUT PROCESSING / SORT OUT TASKS:

Ss complete their Lab report in some parts: Materials and Procedures. (30 m.)

While the experiment goes on, Ss, work in pairs and create their own pie chart of sources of carbon dioxide sources, using coloured cards. (10 m.)

When the experiment finishes, T and Ss discuss the results. Ss write on their Lab report the Analysis and the Conclusions. (25 m.)

T shows Ss a slide with pictures of the greenhouse effect and explain Ss the definition of this phenomenon.

Materials: slides with pictures and definition of the greenhouse effect (Ciresola_s_Activity12_Slides Greenhouse effect), coloured cards.

- **OUTPUT**

Speaking: discussing about the experiment; making the experiment, deducing and comparing informations, being aware of what greenhouse effect is and of which consequences it produces.

- **ENDING EACH LESSON**

At the end of every part of the lesson there will be a feedback between T and Ss.

HW: crossword (Ciresola_s_Activity6_Crossword)

crossword's definitions (Ciresola_s_Activity7_Crossword definitions)

crossword's solutions (Ciresola_s_Activity8_Crossword solutions)

LEARNING UNIT STEPS

TEACHING/LEARNING ACTIVITIES WITH TASKS SUBDIVIDED IN SINGLE LESSONS

LESSON 3 (2h of 55 min.)

Title: ECOLOGICAL FOOTPRINT

- **WARM UP OF THE UNIT** (15 m.)

T asks Ss an opening question and writes it on WB: what is our daily life impact in the enviroment? T gives a few exemples (good / bad practices).

Brainstorming on what Ss already know about this topic. A S writes a spidergram on the WB with the information.

Starting from the Ss' answers T introduces and explains the concept of ECOLOGICAL (or CARBON) FOOTPRINT.

Feedback: oral interaction and discussion about what the Ss have said.

T writes the definition of ECOLOGICAL FOOTPRINT on the WB.

The impact of human activities on the environment: human beings need environmental resources to produce goods and services.

- **NEW INPUT / FIND OUT TASKS** (15 m.)

T gives Ss a vocabulary bank: they have to match the words with their meanings. Ss can work in pairs. These words are necessary to correctly understand the online survey they are going to fill in.

Feedback: Ss read their answers to mates and T corrects them.

Materials: Ciresola_s_Activity13_Wordbank2

- **INPUT PROCESSING / SORT OUT TASKS:**

PC LAB

Ss fill in an online survey about their own ecological footprint (Ss email address is needed to take this survey). (30 m.)

<https://www.wwf.org.au/get-involved/change-the-way-you-live/ecological-footprint-calculator#gs.dsujmb>

Feedback: Ss take note of their results and discuss it with T and other mates.

A S collects the results of each Ss on the WB, then Ss take the class average to see the class ecological footprint.

T writes a question on the WB: Which are the categories of consumption of the Earth's resources? (*answer: food, shelter, mobility*) (5/10 m.)

T shows Activity14_Test results card on the LIM and asks Ss to draw their result in their notebook.

Game: T divides Ss into 5 groups and gives them some flashcards (*eg. Beef, airplane, car, buildings, penthouse, eggs, shellfish etc.*). Every team leader has to put the flashcards into the correct category on the WB.

Ss write the words in their notebook . (30 m.)

Resources: Wwf website <https://www.worldwildlife.org/>

Materials: test results card (Ciresola_s_Activity14_Test results card), flashcards (Ciresola_s_Activity15_Flashcards).

- **OUTPUT**

Ss write sentences on their own ecological footprint compared to their lifestyle, using the vocabulary from questionnaire and flashcards (*eg. My ecological footprint is high because I go to school by car every day*)

- **ENDING EACH LESSON**

At the end of every part of the lesson there will be a feedback between T and Ss.

HW: finish your sentences and study the contents/vocabulary of the lesson.

LEARNING UNIT STEPS

TEACHING/LEARNING ACTIVITIES WITH TASKS SUBDIVIDED IN SINGLE LESSONS

LESSON 4 (2h of 55 min.)

Title: Solutions and future goals

- **WARM UP OF THE UNIT**

HW check and recap of main concepts/ideas. (10 min.)

- **NEW INPUT / FIND OUT TASKS:**

Brainstorming on what Ss already know about this topic: who is Greta Thunberg? A S writes a spidergram on the WB with the information. (10 min.)

T plays video and plays again if it's necessary. (10 min.)

Video: Greta Thunberg's speech to EU leaders.

<https://www.bing.com/videos/search?q=greta+thunberg+EU+speech&&view=detail&mid=AE9812264EEFAFA19E3CAE9812264EEFAFA19E3C&&FORM=VRDGAR>

- **INPUT PROCESSING / SORT OUT TASKS:**

Worksheet scrambled – sentences. In pairs Ss reorder the sentences (20 min.)

Materials: Ciresola_s_Activity16_Scrambled_Sentences

- **OUTPUT**

T shows slides on LIM about What can we do to decrease greenhouse effect. In groups, Ss write ideas on their sustainable behaviour in their daily life, for each of the 3 categories suggested in the slide (energy – transport – food).

Each group prepares a leaflet to promote the best practices for a sustainable style of life. The

leaflet can be hung on the school walls and distributed to the other classes.

Materials: Ciresola_s_Activity17_Sustainable practices

- ENDING EACH LESSON

HW: Ss have to complete their leaflets and prepare an oral presentation of their work.

LEARNING UNIT STEPS

TEACHING/LEARNING ACTIVITIES WITH TASKS SUBDIVIDED IN SINGLE LESSONS

LESSON 5 (2h of 55 min.)

Title: Test

Each group represents their leaflet. T evaluates the group works.

Evaluation grid:

- Team work: 2
- Presentation/product: 2
- Content: 3
- English: 3