CLIL Module Plan

Author(s)	Michela Oss								
School	Istituto Ivo de	Istituto Ivo de Carneri - Civezzano							
School Grade	O Primary			O Middle			High		
School Year	• 1	02		Ο3	O 4		04		05
Subject	Scienze Topi		Торіс		Climate Ch		mate Chai	ange	
CLIL Language	English				O De	euts	ch		

Personal and social-cultural preconditions	The class consists of 22 students of the 1st grade. There are 12 girls and 8 boys. Five of them are students with special needs. Everybody is mother tongue students and all students have an A2 English level. All of them had
of all people involved	prior experiences with CLIL in the middle school. The class is generally collaborative and motivated. An interactive whiteboard (IWB) and a blackboard are available in the class. Each student owns a tablet provided by the school. The teacher is a science teacher from the 1st to the 5th grade. She has a C1 English level certification. Last years she planned some CLIL module with an English teacher.

Students' prior	Subject	Language
knowledge, skills, competencies	Atmosphere, gases, weather and climate, pollution To be able to read and interpret maps and graphs; To remember, order, elaborate data; To collaborate and cooperate with classmates	Present, past, future, modal verbs Scientific language generally related to laboratory, graphs, atmosphere, weather and climate; To be able to understand the main concepts of a video/speech/text

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Description of
teaching and
learning
strategies

Methodological approaches are choosen in order to concentrate on development of scientific enquiry skills. In particular, Cooperative learning allows students to collaborate and help each other. Pratical laboratory activities and Process Oriented Guided-Inquiry Learning (POGIL) permit to students to learning by doing and to study like scientists. Moreover, with POGIL, students work cooperatively in self-managed teams, using carefully designed materials, that guide them to build new understandings while they simultaneously develop key process skills, including critical thinking, problem solving, and collaboration. Generally lesson are composed by three step: the first activity is a brainstorming or a warm up, in order to activate prior knowledge and stimulate interest. The second activity is the focus of the lesson in which students work in groups and learn the topic. Here different activities are alternating (videos, text, experiment,...) in order to maintain interest and exercise different language and social skills. The last activity is the plenary, in which students can check their work, summarise concepts and connect them with previous knowledge. Regarding to assessment, during all the lessons a formative informal assessment of students' participation and cooperation is provided in order to monitoring students' progress. In class, activities are supported by lim. Each student has a tablet to take note, look for information on the web, watch and create videos, take pictures,.... All the materials are shared on classroom platform.

Overall Module Plan

Unit: 1	Lesson 1
Introduction	Introduction and vocabulary
Unit length: 3 hours	Lesson 2
	Case-study
	Lesson 3
	Evidence of Climate Change

Unit: 2	Lesson 1
Causes and effects	CO2 emissions
Unit length: 4 hours	Lesson 2 Black Carbon
	Lesson 3 Impacts
Unit: 3	Lesson 1

Solutions

Unit length: 4 hours

Mitigation and adaptation strategies

Lesson 2

Our carbon footprint

Lesson 3

Let's change our behaviour

Unit number

Lesson number

1

1 **Title**

Introduction and vocabulary

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	minutes prior	Activating prior knowledge	BRAINSTORMING ACTIVITY Students write 3-5 words about the topic (also in L1 if needed) on a piece of paper / post-it and one by one they stick them on the blackboard	Skills L S R W Key vocabulary //	 Whole class Group work Pair work 	//	Formative informal assessment of students' participation
			(version 2: the same activity could be done using site Mentimeter. In that case students write words in that site using cell phone).	Communicative structures Could you tell me? What do you think about? Do you know? Why did you choose?	□ Individual work		

2	25 Students minutes should know the main	FOCUS Teacher gives to students cards with keywords and definitions. Students	Skills L S R W	□ Whole class □ Group	• U1_L1_ALL 1.docx U1_L1_ALL	Formative informal assessment	
		keywords about the topic. Students should be able to organize their own prior knowledge	should match each others.	Key vocabulary greenhouse gases, greenhouse effect, solar radiation, fossil fuel, carbon dioxide emission, climate, weather, global warming, climate change	Pair work Individual work	1.doc Task 1: wordbox Teacher shoud cut out each keyword and definition in order to prepare cards before the lesson.	of students' collaborative work,
				Communicative structures Could you tell me? Do you know? What does mean?			

3	15 minutes	Consolidating vocabulary	PLENARY Teacher shows on the LIM the correct matches and elicits the meaning of keywords. Students check their own answers and paste cards on their exercise book.	Skills L S R W Key vocabulary The same of the prior activity. Communicative structures Could you tell me? Do you know? What does mean?	 Whole class Group work Pair work Individual work 	 U1_L1_ALL 1.docx The same of the prior activity. 	Self assessment.
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Unit number

Lesson number

1

2

Title

Case-study

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	25 minutes	Students be aware of the importance of this topic for our life.	Teacher gives to students a worksheet with a test about climate change. Students read the text, put paragraphs in the correct order and give titles to the text and to each paragraph.	Skills L S R W Key vocabulary Sea level rise, Core Samples, tide gauge, satellite measurements, melting glaciers, polar ice caps	 Whole class Group work Pair work Individual work 	 U1_L2_ALL 1.docx U1_L2_ALL 1.doc Task 2: case-study Before the lesson teacher shoud cut out each paragraph in order to prepare cards. 	Formative informal assessment of students' collaborative work.
				Communicative structures Do you know? What does mean? In my opinion Do you know? I agree because			

2 25 minutes	Consolidating vocabulary. Stimulating curiosity.	Teacher shows the correct answers and sum up the case study interacting with learners. Learners partecipate to the discussion giving their opinions about the topic.	Skills L S R W Key vocabulary The same of the prior activity.	 Whole class Group work Pair work Individual work 	• U1_L2_ALL 1.docx The same of the prior activity.	Self assessment. Formative informal assessment of students' participation.
			Communicative structures Could you tell me Do you know? What does mean? In my opinion Do you know? I agree because What happens if? What do you think about?			

Unit number

Lesson number

1

3 Title

Evidence of Climate Change

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	data. Students should be able to make sense of graphs and data as well as discern the validity of the data. Students should be aware of the extremely speed of nowadays climate change in stead of change in the past. global climate change. Students work cooperatively in self-managed teams, using carefully the materials (text and graphs) to answer the questions provided. Teacher moves through the class and helps students if	explore the evidence that	Skills	 Whole class Group work Pair work Individual work 	• U1_L3_ALL1.pdf U1_L3_ALL1.doc Task 3: Pogil activity	Formative informal assessment of students'	
		change. Students work cooperatively	Key vocabulary Temperature, average, evidence, proxy data, graph		Individual	collaborative work and their results.	
		teams, using carefully the materials (text and graphs) to answer the questions provided. Teacher moves through the class and helps	Communicative structures Could you tell me? What happens if? In my opinion Do you know? Look at the graph				

2	15 minutes	Students should be able to explain their results and share informations.	PLENARY Teacher sums up the main concepts interacting with students in order to give them the opportunity to use and consolidate new vocabulary.	Skills L S R W Key vocabulary The same of the prior activity.	 Whole class Group work Pair work Individual work 	The same of the prior activity.	Self assessment. Formative informal assessment of students' participation.
				Communicative structures The same of the prior activity.			

Unit number

Lesson number

2

1 Title

CO2 emissions

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	knowledge. Students write 3-5 words about the topic (also in L1 if needed) on a piece of paper / post-it and one by one they stick them on the blackboard (version 2: the same activity could be done using site Mentimeter. In that case students write words in that site using cell phone).	Students write 3-5 words	Skills L S R W	 Whole class Group 	//	Formative informal assessment	
		Key vocabulary //	work Pair work Individual		of students' participation.		
		Communicative structures Could you tell me? What do you think about? Do you know? Why didi you choose?	work				

2	25 min	Students should know the causes of climate change. Students	FOCUS Students watch a video about causes of climate change and try to	Skills L S R W	Whole class Group work	video: link	performance assessment
	should be able to recognize sources of CO2 emissions.answer to some questions during the video (thay can use English subtitles). In groups they draw a concept map about CO2 emissions impacts and responsability.should be groups they draw a concept map about CO2 emissions (they can go back to the video if needed).	Key vocabulary greenhouse gases, carbon dioxide emissions, greenhouse effect, solar radiation, fossil fuel, deforestation, volcanic eruption.	work Pair work Individual work				
				Communicative structures present simple, present continuos, to be going to, What happens if? What do you think about? In my opinion Do you know?			

3	15 min	To sum up and check. Students should be able to use new vocabulary. Students explain the causes of climate change, in particular the sources of CO2 emissions. Students reflect on human impacts and responsabilities.	PLENARY Teacher shows on the LIM the source of CO2 emissions and elicits the meaning of keywords. Students check their own answers.	SkillsLSRWKey vocabularyThe same of the prior activity.Communicative structuresWhat happens if?What do you think about? Do you	 Whole class Group work Pair work Individual work 	The same of the prior activity.	Self assessment. Formative informal assessment of students' participation.
				know?			

Unit number

Lesson number

2

2

Title

Black Carbon

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	15 min	Students know what is Black Carbon, its sources and its role in global warming.	WARM UP: students watch a video about Black Carbon in order to introduce the problem and give keywords	Skills L S R W Key vocabulary soot, black carbon, albedo, fossil fuels, coal, cookstoves Communicative structures present continous	 Whole class Group work Pair work Individual work 	video at this link: link	//

2	65 minStudents can collect, display, analyze and share dataLAB ACTIVITY AND DATA ANALYSIS Inquiry-based and hands-on laboratory investigation. Students work in groups of 3. They read the procedure before beginning the investigation (see students worksheet) and then, they apply it. Teacher monitors student progress during data collection. Teacher assists them in creating a multi-line graph that includes all 4 sets of	Skills Uhole L S R Uhole Key vocabulary Group work data collection, Pair work Individual independent and Uhole work dependent variable, x- Individual work axis and y-axis, absorption, reflection work		students worksheet: link	formative assesment on lab skills (control an experiment, collect data, display data, analyze data, and work as a team)	
		data using a computer-based graphing program.	Communicative structures comparatives, reporting verbs			

3	20 minStudents be aware of the relationship between theSUMMARY Students share their results with the class and discuss them in reference to the topic of black carbon and whether or not	Skills L S R W	 Whole class Group work 	The same of the prior activity	Formative assessment about abilities to		
		amount of black carbon on the Earth's surface and the amount of energy absorbed by the Earth's surface.	their results support what is taking place on a global scale. Discussion on how to limit black carbon emissions.	Key vocabulary The same of the prior activity Communicative structures Could you tell me? What happens if? What do you think about? In my opinion I agree because Look at the graph	 Pair work Individual work 	activity	articulate the results and to use the correct terminology.

Unit number

Lesson number

2

3

Title

Impacts

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
	20 minutes	Students reflect on their prior knowledge and organise it in a logical structure	JIGSAW - step 1 Teacher divides the class in 8 groups and assign to each one a specific topic. In each group students discuss about impacts of climate change on their particular topic. After that students check results of their discussion with the information given by the	Skills L S R W Key vocabulary wildlife, weather, climate, oceans, ice cap and glaciers, human health, agriculture, tourism, sea level rise, flood, drought, disease	 Whole class Group work Pair work Individual work 	• U2_L3_ALL1.docx students worksheet, text at this link: link	Teacher observes students during class discussion. Formative informal assessment of students' participation and
		teacher and underline the causes-effects relations.	Communicative structures frequency adverbs comparatives and superlatives, related to due to as a result 			collaborative work.	

2	20 minutes	Students share information with peer. Students can find cause effect relationship between events.	JIGSAW - step 2 Students are divided in groups of 8 people (one for each previous topic). Students explain impacts about its topic to the other member of the group. All together they make a concept map with a global view of effects of climate change.	Skills L S R W Key vocabulary The same of the prior activity Communicative structures The same of the prior activity	 □ Whole class ■ Group work □ Pair work □ Individual work 	• U2_L3_ALL1.docx The same of the prior activity	Teacher observes during class discussion. Formative informal assessment of students' collaborative work. Performance assessment of the concept map.
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minutes should be able to explain their results and share informations vocabulary	Skills L S R W Key vocabulary The same of the prior activity Communicative structures The same of the prior activity	 Whole class Group work Pair work Individual work 	The same of the prior activity	Self assessment. Formative informal assessment of students' participation.
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Title

Unit number

Lesson number

3

1

Mitigation and adaptation strategies

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	10 minutes	Activating prior knowledge.	BRAINSTORMING ACTIVITY Students write 3-5 words about the topic (also in L1 if needed) on a piece of paper / post-it and one by one they stick them on the blackboard (version 2: the same activity could be done using site Mentimeter. In that case students write words in that site using cell phone).	Skills L S R W Key vocabulary // Communicative structures Could you tell me? What do you think about? Do you know? Why did you choose?	 Whole class Group work Pair work Individual work 	//	Formative informal assessment of students' participation

2	25 minutes	Students should recognize mitigation and adaptation strategies	A worksheet with a list of strategies is provided to the students. Students work in pairs and try to separate them in mitigation or adaptation strategies looking the video. Moreover they give a definition of the two terms.	SkillsLSRWKey vocabulary mitigation, adaptation, hazard, ecosystem, storm,renewable, sustainable, biofuelsCommunicative structuresfirst and second conditional Could you tell me? What happens if? What do you think about? In my opinion I agree because to be going to	 □ Whole class □ Group work ■ Pair work □ Individual work 	• U3_L1_ALL1.docx: Worksheet	Self assessment. Formative informal assessment.
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3	15 minutes	Students should be able to explain their results and share informations. Students can give examples of different kind of strategies.	PLENARY Teacher sums up the main concepts interacting with students in order to give them the opportunity to use and consolidate new vocabulary	Skills L S R W Key vocabulary The same of the prior activity Communicative structures The same of the prior activity	 Whole class Group work Pair work Individual work 	• U3_L1_ALL1.docx The same of the prior activity	Self assessment. Formative informal assessment of students' participation.
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Unit number

Lesson number

3

2 **Title**

Our carbon footprint

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	35 minutes	Students reflect on their lifestyle and on the effects on the environment.	Students answer to a series of questions about their lifestyle (transport, food, home, use, waste).	Skills L S R W Key vocabulary carbon footprint, sustainability Communicative structures instead of, frequency adverbs, How much, how many	 Whole class Group work Pair work Individual work 	Carbon footprint calculators site : link	//

2	15 minutes	Students can share their results and compare them with classmates.	PLENARY Teacher collects the results and makes a diagram to show the class foodprint. Students share their results with the class and discuss.	Skills L S R W Key vocabulary Carbon footprint, sustainability	Class □Group work □Pair work	Link to use to insert students results: link	Formative informal assessment of students' participation
				Communicative structures Could you tell me? In my opinion I agree because What do you think about?			

Unit number

Lesson number

3

3 Title

Let's change our behaviour

Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment
1	70 minutes	Students should be able to take actions to reduce climate change and its impacts. Students should be aware that everyone can be part of the solution. Students can communicate accurate information in a creative way.	Students are divided in groups. Each group should plan a project to sensitise teenages about climate change and in particular to promote some actions that they can do personally about climate change (They can choose the technique they prefer like poster, article, video,). Teacher moves between the groups and give them tips if necessary	Skills L S R W Key vocabulary recycle, reuse, save energy, sustainable Communicative structures modal verbs, In my opinion I agree because let's	 □ Whole class ■ Group work □ Pair work □ Individual work 	• U3_L3_ALL1.docx	Formative informal assessment of students' collaborative work. Performance assessment.

2	30 minutes	Students should be able to highlight pros and cons of a project	PLENARY Each group share and join its project with the class. Teacher stimulate a discussion about the	Skills L S R W Key vocabulary //	 Whole class Group work Pair work Individual 	video - link link	Formative informal assessment of students' participation.
			projects. Teacher show a video to sum up and conclude the module.	Communicative structures modal verbs, pros and cons, reporting verbs, instead of, in order to, firstly, secondly, on one handon the other hand	work		