

CLIL Module Plan

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School	ITT Buonarroto Pozzo Trento				
School Grade	<input type="radio"/> Primary		<input type="radio"/> Middle		<input checked="" type="radio"/> High
School Year	<input type="radio"/> 1	<input type="radio"/> 2	<input checked="" type="radio"/> 3	<input type="radio"/> 4	<input type="radio"/> 5
Subject	Informatica	Topic	computational model and Turing machine, two-dimensional array, computer lab		
CLIL Language	<input checked="" type="radio"/> English			<input type="radio"/> Deutsch	

Personal and social-cultural preconditions of all people involved	<p>The ITT Buonarroto-Pozzo is a technical-technological institute with many different specializations that students choose in the third year. The 3INA class consist of 21 boys specializing in information technology. The social-cultural backgrounds is varied but the level of computer science knowledge is quite homogeneous, there are just few cases with ratings below the average. Most of the student are motivated enough to study the IT, but many of them show some concern about their English skills. The main fear is not understanding the subjects and therefore failing the test. Teacher: • Main Teacher (B2). • Previous CLIL experience: CLIL physics, system and networking and web languages (Liceo "Galileo Galilei"). Student group profile: • Average CEFR Level: A1, B1. A very small part of them has foreign origins and speaks a second language that is not English. • Previous CLIL experience with the same teacher: None. • Previous CLIL experience with other teachers: Mathematics. • Special Educational Needs: Three of them have BES certification so their special needs must be taken into account during the tests and to develop teaching and learning strategies.</p>
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Students' prior knowledge, skills, competencies	Subject	Language
	<ul style="list-style-type: none"> • Main concept of Object-Oriented programming. • Basic concept of structured and procedural programming. 	<p>Students should have the following knowledge and skills:</p> <ul style="list-style-type: none"> • Passive forms and simple past • Some conditional forms • IT vocabulary • Use the modal verbs (must, need..) • listen to a teacher's lesson and understanding the general meaning of contents • read meaningful material such as short text and understanding the general meaning • speak with teacher or other classmates, in pairs or in small groups, • ask for help and clarifications when it is necessary • deduce the main information given a written text or a video <p>Competencies</p> <ul style="list-style-type: none"> • know how English language works at intermediate level • interact with a sufficient fluency • express simple thoughts in writing.

Timetable fit	⊙ Module	Length 20
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Description of teaching and learning strategies	<p>The lessons are mixture of frontal and student-centered lesson. Slides presentation is a necessary tool for children with special needs and it is helpful for the other student to support listening. The lesson took place as a sort of flipped classroom in real time and cooperative learning. Student feedback is strongly encouraged and actual learning is verified having students do simple exercises during the lesson. Sometimes students were asked to work together as a team and carry out small projects in order to promote cooperative learning. Learning tools: computer, projector, Internet, LIM, text, blackboard, slide All the materials is shared with the students by Edmodo (a communication, collaboration, and coaching platform). Materials to support content and language scaffolding slides presentation, exercises, on line simulator, videos.</p>
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Overall Module Plan

Unit: 1 Computational model and Turing machine Unit length: 7	Lesson 1 Algorithm and its properties
	Lesson 2 Computational Model and programming language
	Lesson 3 Turing machine
	Lesson 4 Turing machine simulator
Unit: 2 Two-Dimensional array Unit length: 5	Lesson 1 Introduction to Two-dimensional array
	Lesson 2 Two-dimensional array: size and how to access
	Lesson 3 Two-dimensional array: basic algorithm part 1
	Lesson 4 Two-dimensional array: basic algorithm part 2
Unit: 3 computer lab: object-oriented programming Unit length: 8	Lesson 1 computer lab: object-oriented programming part 1
	Lesson 2 computer lab: object-oriented programming part 2
	Lesson 3 computer lab: object-oriented programming part 3
	Lesson 4 computer lab: object-oriented programming: test

CLIL Lesson Plan

Unit number	1	Lesson number	1	Title	Algorithm and its properties
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	15'	-Understand what an algorithm is - create a paper based glossary - Develop communication - Acquire the technical vocabulary of the topic	Teacher shows the presentation on the LIM, the whole class reads one slide at time. The whole class discusses the meaning of the slide content. Students keep their own paper-based glossary by adding all the new words After that, teacher explains the topic and then the students are invites to explain what they have understood.	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary algorithm, implementation, method, solve problems, procedure.</p> <p>Communicative structures Describe..... Explain how to.... According to..... What do you think about? Explain what is.....</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U1_L1_ALL1.pdf Slides 1-3	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	455	<p>-understand the meaning of the properties of an algorithm - create a paper based glossary - develop communication - acquire the technical vocabulary of the topic</p>	<p>Teacher shows the presentation on the LIM, the whole class reads one slide at time. The whole class discusses the meaning of the slide content. Students keep their own paper-based glossary by adding all the new words After that, teacher explains the topic and then the students are invites to explain what they have understood.</p>	<p>Skills</p> <table border="1" data-bbox="1021 165 1361 210"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary Finiteness, Definiteness, Effectiveness, Efficiency, carry out, executor</p> <p>Communicative structures Do you remember whatis? What we have said about.... I remember that.... We have said that....</p>	L	S	R	W	<p><input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>• U1_L1_ALL1.pdf slides 4-10</p>	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

3	40'	<p>Be able to put into practice what they have learned about algorithms: -how to build an algorithm -how to express simple action of daily life as an algorithm</p>	<p>Students are grouped into teams and each team implements the algorithm for making a cup of tea. Each groups present their work to the whole class and an open debate follows.</p>	<p>Skills</p> <table border="1" data-bbox="1021 944 1361 989"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary teabag, cup, kettle, to boil, to pour, to stir, to fill</p> <p>Communicative structures I add to all the previous communicative structures</p>	L	S	R	W	<p><input type="checkbox"/> Whole class <input checked="" type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>link</p>	<p>Formative assessment: - check the correct task execution</p>
L	S	R	W								

CLIL Lesson Plan

Unit number	1	Lesson number	2	Title	Computational Model and programming language
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	20'	-Understand what computation means -Understand a simple definition of “computational model” -create a paper based glossary -Develop communication - Acquire the technical vocabulary of the topic	Teacher shows the presentation on the LIM, the whole class reads one slide at time. The whole class discusses the meaning of the slide content. Students keep their own paper-based glossary by adding all the new words After that, teacher explains the topic and then the students are invites to explain what they have understood.	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary computation, computational model, behavior, input, output, implicit and explicit form, to provide</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U1_L1_ALL1.pdf slides 11-13	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	30	<p>-Understand the relationship between computational model and algorithm. - Understand that there are several types of computational models -create a paper based glossary -Develop communication - Acquire the technical vocabulary of the topic</p>	<p>the Teacher shows the presentation on the LIM, the whole class reads one slide at time. The whole class discusses the meaning of the slide content. Students keep their own paper-based glossary by adding all the new words After that teacher explains the topic and then the students are invites to explain what they have understood.</p>	<p>Skills</p> <table border="1" data-bbox="1019 167 1364 215"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary computational complexity, performances, implementation, sequential model functional model</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<p><input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>• U1_L1_ALL1.pdf slides 14-16</p>	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

3	50'	<p>-Understand the relationship between computational model and programming languages - Understand what imperative and functional programming are - Understand the differences between imperative and functional programming - create a paper based glossary - Develop communication - Acquire the technical vocabulary of the topic</p>	<p>The teacher shows the presentation on the LIM, the whole class reads slide by slide the presentation. The whole class discusses the meaning of the slide content. Student keep their own paper-based glossary by adding all the new words After that the T. explains the topic and then the students are invites to explain what they have understood</p>	<p>Skills</p> <table border="1" data-bbox="1021 169 1361 213"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary imperative, functional, procedural, recursive, objected oriented, evaluation, executor, instances, structures, flow control, manipulation unit, resolution method, focus.</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<p><input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>• U1_L1_ALL1.pdf slides 16-20</p>	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

CLIL Lesson Plan

Unit number	1	Lesson number	3	Title	Turing machine
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	20'	Alan Turing life and his main activities: understand what is the enigma encryption machine -Listen and understand a simple video with English subtitles - create a paper based glossary - Develop communication - Acquire the technical vocabulary of the topic	The teacher tells the story of Alan Turing's life and his main activities. Viewing of video about the enigma encryption machine. Open discussion after videos. Students keep their own paper-based glossary by adding all the new words	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary encryption, random shift, configuration, operation, predictable, repeatable, sequence, cycle, odometer, rotors, wirings, electrical path</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U1_L1_ALL1.pdf slides 22 link 	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	45'	Understand what is Turing machine and how does it work -create a paper based glossary -Develop communication - Acquire the technical vocabulary of the topic	The teacher shows the presentation on the LIM, the whole class reads slide by slide the presentation. The whole class discusses the meaning of the slide content. Student keep their own paper-based glossary by adding all the new words After that the T. explains the topic and then the students are invites to explain what they have understood	<p>Skills</p> <table border="1" data-bbox="1019 167 1364 215"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary hypothetical, simulation, to formalize, sheet, head, symbols, state, tape, edit, erase</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U1_L1_ALL1.pdf <p>Slides 33-45</p>	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

3	35	<p>- Understand how to implement a program for a Turing machine - Understand the concept of transition function and Turing machine's state - create a paper based glossary - Develop communication - Acquire the technical vocabulary of the topic</p>	<p>The teacher shows the presentation on the LIM, the whole class reads slide by slide the presentation. The whole class discusses the meaning of the slide content. Student keep their own paper-based glossary by adding all the new words After that the T. explains the topic and then the students are invites to explain what they have understood</p>	<p>Skills</p> <table border="1" data-bbox="1019 167 1364 215"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary quintuple, transition function, working alphabet, blank symbol</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<p><input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>• U1_L1_ALL1.pdf Slides 33-45</p>	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

CLIL Lesson Plan

Unit number	1	Lesson number	4	Title	Turing machine simulator
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	15'	Understand how to use an online Turing machine simulator -Understand how to implement a simple algorithm and write the code for the Turing machine simulator -create a paper based glossary -Develop communication -Acquire the technical vocabulary of the topic	The teacher explains how does it work the Turing machine simulator.	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary processing, executing condition, compile code, even, odd.</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U1_L4_ALL1.pdf 	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	35	<p>-Implements simples program for a Turing machine simulator - Develop communication</p>	<p>Students work in pairs and must implement simple algorithms and run them on the Turing machine simulator using their own phone</p>	<p>Skills</p> <table border="1" data-bbox="1021 165 1361 210"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary processing, executing condition, compile code, even, odd.</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<p><input type="checkbox"/> Whole class</p> <p><input type="checkbox"/> Group work</p> <p><input checked="" type="checkbox"/> Pair work</p> <p><input type="checkbox"/> Individual work</p>	<ul style="list-style-type: none"> • U1_L4_ALL2.pdf 	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

CLIL Lesson Plan

Unit number	2	Lesson number	1	Title	Introduction to Two-dimensional array
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	10'	Acquire the english technical vocabulary about arrays in programming	Teacher lists the basic technical terms about arrays in programming . Students keep their own paper-based glossary by adding all the new words	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary index. cell ,indexing array</p> <p>Communicative structures What is a.... What does it mean How do you spell that...</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work		Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	40'	<p>To be able to: - understand what is a two dimensional arrays -create a paper based glossary - Develop communication - Acquire the technical vocabulary of the topic</p>	<p>Teacher shows the presentation on the LIM, the whole class reads one slide at time. The whole class discusses the meaning of the slide content. Students keep their own paper-based glossary by adding all the new words After that teacher explains the topic and then the students are invites to explain what they have understood.</p>	<p>Skills</p> <table border="1" data-bbox="1021 165 1361 213"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary to scan, to load and all the previous key vocabulary</p> <p>Communicative structures How would you do ... By considering... Let's think.....</p>	L	S	R	W	<p><input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>• U2_L1_ALL1.pdf Slides 1-5</p>	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

CLIL Lesson Plan

Unit number	2	Lesson number	2	Title	Two-dimensional array: size and how to access
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	15'	To be able to: - Remember what has been done the previous lesson -Recall the key words - Discuss about the topic	Brief overview of the previous lesson using an open class discussion. Teacher writes on the blackboard the key words that students don't remember. Students write in their glossaries all the key words they don't remember.	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary all the previous key vocabulary</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work		Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	40'	<p>-Define the size of 2-dim array - Declare a 2-dim array -Access to 2-dim array: array scan. - Load data into 2-dim array - Create a paper based glossary - Develop communication</p>	<p>Teacher shows the presentation on the LIM, the whole class reads one slide at time. The whole class discusses the meaning of the slide content. Students keep their own paper-based glossary by adding all the new words After that teacher explains the topic and then the students are invites to explain what they have understood.</p>	<p>Skills</p> <table border="1" data-bbox="1019 167 1364 215"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary all the previous key vocabulary</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<p><input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>• U2_L1_ALL1.pdf Slides 6-13</p>	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

3	30'	-Considering a two-dimensional array of integers, to be able to sum all the values contained in the array's -Develop communication	Teacher assigns an exercise showing the text on the LIM. Student , working in pair, implement the requested program using pseudo encoding. After that ,teacher shows the right encoding on the blackboard. Teacher and students discuss about implementations .	<p>Skills</p> <table border="1" data-bbox="1021 165 1359 212"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary all the previous key vocabulary</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input checked="" type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U2_L1_ALL1.pdf Slides 14-15	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

4	15'	-Declare and initialize a 2-dim array - Understand what a 2-dim array rank is	Teacher shows the presentation on the LIM, the whole class reads one slide at time. The whole class discusses the meaning of the slide content. Students keep their own paper-based glossary by adding all the new words After that teacher explains the topic and then the students are invites to explain what they have understood.	<p>Skills</p> <table border="1" data-bbox="1021 165 1361 212"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary all the previous key vocabulary</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U2_L1_ALL1.pdf Slides 16-17	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

CLIL Lesson Plan

Unit number	2	Lesson number	3	Title	Two-dimensional array: basic algorithm part 1
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	50'	Implement basic algorithm about 2dim arrays: -how to select the elements of a 2-dim arrays -find the maximum and minimum element of a 2-dim arrays and their positions -compare two 2-dim arrays - Develop communication.	Teacher assigns an exercise showing the text on the LIM. Student , working in pair, implement the requested program using pseudo encoding. After that ,teacher shows the right encoding on the blackboard. Teacher and students discuss about implementations .	Skills <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> Key vocabulary all the previous key vocabulary Communicative structures all the previous communicative structures	L	S	R	W	<input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input checked="" type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U2_L3_ALL1.pdf Slides 1-9	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

CLIL Lesson Plan

Unit number	2	Lesson number	4	Title	Two-dimensional array: basic algorithm part 2
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	50'	Implement basic algorithm about 2-dim arrays: -find the rows and columns where the sum is the highest and the smallest - calculate the sum and product of an array's elements. - determine the number of null elements -Develop communication.	Teacher assigns an exercise showing the text on the LIM. Student , working in pair, implement the requested program using pseudo encoding. After that ,teacher shows the right encoding on the blackboard. Teacher and students discuss about implementations	Skills <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> Key vocabulary all the previous key vocabulary Communicative structures all the previous communicative structures	L	S	R	W	<input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input checked="" type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U2_L3_ALL1.pdf Slides 10-15	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

CLIL Lesson Plan

Unit number	3	Lesson number	1	Title	computer lab: object-oriented programming part 1
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	25'	Acquire english technical vocabulary about object oriented programming	Teacher lists the basic technical terms about programming . Students add all the new words to their own paper-based glossary	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary class, methods, object, fields package, loop, iteration, selection, sequence, compiler, variable, parameters, index, interface, instruction, global data , constructor, casting, declaration, initialization, string , float ,double</p> <p>Communicative structures What is a.... What does it mean...</p>	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work		Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	35	<p>Considering a programming problem, to be able to: - Understand the text - Identify all the task</p>	<p>Teacher assigns an exercise showing the text on the LIM. Students read the text, identify the words they do not know and write them on their glossary. Students, working in pairs, try to highlight the objectives of the problem and build a concept map.</p>	<p>Skills</p> <table border="1" data-bbox="1021 169 1361 213"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary Elevator, Reservation, trip, floor , factory, building</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<p><input type="checkbox"/> Whole class</p> <p><input type="checkbox"/> Group work</p> <p><input checked="" type="checkbox"/> Pair work</p> <p><input type="checkbox"/> Individual work</p>	<ul style="list-style-type: none"> • U3_L1_ALL1.pdf 	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

3	50'	<p>Considering a programming problem to be able to: - Discuss about possible solutions - Build the solution by structuring it for object-oriented programming - Build the UML scheme with all the necessary classes</p>	<p>Student working in pair to build the UML scheme of the problem. After that, teacher shows the UML scheme designed for the problem. It follows an open class debate about the possible solution.</p>	<p>Skills</p> <table border="1" data-bbox="1021 169 1361 213"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary all the previous key vocabulary</p> <p>Communicative structures Which solution is better... How many classes have you designed How many attributes does a class have</p>	L	S	R	W	<p><input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input checked="" type="checkbox"/> Pair work <input type="checkbox"/> Individual work</p>	<p>• U3_L1_ALL1.pdf</p>	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

4	40'	<p>implement in C# the first class designed in the UML ("Reservation" class): - Build the class fields, the constructor, get and set methods and all methods</p>	<p>Student implement in C# the first class designed in the UML ("Reservation" class) . After that, teacher shows the correct implementation and explaining the code. It follows an open class debate about the possible coding solution.</p>	<p>Skills</p> <table border="1" data-bbox="1021 169 1361 213"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary all the previous key vocabulary</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<p><input type="checkbox"/> Whole class</p> <p><input type="checkbox"/> Group work</p> <p><input type="checkbox"/> Pair work</p> <p><input checked="" type="checkbox"/> Individual work</p>	<ul style="list-style-type: none"> • U3_L1_ALL1.pdf 	<p>Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest</p>
L	S	R	W								

CLIL Lesson Plan

Unit number	3	Lesson number	2	Title	computer lab: object-oriented programming part 2
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	30'	To be able to: -Remember what has been done the previous lesson -Recall the key words - Discuss about the topic	Brief overview of the previous lesson using an open class discussion. Teacher write on the blackboard the key words that students don't remember. Students write in their glossaries all the key words they don't remember.	Skills <table border="1" style="margin-left: 20px;"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> Key vocabulary all the previous key vocabulary Communicative structures all the previous communicative structures	L	S	R	W	<input checked="" type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input type="checkbox"/> Individual work		Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

2	120	Implement, in C#, the second class of the problem ("Elevator" class): - Build the class fields, the constructor, get and set methods and all methods	Students implement in C# the first class designed in the UML ("Elevator" class). Students work in pairs and write the code according to the UML scheme, implementing it step by step. Implementation of each step required about 30'. The teacher makes an ongoing review showing the correct code after each step and the whole class discuss about the code.	<p>Skills</p> <table border="1" data-bbox="1019 167 1364 215"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary sentinel, monitor , status , queue</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input checked="" type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U3_L1_ALL1.pdf 	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

CLIL Lesson Plan

Unit number	3	Lesson number	3	Title	computer lab: object-oriented programming part 3
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	50'	Implement the third class ("Run Elevator") of the problem in C#: fields ,constructor getter and setter methods, methods. Implement the "main" class	Student implement the third class ("Elevator") and the main class in C#. Students work in pairs and write the code according to the UML scheme, implementing it step by step. Implementation of each step required about 30'. The teacher makes an ongoing review showing the correct code after each step and the whole class discuss about the code.	Skills <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> Key vocabulary ll the previous key vocabulary Communicative structures all the previous communicative structures	L	S	R	W	<input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input checked="" type="checkbox"/> Pair work <input type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U3_L1_ALL1.pdf 	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								

CLIL Lesson Plan

Unit number	3	Lesson number	4	Title	computer lab: object-oriented programming: test
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Activity	Timing	Learning Outcomes	Activity Procedure	Language	Interaction	Materials	Assessment				
1	50'	Considering a programming problem to be able to: - Build the UML scheme with all the necessary classes - Implement all the classes in C#	Teacher tests students with an exercise of object oriented programming that summarizes what has been done during the previous lessons.	<p>Skills</p> <table border="1"> <tr> <td>L</td> <td>S</td> <td>R</td> <td>W</td> </tr> </table> <p>Key vocabulary all the previous key vocabulary</p> <p>Communicative structures all the previous communicative structures</p>	L	S	R	W	<input type="checkbox"/> Whole class <input type="checkbox"/> Group work <input type="checkbox"/> Pair work <input checked="" type="checkbox"/> Individual work	<ul style="list-style-type: none"> • U3_L4_ALL4.pdf 	Formative assessment: teacher's check on students' understanding by asking questions, listening to their answers. Self assessment and ongoing assessment: - check participation and interest
L	S	R	W								