CLIL Module Plan

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School Grade	○ Primary		○ Middle		◉ High
School Year	○ 1	○ 2	◉ 3	○ 4	○ 5
Subject	Matematica	**Topic**	Trigonometric functions and equations		
CLIL Language	◉ English		○ Deutsch		

Personal and social-cultural preconditions of all people involved	The class 3INA is composed of 21 boys belonging to different social backgrounds. Some of them are commuters and this means that sometimes they come late. Three students are learners with special needs. The class does not have a homogeneous level of disciplinary skills and some students have learning difficulties in mathematics due to the lack of an appropriate study method. On the whole, they are well motivated. The level of performance increases during the class activity, when they show enthusiasm to come to the blackboard to solve exercise or problems proposed by the teacher. Only one third of this group has not experienced Clil lessons so far, while more than half of them has experienced it during the first two years of the secondary school. The CEFR level of students varies from A2 to B1. ****During the development of this module, I realised that a group of the students was impressed by one of the chosen videos (which I had considered the least meaningful) as if they were kinesthetic learners. In fact, they easily and pleasantly remembered the Soh, Cah, Toa Theorems, mentioned in that video, probably because the tribal rhythm heard activated such a kind of naturalistic intelligence. https://www.teachingchannel.org/videos/introduction-to-trigonometry

Students' prior knowledge, skills, competencies	Subject	Language
	The students should have the following: knowledge: Measure of an angle; Algebraic equations; Pitagora’s Theorem; Radical rules; What is a function and what is a graph; Cartesian plane; Skills The students should be able to: plot an angle given its size; find solutions of an algebraic equation (first and second degree); plot a point on the Cartesian plane; apply the Pitagora’s Theorem; plot the graph of a function given some of its points. Competencies The students can: solve a problem using the available data; make comparison among graphs recognizing analogies and differences;	The students should have the following knowledge: Passive forms and simple past; Some conditional forms; Generally scientific vocabulary; Skills: The students should be able to: listen to the teacher’s lesson or a video understanding the general meaning of the contents with the help of subtitles if necessary; read meaningful material such a short text understanding the general meaning; speak with the teacher or other classmates, in pairs or in small groups, ask for help and further information when it is necessary; deduce the main information of a written text or a video; write simple explanations about what they are doing while they are solving exercise (using Present Simple or Continuous). Competencies: The students should: know how English language works at an intermediate level; interact quite fluently; express simple thoughts in writing.

Timetable fit	◉ Module	Length 14 lessons for trig functions and 9 for Trig equations

Description of teaching and learning strategies	Flipped classroom: Two or three weeks before starting this module, the students are invited to find and select on the Internet one video which better introduces the topic and gives motivations and applications taken from the real life about how trigonometry could be useful. The students send the link to the teacher who will select some of them in order to share with all the students. The link of the most significant videos will be posted on the Edmodo platform and all the class has to watch them before starting the module. Even during the development of the module watching some videos before the lesson will be an adopted strategy for a better awareness which improves the learning. Cooperative Learning and working in small groups in order to promote interaction and communication during the lesson. ICT learning tools: The file with the materials will be posted on Edmodo, lesson by lesson, and projected on the interactive whiteboard to avoid anxiety about taking notes during the activity and making it available also for those students who eventually miss some lessons. Materials to support content and language scaffolding: This module is based on authentic material taken from the Internet. At the beginning of most of the lessons there is a list of keywords. The students are invited to recognize the meaning using different educational way (brainstorming, internet...) Time managing: Even if the time for each activity is fixed in advance, it will be important to consider that it may be necessary to dedicate some lessons only carrying out exercises (on the blackboard or in small groups). Multimodality lesson: Most of the lesson has to be devoted to plotting graphs and figures which can facilitate the visualization. This can be done not only with a blackboard and colored chalks, but also with Geogebra, an easy way to use free software. SEE ALSO **** There is no more space here to add further informations

Overall Module Plan

Unit: 1 Definition of trigonometric function **Unit length:** 6	**Lesson 1** Introduction to the topic
	Lesson 2 Radians and degrees
	Lesson 3 Definition of sine and cosine Goniometric values for the main angles
	Lesson 4 Definition of tangent and cotangent
	Lesson 5 Graphs
	Lesson 6 Exercises

Unit: 2 Associated angles **Unit length:** 4 hours	**Lesson 1** Associated angles
	Lesson 2 Exercises
	Lesson 3 Exercises
	Lesson 4 Exercises

Unit: 3 Inverse trig functions **Unit length:** 6 hours	**Lesson 1** Definition of the inverse trig functions
	Lesson 2 Values of main angles
	Lesson 3 Exercises
	Lesson 4 Classwork

Unit: 4 Trigonometric equations **Unit length:** 9 hours	**Lesson 1** Elementary equations
	Lesson 2 Equations which can be solved using elementary equations
	Lesson 3 Equations which can be solved using elementary equations
	Lesson 4 Linear Equations
	Lesson 5 Homogeneous equations of second degree
	Lesson 6 Exercises
	Lesson 7 Exercises
	Lesson 8 Exercises
	Lesson 9 Classwork

CLIL Lesson Plan

Unit number	1	**Lesson number**	1	**Title**	Introduction to the topic

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**

1	20 minutes	Increasing the motivation in dealing with the whole module Getting the hang of some of the important applications of trigonometry in mathematics and physics	Screening of the best videos among those found by the students. The videos are chosen by the teacher as described in the section “Description of teaching and learning strategies”	**Skills** L S R W **Key vocabulary** Trigonometry, metric system, measurement, periodic, distances, vibration, rayleigh scattering, atomic nucleus, to bank, MRI, magnetic field, data compression, Fourier transform, suspension bridge shape, atomic clocks hypotenuse, angle, adjacent and opposite side, soh, cah, toa theorems **Communicative structures** What are the main application of…? What do you think would be important to understand…? Do you know other applications for this topic? Could you imagine another application of…?	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Interactive whiteboard link 3’.13” link 5’20” link 4’8” link 3’42”	the teacher checks if the students understand the aim of the whole activity asking questions, listening to their answers and adding new tips or further information if necessary

2	10 minutes	Knowing the meaning of the key words	Research in pairs The students look for the meaning of the listed words, which are projected on the interactive whiteboard After 5 minutes, the teacher asks them, randomly, to explain the meanings. They can use a synonym or a whole sentence to do it.	**Skills** L S R W **Key vocabulary** radius, angle, radian, degree, arc, subtend, intersection, size of an angle, radiuses or radii, circumference, circle, full revolution, pi, length of an arc, to convert between radians and degrees and vice versa, simplify, divisible by, left side, right-hand, **Communicative structures** What does it mean the word….?	☐ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 1 Lesson 1 last.docx Interactive board Personal exercise- book and pen Worksheet Unit 1 Lesson 1 Activity 2	Formative assessment The teacher asks each group to explain with a sentence the meaning of the words and to provide examples

3	10 minutes	Understanding why angles are measured in degrees. Understanding the definition of radian. Understanding how to transform the measure of an angle from degrees to radians and vice versa.	The students watch the video. The video could be interrupted sometimes to underline and focus on important steps. At the end the teacher poses the questions written in the worksheet.	**Skills** L S R W **Key vocabulary** The same as in the previous ten minutes **Communicative structures** Did you understand why…? Why did the ancient mathematicians introduce the degrees? Why is it important to use radians? How is a radian defined?	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit 1 Lesson 1 last.docx link Worksheet Unit 1 Lesson 1 Activity 3	
4	10 minutes	Understanding different measures of angles measured in radians and associating with well-known angles measured in degrees Learning how a fraction is read in English and practising it.	The students will plot some angles expressed in radians (such as π, 2π, π/2…)	**Skills** L S R W **Key vocabulary** The same as in the previous parts of the lesson **Communicative structures** Plot an angle which measures…..	☐ Whole class ☐ Group work ☑ Pair work ☐ Individual work	• Unit 1 Lesson 1 last.docx Worksheet Unit 1 Lesson 1 Activity 4 Personal exercise book and pen Interactive whiteboard	Peer assessment:The teacher asks to plot some angles, given their measures, and the students correct each other’s answers.

CLIL Lesson Plan

Unit number	1	**Lesson number**	2	**Title**	Radians and degrees

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	20 minutes	Being able to understand a written text, which is the transcript of a video.	The students have to fill in the gaps of the text uploaded on Edmodo, which the students should have printed before the lesson.	**Skills** L S **R** **W** **Key vocabulary** The same as the previous lesson **Communicative structures** Explain how to convert the measure of an angle which measures... from degrees to radians (or vice versa)	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• Unit 1 Lesson 2last.docx Worksheet Unit 1 lesson 2 Activity 1	Formative assessment: the teacher checks if the students have filled the gaps with the right words asking one by one to read the whole sentence. One sentence –one student.

2	20 minutes	Learning the method, which is used to convert an angle from degrees and vice versa. Applying this method to find the correspondent of the main angles.	The students plot the table on the exercise book filling it with the main angles expressed in degrees and the corresponding in radians.	**Skills** L | S | R | W **Key vocabulary** The same as in the previous lesson **Communicative structures** Complete the table in order to learn how to convert from degrees to radians and vice versa Which is the correspondent of...?	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• Unit 1 Lesson 2last.docx Exercise book	Formative assessment The teacher asks to complete a table with angles and radians in order to find the correspondence for the main angles,

3	10 minutes	Checking if the work is correct	The students correct in pair the conversion table degrees-radians	**Skills** L S R W **Key vocabulary** Main angles **Communicative structures** Explain how to convert the measure of an angle which measures... from degrees to radians (or vice versa) Check if you table is correct comparing it with your desk-mate	☐ Whole class ☐ Group work ☑ Pair work ☐ Individual work	• Unit 1 Lesson 2last.docx Exercise book	Pair assessment

CLIL Lesson Plan

Unit number	1	**Lesson number**	3	**Title**	Definition of sine and cosine Goniometric values for the main angles

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	10 minutes	Activation of prior knowledge: ensuring that all the students have understood the concepts introduced in the first two lessons	The teacher asks the students if they need further explanations and checks with them their homework.	**Skills** L S R W **Key vocabulary** The same as in the previous two lessons **Communicative structures** Is there anybody who didn’t understand…?	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	Students have to say the parts they have not understood., so that they are, in some way, forced to speak

2	20 minutes	Understanding how the sine and the cosine functions are defined, starting from the definition given on the unit circle	Starting from the definition projected on the interactive whiteboard, the students have to plot the unit circle and, following the instruction, they should be able to recognize which is the sine and the cosine of a given angle.	**Skills** L S **R** W **Key vocabulary** unit circle, counterclockwise direction, cosine, sine, x-coordinate and y coordinate, trig function, intersect, **Communicative structures** What is the unit circle definition of the trigonometric functions?	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• unit 1 lesson 3 last.docx Exercise book Unit 1 lesson 3 activity 2	Self-Assessment:Test taken from Khanacademy

3	20 minutes	Being able to understand the difference between the sine and the cosine function and how they are related with the unit circle Finding the trig value for sine and cosine, using a right triangle having hypotenuse equal to 1 and angles of 30° and 60° and a right triangle having angles of 45°.	Using the worksheet, the students follow the given instructions.	**Skills** L S **R** **W** **Key vocabulary** unit circle, counterclockwise direction, altitude, hypotenuse, opposite side, base, height, cosine, sine, tangent, cotangent, adjacent side, x-coordinate and y coordinate, trig function, intersect, *soh cah toa theorems, right triangle trig ratios **Communicative structures** Which is the value for the sine (or cosine) function corresponding to an angle having measure equal to...?	☐ Whole class ☐ Group work ☐ Pair work ▣ Individual work	• unit 1 lesson 3 last.docx Exercise book Worksheet 1 Lesson 3 Activity 3	Formative assessment: The teacher ask the students the values they have found.

CLIL Lesson Plan

Unit number	1	**Lesson number**	4	**Title**	Definition of tangent and cotangent

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	10 minutes	Summarizing the main trig values for sine and cosine	The teacher asks the students randomly the value for sine and cosine, given the measure of an angle, after having seen the video which gives very useful tips	**Skills** L S R W **Key vocabulary** Pinkie, thumb **Communicative structures** Which is the values for the sine (or cosine) functions corresponding to an angle having measure equal to...?	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	link 5’ 01”	Ongoing assessment: the teacher checks if the students understand the suggested tips for memorizing the main trig values posing questions, listening to their answers and adding eventually some new tips

2	20 minutes	Understanding the definition of the tangent and the cotangent of an angle based, firstly, on the geometrical construction, then finding the relation with sine and cosine using similar triangles	The teacher draws on the blackboard the unit circle, the tangent of an angle and the similar triangle having as catheti the sine and cosine of the same angle. Students are frequently asked questions, in order to make them able to discover the relations between the three functions	**Skills** L S R W **Key vocabulary** Tangent, cotangent, similar triangles, corresponding sides **Communicative structures** Which is the correspondent of this side in the other triangle...?	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard with colored chalks, exercise book	Ongoing assessment: the teacher asks frequently to complete the relations or to solve the equations which lead to the final results
3	15 minutes	Using the relations, finding the main values for the tangent and cotangent and memorizing them or, better, being able to calculate them when it is necessary. (This depends on the learning style of the student)	The students complete the table, which was started in the previous lessons, adding the values for the tangent and the cotangent of 0°, 30°, 45° and so on.	**Skills** L S R W **Key vocabulary** The same as in the previous activity **Communicative structures** Which is the value for the tangent (or cotangent) function corresponding to an angle having measure equal to...?	☐ Whole class ☐ Group work ☑ Pair work ☐ Individual work	Exercise book, table started to complete in the previous lesson	Pair assessment The students check in pair the written values

4	5 minutes	Summarizing the found values	The students are asked about the values and check if the table has been correctly completed	**Skills** L S R W **Key vocabulary** The same as in the previous activities **Communicative structures** The same as in the previous activities	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	Formative assessment: The teacher asks the student the values they have found.

CLIL Lesson Plan

Unit number	1	**Lesson number**	5	**Title**	Graphs

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	20 minutes	Being able to graph the sine, cosine, tangent and cotangent functions Being able to recognize all those graphs	Using the table completed in the last lesson, the students plot on the cartesian plane the graphs of the fourth function, starting from the sine and following the instructions given in the worksheet of this lesson	**Skills** L S **R** **W** **Key vocabulary** The same as in the previous lesson **Communicative structures** Plot the graph....	☐ Whole class ☐ Group work ☐ Pair work ☑ Individual work	• unit 1 lesson 5 last.docx Interactive whiteboard Exercise book Worksheet Unit 1 Lesson 5 Activity 1	Ongoing assessment: the teacher checks if the students understand the aim of the whole activity walking in the class and observing what and how they are doing.

2	10 minutes	Learning more about the graphs of the four functions comparing their own graphs with the correspondent graphs made with geogebra Observing, describing and comparing the trig functions graphs	A student opens geogebra and plots the graph of the sine of the function. Then he or she describes which are the main characteristics. Another student does the same with the cosine. Another with the tangent and another with the cotangent.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Compare the graph of ...and the graph of... and describe the main differences.	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Interactive whiteboard Exercise book Geogebra	Ongoing assessment: the teacher checks if the students have understood the main characteristic of the functions, asking them to observe, describe and compare the graphs on the whiteboard
3	20 minutes	Reviewing the main transformations of the graphs: dilation, translation and changing of the period	The teacher asks the whole class to describe the main characteristics of the graph of a function when it has been transformed multiplying it by a constant or multiplying only its variable or adding to it a constant either to the variable or to the function. After each question the teacher plots a function, underlining the main differences with the basic correspondent graph	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Compare the graphs... The graph of .. is less... in comparison with... The graph of... is more...compared to....	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• unit 1 lesson 5 last.docx Interactive whiteboard Geogebra Worksheet Unit 1 Lesson 5 Activity 3	Ongoing assessment: the teacher checks if the students are able to connect the information they possess (they have already seen these graphs with the ICT teacher) with the new ones

CLIL Lesson Plan

Unit number	1	**Lesson number**	6	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	20 minutes	Being able to simplify expression with trig functions (the main aim is to memorize the main trig values) Reviewing the calculus with radicals	A student solves an exercise on the blackboard. The exercise is taken from the book and is dictated by another student	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Simplify the expression...	☑ Whole class ☐ Group work ☐ Pair work ☑ Individual work	Blackboard with chalk Exercise book	Ongoing assessment: The teacher checks if the students have memorized the main trig values, if they are able to work with radians, if they remember the calculus with radicals

2	20 minutes	Calculating the other trig functions starting from one of them and using the main formulas	A student solves an exercise on the blackboard. The exercise is taken from the book and is dictated by another student	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Knowing a value for ....calculate di other trig functions.	☑ Whole class ☐ Group work ☐ Pair work ☑ Individual work		Ongoing assessment: The teacher checks if the students are able to apply the main trig formulas and if they remember how to solve a system with two equations and two unknowns
3	10 minutes	Resuming the different kind of exercises	A student repeats all the different kinds of exercises marking the differences between them and underlining the different formulas to use	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** To solve this kind of exercise it is necessary to... ....apply a formula... ...substitute this expression with...	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	Ongoing assessment The teacher checks if there are some doubts about this kind of exercises

CLIL Lesson Plan

Unit number	2	**Lesson number**	1	**Title**	Associated angles

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	10 minutes	Understanding the relation for associated angles: complementary, supplementary, explementary, opposite angles and for angles which differ by π or π/2.	Watching the video students discover that there are angles which presents some kind of symmetry.	**Skills** L S R W **Key vocabulary** flip, above and below the x axes, figure out, supplementary, different symmetry **Communicative structures**	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	link interactive whiteboard	Ongoing assessment: The teacher asks the students if they have understood the general meaning of the video

2	30 minutes	Being able to deduce the mentioned relations from the unit circle after having drawn two angles (opposite or complementary etc)	The students complete the table given in the worksheet Unit 2 Lesson 1 Activity 2	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures**	☐ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• unit 2 Lesson 1 last.docx Exercise book Unit 2 Lesson 1 Activity 2	Formative assessment: The teacher checks if the students are able to apply the tips given in the video
3	10 minutes	Resuming the formulas	A student asks another student to explain what he or she has just written about a kind of associated angle	**Skills** L S R W **Key vocabulary** The same as in the previous activity **Communicative structures** Tell me the main relations between...	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• unit 2 Lesson 1 last.docx Exercise book	Ongoing assessment The teacher checks if there are some doubts about the formulas

CLIL Lesson Plan

Unit number	2	**Lesson number**	2	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	20 minutes	Being able to apply the relations learnt in the previous lesson to simplify expressions.	A student comes to the blackboard. Another student reads the exercise chosen by the teacher. The first student solves the exercise with the help of the teacher and the students.	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** Apply the relation... and solve...	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard and chalk Exercise book	Ongoing assessment: The teacher can understand the general comprehension of this topic

2	25 minutes	Being able to apply the relations learnt in the previous lesson to simplify expressions	A student reads an exercise. Each student solves the exercise	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous activity	☐ Whole class ☐ Group work ☐ Pair work ☑ Individual work	Exercise book	Ongoing assessment: The teacher checks if the students understand the aim of the whole activity walking in the class and observing what and how they are doing.

3	5 minutes	The students should know how to apply the relations learnt in the previous lesson to simplify expressions	The teacher checks if there are any doubts about this kind of exercises.	**Skills** L S R W **Key vocabulary** The same... **Communicative structures** Are there any doubts about...	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	Formative assessment: the teacher checks if the students have any doubts listening to their answers.

CLIL Lesson Plan

Unit number	2	**Lesson number**	3	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Resuming the main relations useful to solve the exercise	The teacher asks some students to tell the class the relations learnt in the previous lessons	**Skills** L S R W **Key vocabulary** The same... **Communicative structures** Explain which is the relation between ....and .. What are the main formulas connecting....	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	Ongoing assessment The teacher checks if the students have learnt the formulas and the relations before applying them.

2	15 minutes	Being able to apply the relations learnt in the previous lessons to simplify expressions	A student comes to the blackboard. Another student reads the exercise chosen by the teacher. The first student solves the exercise with the help of the classmates. The teacher observes and steps in only if it is necessary.	**Skills** L S R W **Key vocabulary** The same.... **Communicative structures** Solve this exercise... Simplify...	☒ Whole class ☐ Group work ☐ Pair work ☒ Individual work	Blackboard and chalk Exercise book	Formative assessment: The main aim of this lesson is to ensure the teacher about the general understanding of the student and preparing them to face with the classwork. The questions posed by the student can help the teacher to understand if the students are generally ready to do the classwork
3	25 minutes	Being able to apply the relations learned in the previous lessons to simplify expressions	A student reads an exercise. Each student solves the exercise by their own.	**Skills** L S R W **Key vocabulary** The same as... **Communicative structures**	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	Exercise book	The same as in the previous activity

4	5 minutes	Resuming the different kind of exercises and giving instructions about how to find other exercises on the book	The teacher checks if there are any doubts about this kind of exercises and writes on the blackboard the pages containing the exercises in order to be ready for the classwork	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lessons	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	The same as in the previous activity

CLIL Lesson Plan

Unit number	2	**Lesson number**	4	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Resuming the main relations useful to solve the exercise	The teacher asks some students to tell the class the relations learnt in the previous lessons	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Explain which is the relation between ….and .. What are the main formulas connecting….	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	Formative assessment The teacher checks if the students have learnt the formulas and the relations before applying them.

2	15 minutes	Being able to apply the relations learnt in the previous lessons to simplify expressions	A student comes to the blackboard. Another student reads the exercise chosen by the teacher. The first student solves the exercise with the help of the classmates. The teacher observes and steps in only if it is necessary.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Solve... Simplify...	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard and chalk Exercise book	Formative assessment: The main aim of this lesson is to ensure the teacher about the general understanding of the student and preparing them to face with the classwork. The questions posed by the student can help the teacher to understand if the students are generally ready to do the classwork
3	25 minutes	Being able to apply the relations learnt in the previous lessons to simplify expressions	A student reads an exercise. Each student solves the exercise by their own.	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** Solve.. Simplify...Check...	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	Blackboard and chalk Exercise book	The same as in the previous activity

4	5 minutes	Resuming the different kind of exercises and giving instructions about how to find other exercises on the book	The teachers checks if there are any doubts about this kind of exercises and writes on the blackboard the pages containing the exercises in order to be ready for the classwork.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous activity	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	The same as in the previous activities

CLIL Lesson Plan

Unit number	3	**Lesson number**	1	**Title**	Definition of the inverse trig functions

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	15 minutes	Understanding why it is necessary to introduce the inverse of each trig function	A student reads the text projected on the interactive whiteboard. All the students can interrupt the reading if they do not understand some concepts. At the end of the reading the teacher asks to another student to resume with their own words the main contents.	**Skills** L S R W **Key vocabulary** inverse function, inverse operation **Communicative structures** Why do we need to introduce inverse trig functions?	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit 3 Lesson 1 last.docx Interactive whiteboard link Worksheet Unit 3 Lesson 1 Activity 1	Ongoing assessment: during the resuming made by the second student, the teacher checks if they have understood why the inverse trig functions become necessary

2	15 minutes	Understanding how the inverse of the sine is defined	The students watch the video	**Skills** L S R W **Key vocabulary** arcsine of x, negative one power, arctangent, inverse tangent **Communicative structures** Do you know the difference between the inverse of a number and the inverse of a function?	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit 3 Lesson 1 last.docx Interactive whiteboard link Worksheet Unit 3 Lesson 1 Activity 2	
3	20 minutes	Being able to apply the knowledge learnt watching the video to plot the graph of the arcsine, the arccosine the arctangent and the arccotangent, focusing particularly on the domain and the images of these functions	The students follow the suggestions given in the video and plot the graph of the functions on their exercise book. Then a student plots the same graphs, using geogebra, on the interactive whiteboard .	**Skills** L S R W **Key vocabulary** The same as in the previous activity. **Communicative structures** Explain the main characteristics of the graph. Compare the graph of the sine and arcsine and describe the symmetry... .	☒ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 3 Lesson 1 last.docx Exercise book Worksheet lesson 1 unit 3 Activity 3	Ongoing assessment The teacher during this activity walks around the class, asking to the students if they have any doubt and providing advice if necessary

CLIL Lesson Plan

Unit number	3	**Lesson number**	2	**Title**	Values of main angles

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	15 minutes	Being able to apply the learned inverse trig functions to find the corresponding angles	The students complete the table given in the worksheet unit 3 lesson 2 activity 1.	**Skills** L S R **W** **Key vocabulary** The same as in the previous lesson **Communicative structures**	☐ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 3 lesson 2 last.docx Exercise book worksheet unit 3 lesson 2 activity 1	

2	5 minutes	Being able to listen and correct their own work when it is wrong	A student asks his classmate to say the measure of the angle (in degrees or in radians) which corresponds to one of the main trig value. One of the greatest difficulty about this topic is to respect the codomain of the functions.	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** Which is the angle correspondent of a value of the .... equal to,,,,_	☒ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 3 lesson 2 last.docx Exercise book	Pair-assessment The students correct in pair the values written in the table
3	30 minutes	Being able to apply the inverse trig functions to solve some simple expressions and to find the domain of more complex inverse trig functions	A student dictates to another student who is in charge of writing on the blackboard an expression or an exercise about the domain. The teacher gives explanations only when they are requested.	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** Tell me which is the relation between... Calculate the domain of the function...	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit 3 lesson 2 last.docx Exercise book Blackboard worksheet unit 3 lesson 2 activity 3	Ongoing assessment The teacher checks the correctness of the procedure

CLIL Lesson Plan

Unit number	3	**Lesson number**	3	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	15 minutes	At the end of the lesson students should be able to solve all kinds of exercises learnt so far	The teacher divides the class into three groups. Each group has to solve some exercises. The exercises are different for each group.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures**	☐ Whole class ▣ Group work ☐ Pair work ☐ Individual work	Exercise book Blackboard	Ongoing assessment: The teacher checks if the students are able to solve the equations walking around the class, observing what they do and answering the requests of clarification

2	25 minutes		A student of each group comes to the blackboard and shows the solution process of one of the assigned exercises.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lesson	▣ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book Blackboard	Ongoing assessment: The teacher checks the correctness of the procedure and the results
3	10 minutes		A student dictates to another student, who is in charge of writing on the blackboard, an expression or an exercise. The teacher gives explanations only when they are requested.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lesson	▣ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book blackboard	Ongoing assessment: The teacher checks the correctness of the procedure and the results

CLIL Lesson Plan

Unit number	3	**Lesson number**	4	**Title**	Classwork

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	50 minutes	Evaluation of the previous outcomes	Written test: The teacher hands in the photocopy with the exercises that the students have to solve	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** See in the file Maths Classwork 1	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• MATHS CLASSWORK 1 last.docx • assessment grid.docx	Summative assessment

CLIL Lesson Plan

Unit number	4	**Lesson number**	1	**Title**	Elementary equations

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Understanding what a trigonometric equation is	The teacher explains to the whole class what a trig equation is and illustrates the different kinds which will be learnt	**Skills** L S R W **Key vocabulary** elementary equations **Communicative structures** What does it mean "solving an equation"?	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	blackboard	

2	15 minutes	Solving simple equations with the sine function	After having watched the video, the students solve the equation given in the worksheet Unit 4 lesson 1 activity 2	**Skills** L S R W **Key vocabulary** equaled, pattern, integer **Communicative structures** For what values of theta does sine of theta equal to….?	☒ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 4 Lesson 1 last.docx link Exercise book worksheet Unit 4 lesson 1 activity 2	Ongoing assessment: The teacher checks if the students are able to solve the equations walking around the class, observing what they do and answering the requests of clarification
3	15 minutes	Solving simple equations with the cosine function	After having watched the video, the students solve the equation given in the worksheet Unit 4 lesson 1 activity 3	**Skills** L S R W **Key vocabulary** The same as in the previous activities **Communicative structures** For what values of theta is cosine of theta equal to….?	☒ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 4 Lesson 1 last.docx link 5’17” Exercise book worksheet Unit 4 lesson 1 activity 3	Ongoing assessment The teacher checks if the students are able to solve the equations walking around the class, observing what they do and answering the requests of clarification

4	10 minutes	Solving simple equations with the tangent and the cotangent functions	The students are invited to solve the equations written in the worksheet, organizing the information and deducing the right methodology worksheet Unit 4 lesson 1 activity 4	**Skills** L S R W **Key vocabulary** The same as in the previous activities **Communicative structures** For what values of theta is tangent (or cotangent) of theta equal to….?	☐ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 4 Lesson 1 last.docx Exercise book worksheet Unit 4 lesson 1 activity 4	Peer assessment The students check in pairs the correctness of the procedure and the solutions
5	5 minutes	Solving different kind of elementary equations	The students are asked to explain how to solve equations with tangent and cotangent	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** The same as in the previous lesson	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit number 4 Lesson 2 and 3.docx Exercise book blackboard Unit number 4 Lesson 2 and 3	Ongoing assessment The teacher checks the correctness of the procedure and the solutions

CLIL Lesson Plan

Unit number	4	**Lesson number**	2	**Title**	Equations which can be solved using elementary equations

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Being able to solve elementary equations	The teacher invites a student to resume the four kinds of elementary equations learnt in the previous lesson, underlining the differences and the similarities among them	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** The same as in the previous lesson	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard	Ongoing assessment The teacher checks if the student who is charge of resuming has understood the topic

2	15 minutes	Solving equations which can be reduced to elementary ones	A student comes to the blackboard and solves an equation which another student dictates him. The exercise is taken from the worksheet Unit 4 lesson 2 and 3 Activity 2	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** Solve the equation... Which values of theta verify the equation ?	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit number 4 Lesson 2 and 3.docx Blackboard Exercise book Unit 4 lesson 2 and 3 Activity 2	Ongoing assessment: The teacher checks if the student who is charge of solving the equation has understood the topic
3	20 minutes	Solving simple equations reducible to the elementary ones	The students solve in pair the equations which are written on the blackboard by the teacher	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** The same as in the previous lesson	☐ Whole class ☐ Group work ☑ Pair work ☐ Individual work	Blacboard Exercise book	Peer assessment

4	10 minutes	Solving simple trig equations	Resuming The students are invited to tell the solutions for an equation, explaining the procedure they have followed to reduce it to an elementary one	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** Explain how you have solved this equation...	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book	Ongoing assessment The teacher checks the correctness of the procedure and the solutions

CLIL Lesson Plan

Unit number	4	**Lesson number**	3	**Title**	Equations which can be solved using elementary equations

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Being able to solve elementary equations	The teacher invites a student to resume the four kinds of elementary equations learnt in the previous lesson, underlining the differences and the similarities among them	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lesson	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard	Ongoing assessment The teacher checks if the student who is in charge of resuming has understood the topic

2	15 minutes	Solving equations which can be reduced to elementary ones	A student comes to the blackboard and solves an equation which another student dictates him. The exercise is taken from the worksheet Unit 4 lesson 2 and 3 Activity 2	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Which values of theta verify this equation?	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit number 4 Lesson 2 and 3.docx Blackboard Exercise book Unit 4 lesson 2 and 3 Activity 2	Ongoing assessment: The teacher checks if the student who is charge of solving the equation has understood the topic
3	20 minutes	Solving simple equations reducible to the elementary ones	The students solve in pair the equations which are written on the blackboard by the teacher	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lesson	☐ Whole class ☐ Group work ☒ Pair work ☐ Individual work	Blackboard Exercise book	Peer assessment

4	10 minutes	Solving simple equations Being able to explain the procedure for doing it	Resuming The students are invited to tell the solutions for an equation, explaining the procedure they have followed to reduce it to an elementary one	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** Explain how you have solved this equation...	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book Blackboard	Ongoing assessment The teacher checks the correctness of the procedure and the solutions

CLIL Lesson Plan

Unit number	4	**Lesson number**	4	**Title**	Linear Equations

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Understanding what a linear equation is, how it is written and which is one of the possible method to solve it	The teacher explains how a linear equation is written, the reason of its name and shows the procedure to solve it theoretically using the intersection with the unit circle.	**Skills** L S R W **Key vocabulary** Linear equation **Communicative structures**	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard	

2	10 minutes	Being able to solve linear equations, to verify the solutions and to describe the procedure adopted	A student solves a linear equation on the blackboard. The exercise is taken on the worksheet Unit 4 Lesson 4 Activity 2	**Skills** L S R W **Key vocabulary** linear equation, substitution **Communicative structures** Which are the main characteristics which allow to recognize a linear equation?	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit 4 lesson 4.docx Blackboard Exercise book worksheet Unit 4 Lesson 4 Activity 2	Ongoing assessment. The teacher checks the general understanding of this topic
3	20 minutes	Being able to solve linear equations	The students solve in pair the equations which are taken from the worksheet Unit 4 Lesson 4 Activity 3	**Skills** L S R W **Key vocabulary** The same as in the previous activities **Communicative structures** Could you tell me the solutions of...?	☐ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• Unit 4 lesson 4.docx Interactive whiteboard Exercise book worksheet Unit 4 Lesson 4 Activity 3	Peer assessment

4	15 minutes	Being able to solve linear equations	A student dictates an equation to another student, who writes it on the blackboard. The second student solves the equation. The other students are requested to solve it individually and check the procedure and the result at the end.	**Skills** L S R W **Key vocabulary** The same as in the previous activities **Communicative structures** Explain the steps you are doing to solve this equation...	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• Unit 4 lesson 4.docx Exercise book Blackboard worksheet Unit 4 Lesson 4 Activity 4	Ongoing assessment The teacher checks the correctness of the procedure and the solutions

CLIL Lesson Plan

Unit number	4	**Lesson number**	5	**Title**	Homogeneous equations of second degree

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Learning the solving method for homogeneous equations of second degree Being able to apply it	The teacher explains what a homogeneous equation is, why it is so called and shows the procedure to solve it using a general method.	**Skills** L S R W **Key vocabulary** homogeneous equations **Communicative structures** Which are the main characteristics which allow to recognize a homogeneous equation?	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard Exercise book	

2	10 minutes	Being able to solve homogeneous equations of second degree	A student solves a homogeneous equation on the blackboard worksheet Unit 4 Lesson 5 activity 2	**Skills** L S R W **Key vocabulary** The same as in the previous activity **Communicative structures** Explain the steps you do to solve...	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• Unit number 4 Lesson 5.docx Blackboard Exercise book Worksheet Unit 4 Lesson 5 activity 2	Ongoing assessment
3	15 minutes	Being able to solve homogeneous equations of second degree	The students solve in pair the equations which are projected on the interactive whiteboard worksheet Unit 4 Lesson 5 activity 3	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures**	☐ Whole class ☐ Group work ☑ Pair work ☐ Individual work	• Unit number 4 Lesson 5.docx Interactive whiteboard Exercise book Worksheet Unit 4 Lesson 5 activity 3	Peer-assessment: The students check in pair if they are able to solve this kind of equation and check the found solutions.

4	20 minutes	Being able to solve homogeneous equations of second degree, even when there is a known term in the equation.	A student dictates an equation to another student, who is in charge of writing on the blackboard. The second student solves the equation. The other students are requested to solve it individually and to check the procedure and the result at the end Worksheet Unit 4 Lesson 5 activity 4	**Skills** L S R W **Key vocabulary** The same as in the previous activities **Communicative structures** Explain the steps you are doing to solve this equation...	☒ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• Unit number 4 Lesson 5.docx Exercise book Blackboard Worksheet Unit 4 Lesson 5 activity 4	Ongoing assessment The teacher checks the correctness of the procedure and the solutions

CLIL Lesson Plan

Unit number	4	**Lesson number**	6	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Resuming the different kinds of equations	The teacher explains shortly the purpose of the lesson and recalls all the kinds of equations learnt so far.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lessons	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard	

2	15 minutes	At the end of the 3 lessons (6, 7 and 8) the students should be able to solve all kinds of equations learnt in the previous five lessons, using the knowledge related to the Units 1, 2, 3 and 4	The teacher divides the class into three groups. Then three different groups of exercises are assigned to each group. The students solve them.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lesson	☐ Whole class ☒ Group work ☐ Pair work ☐ Individual work	Exercise book Interactive whiteboard	Peer - assessment: The students check if they are able to distinguish each kind of equations and if they are able to solve them
3	20 minutes	Being able to solve equations and explain how to do it	Three students, one of each group, come to the blackboard, once at time, and show the solution process of one of the assigned exercises.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Explain how you solve the equation...	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book Backboard	Ongoing assessment: The teacher checks the correctness of the procedure and the results. The teacher checks also the explanation

4	10 minutes	The same as in the previous activity	A student dictates an equation to another student who is writing on the blackboard; the equation is chosen from the book. The teacher provides explanations only if they are requested.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Solve the equation and explain all the steps you made for solving this equation…	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book Blackboard	Formative assessment The teacher checks the correctness of the procedure and the results The teacher checks also the explanation

CLIL Lesson Plan

Unit number	4	**Lesson number**	7	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Resuming the different kinds of equations	The teacher underlines shortly the purpose of the lesson and recalls all the kinds of equations learnt so far.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lessons	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard	

2	15 minutes	At the end of the 3 lessons the students should be able to solve all kinds of equations learnt in the previous five lessons, using the knowledge related to the Units 1, 2, 3, 4	The teacher divides the class into three groups. Then three different groups of exercises are assigned to each group. The students solve them.	**Skills** L S R W **Key vocabulary** The same a s in the previous lessons **Communicative structures** The same as in the previous lesson	☐ Whole class ☐ Group work ☑ Pair work ☐ Individual work	Exercise book blackboard	Peer - assessment: The students check if they are able to distinguish each kind of equations and if they are able to solve them.

3	20 minutes	Being able to solve equations and explain how to do it	Three students, one of each group, come to the blackboard, once at time, and show the solution process of one of the assigned exercises	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Explain how you solve the equation.	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book blackboard	Formative assessment: The teacher checks the correctness of the procedure and the results The teacher checks also the explanation

4	10 minutes	The same as in the previous activity	A student dictates an equation to another student, who is writing on the blackboard, the equation is chosen from the book. The teacher provides explanations only if they are requested.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Solve the equation and explain all the steps you made for solving this equation…	▣ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard Exercise book	Formative assessment The teacher checks the correctness of the procedure and the results The teacher checks also the explanation

CLIL Lesson Plan

Unit number	4	**Lesson number**	8	**Title**	Exercises

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 minutes	Resuming the different kinds of equations	The teacher explains shortly the purpose of the lesson and recalls all the kinds of equations learnt so far.	**Skills** L S R W **Key vocabulary** The same as in the previous lesson **Communicative structures** The same as in the previous lesson	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Blackboard	

2	15 minutes	At the end of the 3 lessons the students should be able to solve all kinds of equations learnt in the previous five lessons, using the knowledge related to the Units 1, 2, 3, 4	The teacher divides the class into three groups. Then three different groups of exercises are assigned to each group. The students solve them.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lessons	☐ Whole class ☑ Group work ☐ Pair work ☐ Individual work	Exercise book Blackboard	Peer - assessment: The students check if they are able to distinguish each kind of equations and if they are able to solve them

3	20 minutes	Being able to solve equations and explain how to do it	Three students, one of each group, come to the blackboard, once at time, and show the solution process of one of the assigned exercises.	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Explain how you solve the equation	☑ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book Blackboard	Formative assessment: The teacher checks the correctness of the procedure and the results The teacher checks also the explanation

4	10 minutes	The same as in the previous activity	A student dictates an equation to another student, who is writing on the blackboard; the equation is chosen from the book. The teacher provides explanations only if they are requested	**Skills** L S R W **Key vocabulary** The same as in the previous lessons **Communicative structures** Solve the equation and explain all the steps you made in solving this equation...	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	Exercise book Blackboard	Formative assessment The teacher checks the correctness of the procedure and the results The teacher checks also the explanation

CLIL Lesson Plan

Unit number	4	**Lesson number**	9	**Title**	Classwork

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	50 minutes	Evaluation of the previous outcomes	Written test: The teacher hands the photocopy with the exercises that the students have to solve.	**Skills** L S **R** **W** **Key vocabulary** The same as in the previous lessons **Communicative structures** The same as in the previous lessons	☐ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• MATHS CLASSWORK 2.docx • assessment grid.docx	Summative assessment: Teacher checks if students are able to solve all the kinds of the equations