CLIL Module Plan

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School Grade	○ Primary		○ Middle		◉ High
School Year	○ 1	◉ 2	○ 3	○ 4	○ 5
Subject	Chimica	**Topic**	Chemical & Physical Changes, Elements & Compounds, Chemical Equation		
CLIL Language	◉ English		○ Deutsch		

Personal and social-cultural preconditions of all people involved	The class is composed of 16 students, 10 girls and 6 boys. Italian is mother tongue for all of them. One pupil has learning disabilities (DSA), though they are of minor entity (he hardly ever uses the available compensatory and dispensative measures). Despite the fact that Chemistry is not a curricular subject, the class looks interested and willing to learn, being aware of the importance of chemical substances and materials to everyday life. The students' English language level, according to the CEFR, is A2 for most and B1 for a few of them. The teacher is well-known to them as she has been their Maths and Physics teacher in the previous year. She's got a C1 level English certification.

Students' prior knowledge, skills, competencies	**Subject**	**Language**
	The present lessons are the first two of a new CLIL module on chemical reactions. They come after a CLIL module on the states of matter and phase changes. The students are therefore familiar with the following key concepts: physical properties (mass, volume, density, temperature), pure substances and mixtures, separation processes, states of aggregation and phase transitions.	The students are familiar with most of the vocabulary related to the present lessons, thanks to the previous CLIL module. The most used tenses are simple present and simple future, both in active and passive form, and imperative. Knowledge of zero conditional is also required.

Timetable fit	◉ Module	Length 2 lessons of 50 and 55 minutes, which are part of a module of 4 units.

Description of teaching and learning strategies	The lessons are introduced by presenting the expected learning outcomes. Immediately afterwards, the first task is required, aimed at activating prior knowledge of subject-specific vocabulary and content. In pairs, the students either fill the blanks in a short extract with content-obligatory language (Unit 1) or they match the opposites in a list of words (Unit 2). Low order thinking skills (LOTS) are required in the first tasks. The second activity follows a short presentation of the key concepts of the lesson. The students work in small groups on a worksheet with visual organisers and language support and carry out categorisation and multiple-choice excercises. They need to discuss their idea within the group and agree on the task completion. The purpose of the third task in both lessons is to further help the learners to understand and consolidate the topic. Cognitive skills required at this stage are primarily of higher order (HOTS), while group interaction is further enhanced. The final activities review the new vocabulary and concepts presented in class, as well as they assess the learning progress of the students, also by means of peer assessment (Unit 1) and self-assessment (Unit 2). All tasks are designed in order to involve as many language skills as possible (listening, reading, writing and speaking), and to promote interactive learning (in pairs or in group). A wide range of different materials are used to meet this purpose, from presentations, worksheet, lab activities to videos with subtitles. Scaffolding is used throughout the lesson, so that content understanding is preserved. The teacher acts as facilitator and constantly gives ongoing oral feedback (formative assessment). At the end of the module a summative assessment will be carried out to verify the comprehension and acquisition of both the content and the language delivered.

Overall Module Plan

Unit: 1 Physical & Chemical Changes **Unit length:** 50	**Lesson 1** Physical & Chemical Changes

Unit: 2 Chemical Reaction **Unit length:** 100	**Lesson 1** Elements, Compounds & Chemical Equation
	Lesson 2 Types of Reaction

Unit: 3 Chemical Laws **Unit length:** 100	**Lesson 1** Laws of Conservation of Mass & Energy
	Lesson 2 Laws of Proust & Dalton

Unit: 4 Balancing Chemical equations **Unit length:** 50	**Lesson 1** Balancing Chemical Equations

CLIL Lesson Plan

Unit number	1	**Lesson number**	1	**Title**	Physical & Chemical Changes

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 min	Raising curiosity, by presenting the topic and the learning outcomes of the lesson	The teacher briefly presents the structure of the lesson and the expected learning outcomes. She hands out the prepared lesson worksheet to each student.	**Skills** L S R W **Key vocabulary** to get familiar with, clues **Communicative structures**	☒ Whole class ☐ Group work ☐ Pair work ☐ Individual work	• CHEMICAL REACTIONS.pdf Powerpoint presentation	

2	10	Activating prior knowledge	The teacher shows a list of subject-specific vocabulary already met in previous lesson and asks the students to complete a text by filling the blanks with the correct word from the list. At the end of the task the teacher has the students read aloud their sentences in turn and invites the whole class to discuss any discrepancy with their own results.	**Skills** L S R W **Key vocabulary** subject-specific vocabulary introduced in previous lessons **Communicative structures**	☒ Whole class ☐ Group work ☒ Pair work ☒ Individual work	• CHEMICAL REACTIONS.pdf • Worksheet_Unit 1_Lesson 1 - Physical&Chemical Changes.pdf Powerpoint presentation. Individual student worksheet prepared by the teacher.	Formative: the teacher moves around the class, checks if the students are completing the exercise correctly and scaffolds language and content when needed.

3	15	Enabling students to tell apart a chemical from a physical change.	The teacher projects a slide which highlights the differences between a chemical and a physical change. Then she mentions a list of human actions which cause changes and asks the students to discuss within the group and classify them by using a T-chart. At the end of the task, the teacher invites a speaker for each group to present and justify their choice and the rest of the class to assess the statements. After the discussion, the teacher provides the correct answers and further examples of physical and chemical changes in everyday life.	**Skills** L S R W **Key vocabulary** subject-specific vocabulary (see activity 2); everyday language (content-compatible language): baking, mixing, cutting into, heating, ... **Communicative structures** Can you tell your mates ...? In my opinion ... I disagree / agree with ... The basic differences between... ..whereas .... ..while..... Zero conditional	☒ Whole class ☒ Group work ☐ Pair work ☐ Individual work	• CHEMICAL REACTIONS.pdf • Worksheet_Unit 1_Lesson 1 - Physical&Chemical Changes.pdf Powerpoint presentation and student worksheet.	In addition to on-going, continuous assessment by the teacher, also performance assessment is present in this activity.

4	10	Being able to recognize a chemical reaction by observing some typical indicators	The teacher projects a slide which reports the most common phenomenon occurring during a chemical change, compared to a physical one. Then she gives each student group a match and invites them to light it and carefully observe what happens while it is burning. Finally, the students are asked to determine the nature of the change by using the binary key pattern on their worksheet and to write down the main reason why they reached their conclusion (chemical or physical change). .	**Skills** L S R W **Key vocabulary** subject-specific vocabulary: to release, to absorb, precipitation, to reverse, flammability, ... everyday language (content-compatible language): bubbles, odour, disappearance, ... **Communicative structures** I think ... Compared to ... At the beginning of ... At the end of ... There's no longer	☐ Whole class ☒ Group work ☐ Pair work ☒ Individual work	• CHEMICAL REACTIONS.pdf • Worksheet_Unit 1_Lesson 1 - Physical&Chemical Changes.pdf Powerpoint presentation and student worksheet. Realia: matches	Formative: the teacher moves around the class, checks if the students are completing the exercise correctly and scaffolds language and content as needed.

5	10	Reviewing and memorizing the subject-specific vocabulary of the lesson.	Students are invited to work in pairs. One of the two students is required to record 3 new English words learned during the lesson. Next she/he asks her/his peer to translate them and/or make a short English sentence out of them. The same exercise is then repeated by exchanging the role in the pair.	**Skills** L S R W **Key vocabulary** subject-specific language **Communicative structures**	☐ Whole class ☐ Group work ▣ Pair work ☐ Individual work	• Worksheet_Unit 1_Lesson 1 - Physical&Chemical Changes.pdf Student worksheet.	Peer assessment: students in pairs assess and give feedback each other. In addition, the teacher performs a formative assessment by moving from pair to pair, examining the students' worksheets and providing feedback.

CLIL Lesson Plan

Unit number	2	**Lesson number**	1	**Title**	Elements, Compounds & Chemical Equation

Activity	**Timing**	**Learning Outcomes**	**Activity Procedure**	**Language**	**Interaction**	**Materials**	**Assessment**
1	5 min	Raising curiosity, by presenting the topic and the learning outcomes of the lesson. Introducing new vocabulary.	The teacher briefly presents the structure of the lesson and the expected outcomes. She hands out the prepared lesson worksheets to each student and introduces new content-obligatory and content-compatible vocabulary, necessary to understand the new topics. The students take notes on their worksheet.	**Skills** L S R W **Key vocabulary** subject-specific language (element, compound, reactant, product, ...); content-compatible language (to split into, to break down, to yield, to skim through, ...) **Communicative structures**	☒ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• CHEMICAL REACTIONS.pdf • Worksheet_Unit 2_Lesson 1 - Chemical Reaction_Equation.pdf Powerpoint presentation, Student worksheet prepared by the teacher.	

2	10	Activating prior knowledge	The teacher reads aloud two lists of words and has the whole class repeat them together, word after word. The students are then required individually to match the words in the first list with their antonyms in the second list, on their worksheet.	**Skills** L S R W **Key vocabulary** subject-specific vocabulary, most of which already introduced in previous lessons **Communicative structures**	☒ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• CHEMICAL REACTIONS.pdf • Worksheet_Unit 2_Lesson 1 - Chemical Reaction_Equation.pdf Powerpoint presentation and student worksheet.	Formative: the teacher moves around the class, checks if the students are completing the exercise correctly and scaffolds language and content as needed.

3	10	Enabling the students to tell apart an element form a compound and an atom from a molecule.	The teacher projects few slides which highlight the differences between an element and a compound, and between an atom and a molecule. While presenting, she scaffolds new terms and utilises pictures pasted to the presentation to make concepts clearer. At the end, she asks the students to complete a multiple-choice quiz.	**Skills** L S R W **Key vocabulary** subject-specific and content-compatible language (see activity 1) **Communicative structures** whereas .... ; while..... Zero conditional	☒ Whole class ☐ Group work ☒ Pair work ☐ Individual work	• CHEMICAL REACTIONS.pdf • Worksheet_Unit 2_Lesson 1 - Chemical Reaction_Equation.pdf Powerpoint presentation and student worksheet.	Formative: the teacher moves around the class and provides feedback.

4	20	Clarifying what a chemical equation is and the meaning of the simbols used to represent it. Consolidating key vocabulary and concepts and supporting correct pronounciation.	The teacher projects few slides with examples of chemical equations and explains the symbols present in them. Then the first 5 minutes of a video with English subtitles is shown. After watching it, the students in groups need to discuss and then answer, in writing and individually, a few questions which assess the understanding of the video and the subject content.	**Skills** L S R W **Key vocabulary** subject-specific and content-compatible language (see activity 1) **Communicative structures** Can you name....? What about ....? At a certain point... Modal verbs "may" and "can"	☒ Whole class ☒ Group work ☐ Pair work ☒ Individual work	• CHEMICAL REACTIONS.pdf • Worksheet_Unit 2_Lesson 1 - Chemical Reaction_Equation.pdf Powerpoint presentation and student worksheet. Video: link	Formative informal assessment: the teacher moves around from group to group, facilitates the discussion by questioning about some significant parts of the video and by scaffolding language and content.
5	10	Reviewing key vocabulary and concepts. Student self-assessing.	The video shown in activity 4 is projected again. It is commented and sometimes stopped each time the specific photograms provide the answers to the questions in Task 3. The students	**Skills** L S R W **Key vocabulary** subject-specific and content-compatible language (see activity 1)	☒ Whole class ☐ Group work ☐ Pair work ☒ Individual work	• Worksheet_Unit 2_Lesson 1 - Chemical Reaction_Equation.pdf Student worksheet. Video: link	Formative self-assessment. The sum of the red Xs compared to the sum of the dark Xs may be used by the student to

			analyse their own answers and draw an X in red pen when the answer is not correct and an X in dark pen when it is correct. Eventually, they make the sums of their red and dark Xs.	**Communicative structures**			assess how much and how well she/he is learning about subject content. Moreover, the same results, related to all the students in the class, provide the teacher feedback which can lead to change or adapt her future teaching (lesson pace, materials, tasks, etc.).

CLIL Lesson Plan

Unit number	2	**Lesson number**	2	**Title**	Types of Reaction

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

CLIL Lesson Plan

Unit number	3	**Lesson number**	1	**Title**	Laws of Conservation of Mass & Energy

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

CLIL Lesson Plan

Unit number	3	**Lesson number**	2	**Title**	Laws of Proust & Dalton

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

CLIL Lesson Plan

Unit number	4	**Lesson number**	1	**Title**	Balancing Chemical Equations

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