

FL/NS Lesson Planning/Template based on 4 Cs (see next page)
(content, communication, cognition, culture)

phase time	Content	Objective/ Competence („can-do“ statements)	Student activity	Social form/ setting	Material, media, mobile lab	Language: subject specific terminology	Language: communicati on & interaction	Teacher activity	Notes, comments on processes & outcomes = including affective outcomes, (self- evaluation **
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The current Lesson Plans was developed by Ms. Radost Mazganova Spanish teacher, and Ms. Yordanka Yordanova chemistry teacher

<p>trigger</p>	<p>Recalling acquired knowledge and introducing the new subject/topic</p>	<p>Students will be aware of the procedures of taking protective measures, of the conditions and indications for the development of a chemical reaction and will be able to describe them</p>	<p>Students answer teacher's questions</p>	<p>Discussion</p>	<p>Data sheets</p>	<p>Taking protective measures, chemical reaction, conditions and indications of the development of a chemical reaction Recordamos los términos conocidos: La ley de la conservación de la masa; las reacciones químicas, los indicios y las condiciones para que ocurra una reacción química.</p>	<p>Alrededor de 4/5 partes del aire de la atmósfera terrestre corresponden al nitrógeno. Casi todo el resto del aire es oxígeno (20.9%). Participa de forma muy importante en el ciclo energético de los seres vivos.</p>	<p>Asking questions to students in order to consolidate the acquired knowledge which will be useful in the new subject/topic</p>	<p>Revising in order to consolidate the topic of taking protective measures, on the conditions and indications of chemical reactions</p>
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<p>hypothesis</p>	<p>Introducing new notions and formulating the hypothesis</p>	<p>Students will be aware of the physical and chemical properties of oxygen, as well as the methods for producing it</p>	<p>Students formulate a hypothesis to be tested in the experiment</p>	<p>Lecture, discussion</p>	<p>Data sheet</p>	<p>Chemical compound, chemical cleavage, combustion, oxides Enlaces químicos, degradación química, combustión, óxidos. Demostrar la combustión del oxígeno.</p>	<p>La presencia del oxígeno permite la combustión y en ausencia del oxígeno no hay combustión. Se desprende energía en forma de luz y calor.</p>	<p>Introducing new notions- chemical compound, chemical cleavage, combustion, oxides</p>	<p>Students must be able to use the new terms in the foreign language as well as in their mother tongue</p>
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<p>experimentation, (processes, results) verification of hypothesis</p>	<p>Experiment, Problem solving</p>	<p>Students are able to perform experiments in order to identify the type of reaction</p>	<p>Students perform experiments, observe and record their findings</p>	<p>Teamwork, individual work</p>	<p>Worksheets, mobile lab</p>		<p>¿Cuáles son los indicios de la presencia del oxígeno?</p>	<p>Splitting the class into groups or assigning a project to the whole class, supervising the successful completion of the project of all students and providing the necessary assistance</p>	<p>Students explain and analyze the outcomes of the experiments</p>
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<p>conclusion</p>	<p>Outcomes</p>	<p>Students can proceed to the necessary summary and conclusions of the experiment performed and the problems solved</p>	<p>They formulate conclusions and proceed to analysis</p>	<p>Team work, discussion</p>	<p>Worksheets</p>	<p>El oxígeno es un gas incoloro (no tiene color), inodoro (no tiene olor) e insípido (no tiene sabor) que es muy reactivo y que resulta esencial para la respiración</p>	<p><i>El oxígeno</i> es un elemento muy importante pues está en muchas cosas que nos rodean y se puede mezclar con muchos otros elementos.</p>	<p>Analyzing and summarizing the outcomes of the projects or guiding students to draw up their own summaries and analyses</p>	
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<p>transfer generalization application</p>	<p>Summarizing and consolidating new knowledge</p>	<p>Students proceed to the necessary summaries and conclusions drawn by the project performed- they hand in writing, based on a pattern, the outcomes of the experiments and they are able to prove the nature of the gas released</p>	<p>They compare the development conditions of various reactions; they analyze and summarize</p>	<p>Discussion, summary</p>	<p>Worksheets</p>	<p>El oxígeno toma parte de la composición del agua.</p>	<p>El oxígeno es necesario para la vida.</p>	<p>Analyzing and summarizing the outcomes of the projects or guiding students to draw up their own summaries and analyses</p>	<p>Relating the ability of oxygen to be involved in combustion and respiration to its importance for living organisms and everyday life</p>
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FL/STEM and the domains of the 4Cs

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C1 □	Content / Learning outcomes	“know” (content) “be able to” (content, communication) “be aware” (content, cognition)
C2	Communication: Language learning & Interaction	Vocabulary (revisited/new) Vocabulary (new): subject matter specific (CALP) Vocabulary (new): general (BICS) Structures (focus on grammar) Language functions (information, argumentation, questioning, reasoning)
C3	Cognition / cognitive processing: LOTS & HOTS	Remembering / Identifying Comparing Classifying Predicting Reasoning Synthesizing / creating
C4	Culture / Community	Awareness (of scientific topic as relevant for the culture / community) Involvement (project continuation outside of classroom) Communication (proliferation of scientific results in community)

****Note:** this column refers to the lessons implemented during the school year 2015-2016. The comments concern exclusively the academic hours the lesson was made and because of the uniqueness and diversity of each class, it should not be expected to be exactly the same during another lesson.

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