Course "Use of open educational resources for CLIL". José Antonio Gutiérrez Flores (based upon a model by Isabel Pérez Torres. 2009)

Template to design a CLIL didactic unit[1]

(Activity 1.3: Identify the required language)

Teacher: JOSÉ RAÚL ALEJANDRO BÉJAR	Course/Level: 1º ESO
Subject: MATHEMATICS	DU Title: PYTHAGOREAN THEOREM
Observations (if necessary)):	

1. Learning outcomes / Evaluation criteria	To determine the relationship between the lengths of the sides of a right-angled triangle. To find the length of the missing side of a right-angled triangle using the Pythagoras' theorem. To solve problems using the Pythagorean theorem.
2. Subject Content	Pythagorean theorem. The converse of Pythagoras' theorem. Pythagorean Triples. Problem solving using Pythagorean theorem.
3. Language Content / Communication	
Vocabulary	Pythagorean theorem; hypotenuse; leg; rightangled triangle; isosceles triangle; equilateral triangle, length side; missing side; Pythagorean triples; rectangle; diagonal; square; rhombus; perimeter; square root, formula, equation, opposite; unknowns; obtuse angle; acute angle; converse, find; solve; proof; determine; draw; explain; identify.
Structures	"If" + "simple present" "simple present" (zero conditional) By looking at ... How far ..?

[1] Unshaded cells must be filled in. It's **VERY IMPORTANT** to read carefully the *Help to Complete the Template*, at your disposal in the front page of the course (activity 1.3).

	How long..? Where necessary ... I can use…to … Can you show me where … is? Can you help me with the word…? This is called…. The height is….. cm To calculate ……. you have to…… What is the perimeter/surface of…..? Calculate the …….. of….. whose… What figure appears in ….?
Discourse type / Language Skills	Throughout this subject we are going to use mainly two types of discourse, exposition and argument. Listening: Students understand the subject and they are able to answer the questions that are asked in class. Speaking: Students will communicate with each other and with the teacher using the appropriate vocabulary and grammatical structures. Reading: The students recognize the grammatical structures and the basic vocabulary of Geometry The form of work these skills will be doing the activities planned individually and collaborative and watching videos.
4. Contextual (cultural) elements	Geometry is in our environment. The students will apply the Pythagorean theorem to calculate heights of buildings in Badajoz.
5. Cognitive (thinking) processes	To describe and to analyze real situations, to compare results, to be conscious of the importance of the topic, to evaluate other pupils, to apply the knowledge to their environment, to extract conclusions, to defend its results
6. Task	Initiation and motivational tasks: Students will see videos and read the subject's readings. Development and consolidation tasks: Using the educational platform escholarium, thatquiz, videos, the pupils will defend its thesis speaking and listening to theirs peers. Tasks of enlargement and of reinforcement: they will use the Escholarium and Thatquiz educational platforms where they have to read, listen and speak to present their results. At all times there will be activities in which they will have to work individually and in groups.

Activities	Vocabulary activity https://create.kahoot.it/share/pythagoras-theorem-vocabulary/42514dd2-87c4-42e1-b18f-93a22e8b94a3 https://www.educaplay.com/learning-resources/2632503-pythagorean_theorem_vocabulary.html Initial activities https://www.mathsisfun.com/activity/pythagoras-theorem-shoes.html Reading activities https://sciencing.com/real-life-uses-pythagorean-theorem-8247514.html Implementation activities https://www.transum.org/software/SW/Starter_of_the_day/Students/pythagoras.asp https://www.mathplayground.com/MathApprentice/GamePro.html https://www.brainingcamp.com/lessons/pythagorean-theorem/problems.php https://drive.google.com/file/d/1eLLi4jzoEhYMqUi1V6V647pguqYEj1Gl/view?usp=sharing Watch Pythagoras' Theorem videos: https://www.youtube.com/watch?v=AA6RfgP-AHU https://www.youtube.com/watch?v=en6tjt7KL3E
Organization and class distribution / timing	8 sessions: • Introducing the topic. 1 session • Content Development: 2 sessions. • Consolidation Sessions: 4 sessions • Final session: 1 session
Resources / Materials	Paper, Pens and Pencils, Ruler, Calculator, Digital Whiteboard, Internet.
KEY COMPETENCES:	Competence in linguistic communication. Mathematical competence. Competence in processing information and use of ICT.

	Competence in social skills. Autonomy and personal initiative.
Evaluation (criteria and instruments)	Students will have a rubric at the beginning of the unit Google form will be used to evaluate.There will be an assessment of student, another of the peers and another of teacher.

Feel free to use this model of template. Thanks for mentioning the source.

Notas bibliográficas y créditos:

Un primer modelo de esta plantilla ha sido publicado en:
Pérez Torres, I. 2009. *Apuntes sobre los principios y características de la metodología AICLE*, en V. Pavón, J. Ávila (eds.), *Aplicaciones didácticas para la enseñanza integrada de lengua y contenidos*. Sevilla: Consejería de Educación de la Junta de Andalucía-Universidad de Córdoba.171-180.

Está basada sobre todo en la experiencia práctica a la hora de diseñar unidades y conversaciones con expertos y compañeros. También he tenido en cuenta la teoría de las 4 Cs de Do Coyle, expuesta en numerosas publicaciones, como por ejemplo: Coyle, D., Hood, P. and Marsh, D., 2010. *Content and Language Integrated Learning*. Cambridge University Press.