

NUTRITION **A**ND **M**ATTER

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Generació Plurilingüe (GEP)

Year 1

2018-2019

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Reconeixement - No Comercial - Compartir Igual

TASK 1: NUTRITION

GEP 1	Task 1 : Input & Cooperative /Collaborative learning in CLIL
Title of the lesson or topic	NUTRITION
Course / year / age	2018-19/ 6TH/ 11-12
Timing	2 HOURS/SESSION
Collaboration with	Alone
Short description of the session/s	Nutrition. These sessions focus on the principal organs of the human body and the importance of healthy lifestyle and to take an interest in their physical well-being. These two sessions explore the digestive system and the circulatory system, as well as the respiratory and excretory systems. This topic encourages students to work in pairs or small groups to share their knowledge.
<p><i>The descriptions of the activities below should contain:</i></p> <p>1. type of input (linguistic, audio, visual, realia, spoken videos)</p>	

Template adapted from CLIL-SI 2015.

More information at: <http://grupsderecerca.uab.cat/clilsi/>



2. *questions (explicit; right there , implicit; think and search and referential; author and you posed by the teacher to ensure the students' involvement (questions: to understand, to investigate, to communicate)*
3. *dynamic instructions with collaborative and cooperative activities, collaborating; students interact and help each other/ cooperating: all the roles are important. The students depend on each other*
4. *materials used. (posters, flashcards, videos, pictures, mind maps, brainstorming, schemas, songs, presentations, realia, written text, warm up,...)*

S E S S I O N 1	Activity 1	Introduce all the new vocabulary related to the different systems through flashcards. And teach and show them the anatomy set (Human body) Classic Unisex Torso «Miniland Educational» In small groups, nominate a pupil to read out the vocabulary that they have learnt and correct pronunciation if necessary. Classify the different vocabulary into the different systems. <i>Digestive system</i> : small intestine, stomach, anus, salivary glands, oesophagus, liver large intestine, rectum, pancreas; <i>Circulatory system</i> : aorta, pulmonary artery, left atrium, pulmonary vein, left ventricle, inferior vena cava, right ventricle, right atrium, superior vena cava, arteries, heart, veins, capillaries; <i>Respiratory system</i> : lungs, diaphragm, bronchus, bronchiole, alveolus, trachea; <i>Excretory system</i> : kidneys, bladder, pores, renal arteries, ureter, urethra.
	Activity 2	Using big posters label the parts of each system through the written flashcards. Play the game in small groups. Guessing what flashcards belongs to each system.



	<p>Activity 3</p>	<p><i>Healthy Habits.</i> Write down on the blackboard different question. Why is it important to have a healthy diet? How can exercise help us keep fit? What happens if we do not exercise every day? What advice would you give someone who wants to have a healthier lifestyle? Divide the class up into five groups. Ask pupils to read the text in the white digital screen and discuss the concepts. Encourage pupils to work out unknown vocabulary from the context. They should take it in turns to tell the rest of the group what they have read about. Organize pupils in small groups and ask them to discuss the questions that they have read on the blackboard. Allocate different roles, within the group each one be assigned a role; technician, secretary, speaker, checker, ...and exchange the roles (technician becomes secretary, secretary becomes speaker, and so on).</p>
<p>S E S S I O N 2</p>	<p>Activity 4</p>	<p>In this session students will review different ideas connected to nutrition and health. They will consider the different sources of energy our bodies need (carbon, liquid, and oxygen) and how the different systems interconnect to provide this energy. Pupils will discuss the importance of a healthy diet and exercise. They will also consider the importance of mental health. (Brainstorming on the blackboard, digital flashcards, digital word cards, food pyramid; poster)</p> <p>Tell pupils to work with a partner and to identify the healthy foods on their lists. Ask: Do you have a healthy diet? What are the health benefits of these foods? Elicit responses from the class.</p>
	<p>Activity 5</p>	<p>Written INPUT a powerpoint presentation. Cooperative project in small groups (four or five pupils per group)</p>
<p>In terms of academic content, what are the students learning and what are they learning to</p>	<p>*Identifies and locates the principal organs and systems involved in nutrition: respiratory, digestive, circulatory, excretory systems.</p> <p>*Identifies healthy lifestyles and their effects on the care and maintenance of the different organs and systems.</p> <p>* Identifies and adopts healthy diet, hygiene and rest habits.</p>	



do?	* Shows creativity and originality in their project work and presentations.
In terms of language, what are the students practicing or learning to do?	<ul style="list-style-type: none"> * Uses vocabulary appropriate to each content block. * Communicates the results verbally or in writing, presenting them with visual support. * Verbally explains the contents related to the subject area in a clear and organized manner.
In what way is this lesson plan a good example of what we learnt in the GEP course session?	<ul style="list-style-type: none"> * Produce quality in the classroom. * The students are getting involved in the activities. I make them participate. * Enrich «input» in the lessons: functional and meaningful. * Motivate, promote understanding, catch them attention. * Take into account multi-intelligences (learning styles)
Other important information	Youtube.com: Peek a Bas (Learn videos for kids), Dr. Binacs Show (subtitled), Gettingsmart.com, Science for Kids (Cardiovascular System-Body Parts. Blood)
ANNEXES (materials, handout, pictures... if not possible to include in the activity section.)	Annexes: Powerpoint presented (flashcards, posters, mind maps, arts & craft material; different systems, videos, ,,)



Self assessment Checklist

Task 1 : Input & Cooperative /Collaborative learning in CLIL	YES/NO
1. Students are presented with multimodal and varied input (spoken, written, visual, hands-on...)	YES
2. The input presented is used to help learners understand ideas and construct meaning	YES
3. The input is presented at the right cognitive level and the right language level , i.e. it is neither too challenging in terms of content nor too difficult in terms of language.	YES
4. Students are helped in some way to understand , i.e. input is made comprehensible	YES
5. Students are helped in some way to process the input presented, i.e. activities or questions make students think and construct meaning.	YES
6. The input and activities presented cater to multiple intelligences	YES
7. Students are presented with good questions (explicit, implicit and referential) that help them process input and that challenge them not only to understand, but to think, create...	YES



8. A variety of collaborative learning strategies are used throughout the session.	YES
9. At least one of the activities presented requires cooperation among students.	YES
10. Students are explicitly taught how to work in groups (or pairs).	YES
11. Students are explicitly guided to succeed in group/pair work discussions and interactions . Clear support to guide their interactions is provided.	YES
12. At least one ICT tool is used to promote digital collaborative learning .	YES

TASK 2: MATTER

Template adapted from CLIL-SI 2015.

More information at: <http://grupsderecerca.uab.cat/clilsi/>



GEP 1	Task 2: Reading, writing and Assessment in CLIL
Title of the lesson or topic	MATTER
Author	YOLANDA VILÀ AGUDO
Course / year / age	2018-19/ 6TH/ 11-12
Number of sessions	6 (4+2) HOURS/ 3 (2+1) SESSIONS
Collaboration with...	Alone
Main objectives of the sessions	Provide students all the help that they need. Give them authentic and meaningful resources (interest real life). Help them; before, during and after the whole process.
Short description of the sessions	Matter. This unit focuses on matter and its properties. They will learn how different mixtures are composed and whether these are homogenous or heterogeneous. They will learn five different methods of separation, some of which will be put into practice in different experiments. Finally the pupils will learn about the effects of chemical changes on substances.



<p><i>The descriptions of the activities below should contain:</i></p> <ol style="list-style-type: none"> 1. Collaborative and cooperative activities instructions (including the timing and the language support) 2. type of support, 3. readings and writings planned, 4. assessment tools 5. materials used. (posters, flashcards, videos, pictures, mind maps, brainstorming, schemas, songs, presentations, PowerPoint, realia, written text, warm up,...) 		Timing	
<p>S E S S I O N</p>	<p>Activity 1</p>	<p>Ask students to look around the class and identify the different objects they can see. Ask; What are they made of? Ask pupils to consider something which looks simple: for example, a pencil, a desk, a window. Ask them to identify the different materials which it is made from: wood, pigment made of graphite and clay, paint made of various chemicals.</p> <p>Ask pupils to work in small groups (4 or 5 pupils per group) to say a brainstorming materials vocabulary related to matter. Nominate a speaker to read out the vocabulary they have written. Correct the pronunciation as necessary. Revise vocabulary. Mind map¹. The pupils should copy the new words into</p>	<p>20'</p>

¹ See appendix 6



1		their notebook. Then, they can use the English dictionaries looking up into new words that they want to learn related to matter. Previous knowledge: solid, liquid, iron, stones, gas, evaporation. Watch the videos; 1. What's the matter ? 2. Shapes and Forms	
	Activity 2	Introduce a PowerPoint about the unit Matter. Situate the pupils; the content, the evaluation criteria, the key competences related to each learning standard (LIN, MST, DIG, LTL, SOC, AUT. CUL) and the learning standards.	10'
	Activity 3	Experts Groups. Working with small groups. Separating mixtures definitions. Find the most suitable definition; filtration, decantation, magnetic separation, evaporation, distillation. (English-Catalan) Plurilinguism. Evaluation: ² Quiz K! (Kahoot) Play with two groups (The whole class)	15'
	Activity 4	Exp How to make “a Fire Snake” from sugar and baking soda. It is a classic Science experiment .	10'
S E S S	Activity 5	Watch a video about the 3 states of matter and we will do an activity related to change in state. In groups, pupils will be responsible of writing the characteristics of one state of matter: Solid, Liquid or Gas. Then pupils will share the characteristics and the other groups will need to guess which state of matter are you. Physical changes .	20'

² See appendix 1



I O N 2	Activity 6	Evaluation: ³ Pupils will create a poster with laminated flashcards about each state of matter characteristics. Then we will draw the atoms and how they imagine the bonds between particles. Finally we will see 3 different pictures with the corresponding bonds and they will need to guess which image corresponds to a liquid, a solid or a gas.	15'
	Activity 7	The last activity of the session will be manipulating two different papers to experiment the following changes: 1. Change in texture + reversible change → children will be delivered a laminated paper that they will first touch, and will be asked about the texture. Then, they will need to stick a soft paper on the laminated paper and, again, they will be asked about the texture (there will have been a change in texture). Finally they will be asked to put the paper back as it was in the beginning (reversible change). 2. Change in shape + irreversible change → children will be delivered a square paper that they will be asked to cut into 4 different pieces (change in shape). Then they will be asked to put the paper back as it was in the beginning (irreversible change).	10'
	Activity 8	The session ends talking about what you have observed and learnt (what have you liked most/less about the session and why? / What have you learnt?)	10'

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³See appendix 2



<p>3</p>	<p>Activity 9</p>	<p>In groups, write 5 words you remember about the session we did last week and write the characteristics of 1 state of matter.</p> <p>If I take one jug and I put it on the scale, what am I doing? What I want to know? I'm weighing the jug because I want to know the weight.</p> <p>What is the jug made of? Is there a general name? The jug is made of glass and glass is matter. What is matter then?</p> <p>Do you think that the WEIGHT of the jug is the same on Earth or in the Moon? Why?</p> <p>Do you think that the MASS of the jug is the same on Earth or in the Moon? Why?</p> <p>Now, if I put water inside the jug, what will this water occupy? What's the name of the space an object occupies?</p> <p>If I take a cork and I put it inside the recipient, what will happen? Which is heavier, 1kg of stones or 1kg of cotton?</p> <p>It will FLOAT. What do you think floatability is? Why does floatability happen?</p> <p>Which is denser, 1kg of stones or 1kg of cotton?</p>	<p>15'</p>
<p>10</p>	<p>Activity</p>	<p>Work on the following concepts:</p> <p>MASS WEIGHT VOLUME FLOATABILITY DENSITY</p> <p>a) We will watch one video about some of these concepts: DENSITY</p>	<p>20'</p>



	<p>Evaluation:⁴ I will deliver 1 paper per group with the definitions of these words and you will need to:</p> <p>b) Look at the dictionary for the new words in bold</p> <p>c) Match the definition with the concept.</p> <p>2. We will watch the video again so you can self-correct the definitions.</p> <p>3. Finally, we will read the Power Point definitions to ensure you have understood the concepts.</p>	
Activity 11	Do an <u>EXPERIMENT</u> : we will calculate the volume and the density of a stone.	15'
Activity 12	Revise all the new words: mass, weight, density, scales, float, sink.	5'
In terms of academic content, what are the students	Create- Evaluate-Analyze- Apply- Understand-Remember (Blooms Taxonomy)	

⁴ See appendix 4, session 3



<p>learning and what are they learning to do?</p>		
<p>In terms of language, what are the students practicing or learning to do?</p>	<p>Mindmaps: ...made up of It refers to... are made of... one type is called...,... and, ...unlike..., which can be found..., carry out ...</p> <p>Linking words: First of all, therefore, but, however...</p>	
<p>In what way is this lesson plan a good example of what we learnt in the GEP course session?</p>	<ul style="list-style-type: none"> -Produce quality in the classroom. Sharing is learning. - Content language integrated learning by doing, experimenting and touching. - Involve everyone: feeling confidence, motivated students - Provide them a good atmosphere (class management. 	
<p>ANNEXES (materials, handout,</p>	<p>Worksheets, pictures, power Point, scaffolding (visual support), materials (different resources; flashcards, poster...) See Appendices.</p>	



pictures... if not possible to include in the activity section.)			
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Self assessment checklist

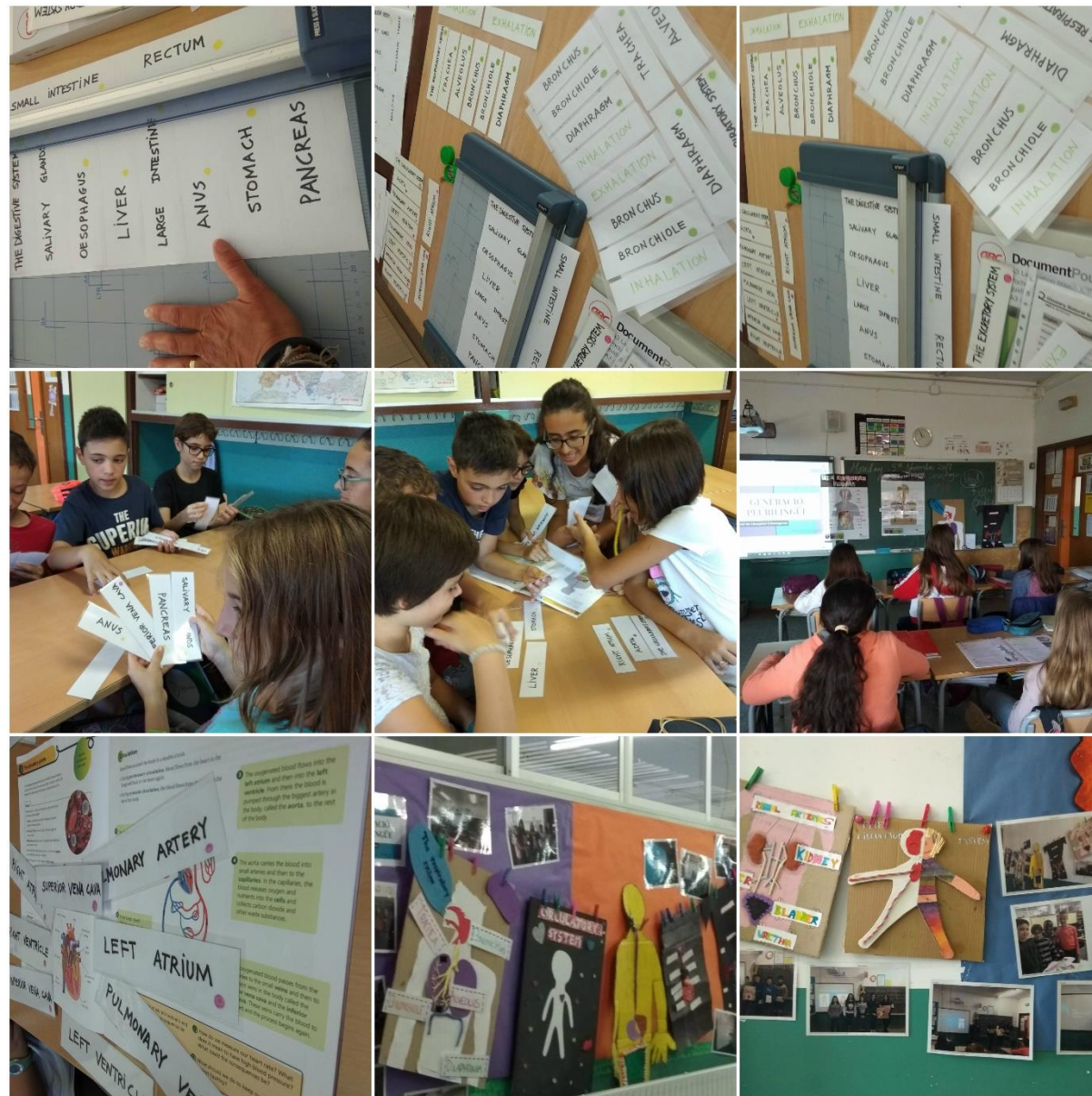
Task 2 : Reading, writing in CLIL and Assessment	YES/NO
1. Support is provided to help students read and understand texts.	YES
2. Before-, during- and after- reading activities are prepared.	YES
3. The materials use visuals to support comprehension.	YES
4. The writing process takes place in joint collaboration with the teacher (modelling)	YES
5. Support is provided to help students write (the Students are provided with Language patterns, Language frames, vocabulary banks...)	YES



6. The teacher uses different strategies to help students throughout the process of reading and writing	YES
7. The teacher has previously predicted the Language the students will need when carrying out the different tasks successfully and, therefore, is aware of the content-obligatory language .	YES
8. At least the teacher uses 1 type of assessment (self-assessment, teacher assessment or co- assessment)	YES
9. At least teacher used 1 type of designed assessment tool during the sessions (rubric, digital app, checklist, personal dossier...)	YES



NUTRITION APPENDICES: Flashcards are made by hand, one of the packs can be delivered to you, if you need it.



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MATTER APPENDICES:

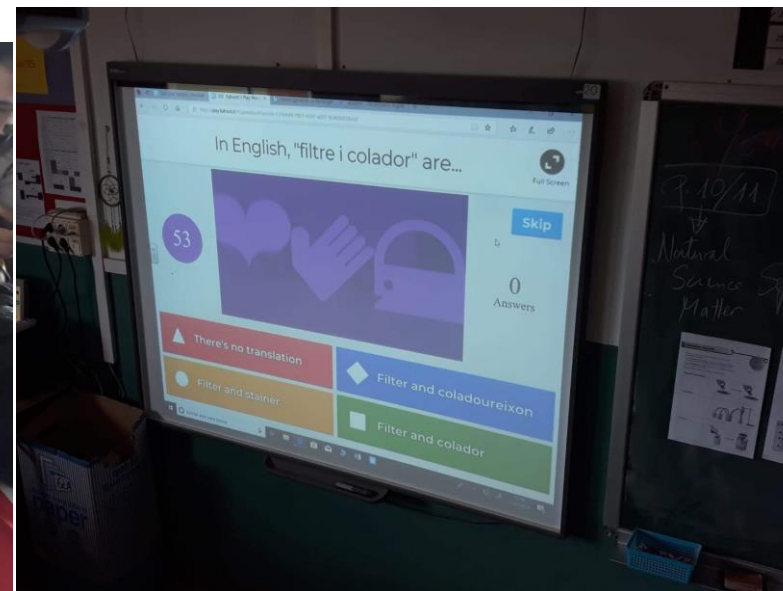
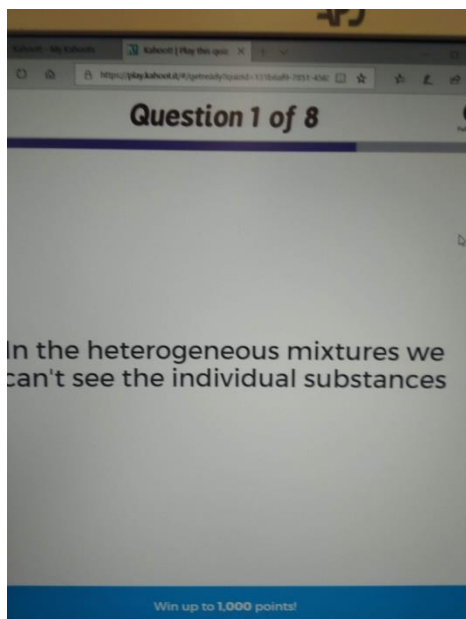
Appendix 0

Session 1. PowerPoint

Appendix 1.

Session 1.

Kahoot! **Evaluation**



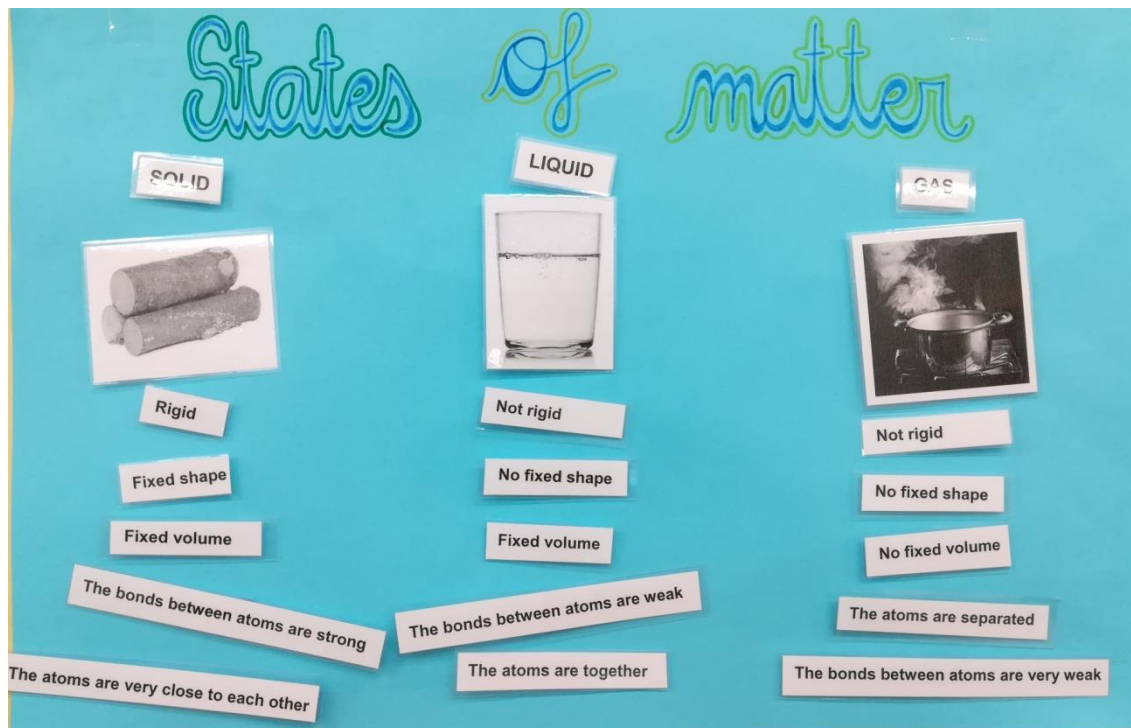
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Appendix 2.

Session 2.Activity 6. **Evaluation**



Template adapted from CLIL-SI 2015.

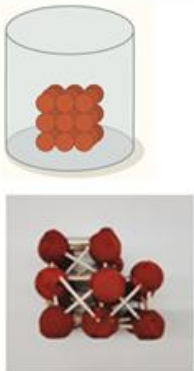


More information at: <http://grupsderecerca.uab.cat/clilsi/>



Appendix 3.

Session 2. **Evaluation:**

STATES OF MATTER CHARACTERISTICS:

Solid	Liquid	Gas
Rigid	Not rigid	Not rigid
Fixed shape	No fixed shape	No fixed shape
Fixed volume	Fixed volume	No fixed volume
The atoms are very close to each other	The atoms are together	The atoms are separated
The bonds* between atoms are strong	The bonds between atoms are weak	The bonds between atoms are very weak
		

*Bonds = enllaços (entre partícules/àtoms)

Template adapted from CLIL-SI 2015.

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Appendix 4.

Session 3. Worksheet. **Evaluation**

Group names:

NEW CONCEPTS AND DEFINITIONS

Key words: Floatability, Density, Weight, Mass and Volume

Is the **amount** of **matter** that forms an object. We can calculate it with and **scale** and the basic measure unit is in grams (g), which has multiples and submultiples. One of the most used submultiples is the kilograms (kg).

New words with the translation:

Strength with which the Earth attracts the bodies that are on its **surface**. It varies according to the situation of the bodies in other points of the universe. For example, as in the moon there is **lessgravity** than in the earth the **weight** would change. However, the **mass** is the same in **either** Universe or Earth.

New words with the translation:

Is the space an object **occupies**. We measure it in milliliters (ml), which has multiples and submultiples. The most used multiple is the liters (l). The basic **measure unit**, however, is the cubic meter (m³).

New words with the translation:

It is how **compact** an object is. In other words, **density** is the **mass** of an object divided by its **volume**. So once you know the object's volume, and the object's mass, you can find out its _____. It is expressed as grams per milliliter (g/ml) or kilograms per liter (kg/l).

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New words with the translation:

It happens with the materials that have a **lower** density than the water. The ones that have a **higher** density in comparison with the water, they **sink**.

New words with the translation:

Appendix 5.Session 3.Photos.

Template adapted from CLIL-SI 2015.

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Density ✓

It is how **compact** an object is. In other words, it is the **mass** of an object divided by its **volume**. So once you know the object's volume, and the object's mass, you can find out its density. It is expressed as grams per milliliter (g/ml) or kilograms per liter (kg/l).

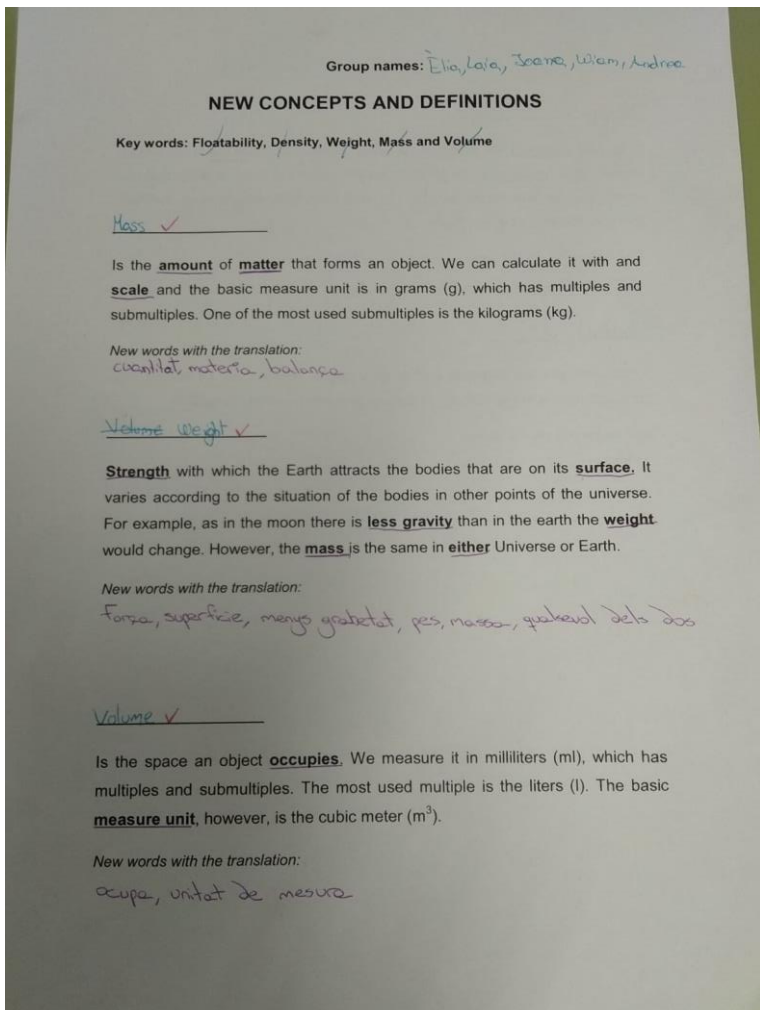
New words with the translation:
compacte, massa, volum

Floatability ✓

It happens with the materials that have a **lower** density than the water. The ones that have a **higher** density in comparison with the water, they **sink**.

New words with the translation:
inferior, pes, enfonsar

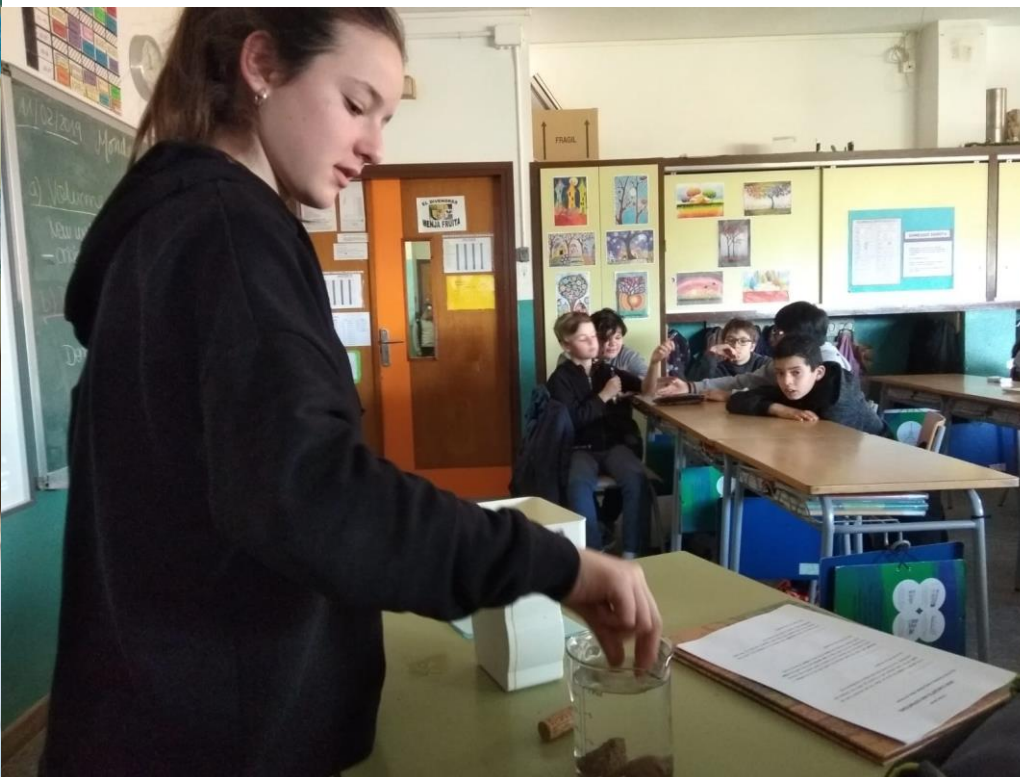




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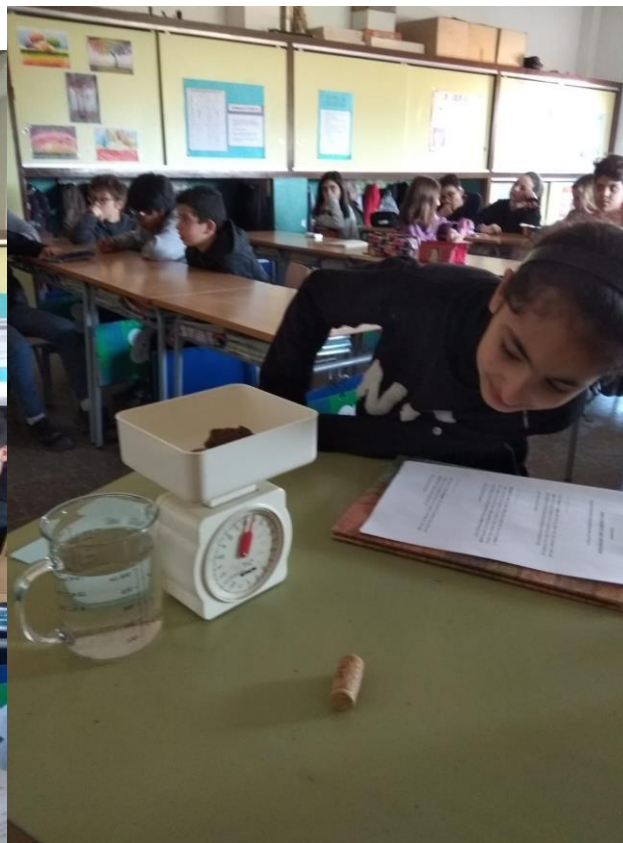




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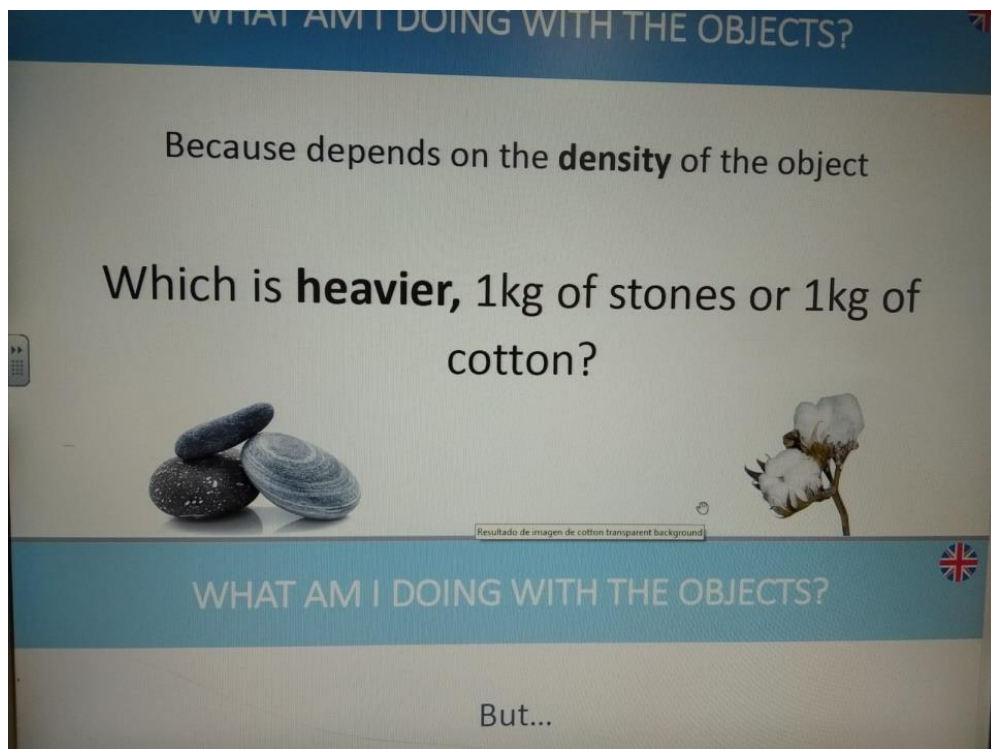


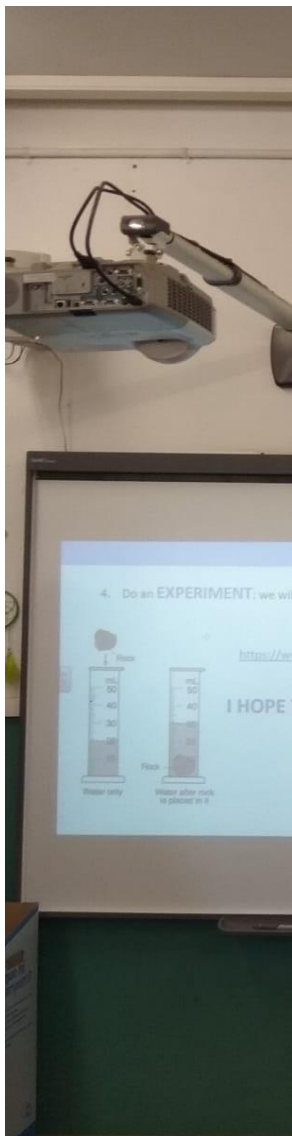


Template adapted from CLIL-SI 2015.

More information at: <http://grupsderecerca.uab.cat/clilsi/>







Appendix 6.Session 1.Photos.

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More information at: <http://grupsderecerca.uab.cat/clisi/>

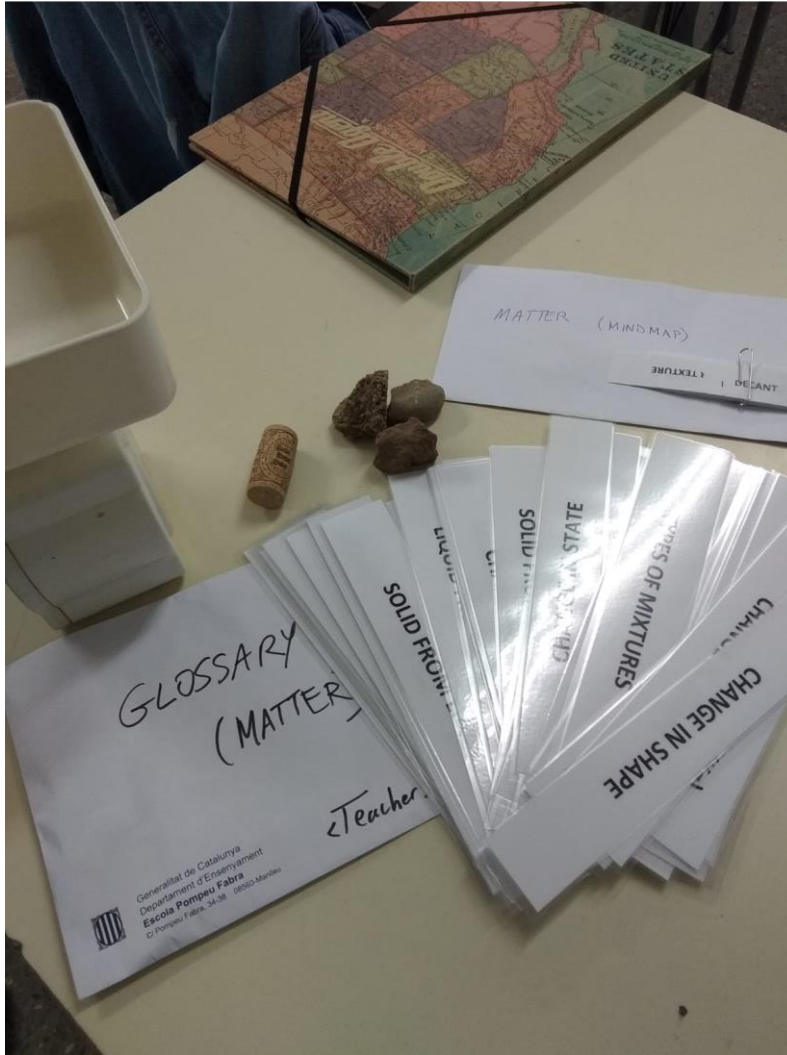




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FLASHCARDS: **M**MATTER

MATTER

STATES

SOLID

LIQUID

FILTER GAS

PROPERTIES

VOLUME

DENSITY

CHANGE IN STATE

MASS

CHANGE IN SHAPE

CHEMICAL CHANGES

PHYSICAL CHANGES COMBUSTION OXIDATION

FERMENTATION

TYPES OF MIXTURES

HETEROGENEOUS

HOMOGENEOUS

SEPARATING MIXTURES MAGNETIC SEPARATION

Template adapted from CLIL-SI 2015.

More information at: <http://grupsderecerca.uab.cat/clilsi/>



DECANTATION FILTRATION EVAPORATION

DISTILLATION SOLID FROM SOLID

SOLID FROM SOLUTION LIQUID FROM SOLUTION

SOLID FROM LIQUID HEAT CONDUCTIVITY

LIQUIDS OF DIFFERENT DENSITIES

CHANGE IN SHAPE ISOLATING MATERIALS

CHANGE IN POSITION OR TEXTURE

TYPES OF PHYSICAL CHANGES DECANT



REVERSIBLE CHANGES IRREVERSIBLE CHANGES

GRAMS (g) KILOGRAMS (Kg)

MILLILITRES (ml) LITRES (l)

GRAMS PER MILLILITRE (g/ml)

