

MATTER AND MIXTURES



Escola Cavaller Arnau
By Joan Carles Mas Montosa

Generació Plurilingüe (GEP)

Year 1
2018-2019

Template adapted from CLIL-SI 2015.

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





GEP 1	Task 1 : Input & Cooperative /Collaborative learning in CLIL	
Title of the lesson or topic	Mixtures	
Course / year / age	5th grade (pupils from 10 to 11 years)	
Timing	One session of one and a half hour (session 1) and two sessions of 45 minutes (session 2 and 3)	
Collaboration with	No one (I'm doing this alone and in my own).	
Short description of the session/s	In this session students will develop some experiments in groups, in order to discover properties related to different substances. We are studying mixtures and useful techniques needed to separate different substances.	
<p><i>The descriptions of the activities below should contain:</i></p> <ol style="list-style-type: none"> 1. <i>type of input,</i> 2. <i>questions (explicit, implicit and referential) posed by the teacher to ensure the students' involvement</i> 3. <i>dynamic instructions with collaborative and cooperative activities,</i> 4. <i>materials used.</i> 		
S E S S I O N	Activity 1 <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">(5 minutes)</div>	<p>-Today's menu: sharing the activities of the session. The first task will consist in explaining all the activities that we are going to do during the session. It is important for the pupils to know what we expect from them before starting the session.</p> <p>-Type of input: visual and auditory.</p> <p>-Resources: a smartboard to project the list of the activities</p> <p>-Type of activity: explicit (<i>check the annex to have a look to the entire list of the activities: Today's menu session 1</i>)</p>



1	Activity 2 <div data-bbox="165 280 394 376" style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">(10 minutes)</div>	<p>Introduction to new vocabulary. We are going to introduce the vocabulary that is relevant to carry out the session. We will use a PowerPoint presentation to show the pictures and the corresponding words that fit with them. While we display the presentation the teacher says every single word, and encourages the pupils to repeat them at the same time (in unison).</p> <p>Type of input: visual, written and auditory input.</p> <p>Type of activity: explicit</p> <p>Resources: a smartboard to project the presentation</p>
	Activity 3 <div data-bbox="156 783 385 863" style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">(30 minutes)</div>	<p>Oral Communicative Game</p> <p>We divide this activity in two parts:</p> <ol style="list-style-type: none">1) We show the pictures, but we encourage the students to repeat the words (remembering the vocabulary).2) We ask the students to complete a table with the words learnt before. It is important to ask all students in each group in order to share the doubts and recommendations about how to write the words.3) We correct the activity by displaying the pictures again. Students will correct their mistakes (in case they have wrong answers or spelling mistakes). <p>Type of input: visual, written and auditory.</p> <p>Resources: a smartboard to project the list of the activities</p> <p>Type of activity: explicit</p>



Activity 4

(30 minutes)

Let's experiment! Student grouping and roles distribution (worksheet 3, included in the annex).

Now, students are going to complete in groups the worksheet 3. It consists in:

- 1) Writing the hypothesis about what they expect that is going to happen before starting the experiment. In order to do this, it is important to check the language support included in the worksheet 2 (important to scaffold correctly).
- 2) Matching the pictures with the corresponding words. It is helpful to ensure that pupils understand the vocabulary included in the worksheet.
- 3) Materials preparation: Students prepare and collect the required materials and tools included in the worksheet.
- 4) Reading: Students read the different steps in the worksheet and, at the same time, they follow the steps with the required materials and tools. At the same time, they also draw the steps that they follow in the table included in the worksheet.
- 5) Writing: Students write the conclusion of the experiment that we have implemented in class. Again, it is required to take into account the worksheet 2 (to scaffold correctly).

As we are developing this activity in groups, we will distribute the students (before starting the first activity of the worksheet) in four groups of three students per group. All students in each group are going to carry out a different experiment and learning different techniques to separate mixtures, but we will assign beforehand two different roles: the *secretary and two scientists*. Everyone is supposed to develop specific actions throughout this activity. These are the following ones:

The secretary takes notes of the group predictions, matches the vocabulary words of the worksheet to the right pictures (with the help of his/her classmates) and draws the different steps while the group work is doing the experiment.

Scientist 1: This student should be responsible to prepare the required materials that they need to follow all the steps included in their worksheet before they start reading them. He reads the steps of the experiment (he/ she alternates this task with the other scientist).



Scientist 2: This student will check that the materials prepared by the scientist 1 are well chosen. He reads the steps of the experiment (he/ she alternates this task with the other scientist).

All members of the group should **be responsible to clean up** the tools used in class.

Type of input: visual, auditory, written, kinesthetic,

Resources: worksheet support to write the hypothesis and the conclusions, worksheet to read the steps and to gather evidences, and tools and materials to carry out the experiments.

Type of activity: explicit

Activity 5

(15 minutes)

Sharing the conclusions: One volunteer in each group reads out the conclusions about the experiment that they have been carrying out. They are reading the conclusions to the rest of the classmates, so we ask them to do it in a loud and clear voice to make the message comprehensible.

Type of input: auditory (for those that are listening to the information), written (for the volunteer that is reading).

Resources: the worksheet with the written conclusions (worksheet 3).

Type of activity: explicit



S E S S I O N 2	(20 minutes)	<p>Oral exposition: let's teach our classmates!</p> <p>During this session all members of each group explain to the rest the experiment that they did during the previous session and also they prove it. The rest of the classmates listen to and take notes about some aspects; in order to develop this activity they will have a worksheet in which they will focus on some specific aspects related to the topic that we are studying (dissolution techniques and types of mixtures). It is important to pay attention because in the next session we are going to develop a mind map and we will need this information. So, it is in this phase that we foster interdependence.</p> <p>Type of input: auditory (for those that are listening to the information), written (for the volunteer that is reading), visual and kinesthetic.</p> <p>Resources: a worksheet to write down important information about the experiments developed in class (worksheet 5).</p> <p>Type of activity: explicit</p>
	Activity 2 (10 minutes)	<p>Evaluation of the oral expositions</p> <p>Now, it is time to analyze how they have been working in groups (if all members have accomplished the task roles, what they think they need to improve, difficulties...). Also, they will evaluate the quality of the oral expositions that they have listened to during this session. The objective is to gather evidences of aspects that they should improve, and also what explains their success. It is essential to foster his/her learn to learn dimension (be conscious about how can they improve and how are they learning). So, we are going to provide them an evaluation worksheet and they will have some time to exchange ideas and feelings in their groups in order to evaluate the oral exposition of their classmates.</p> <p>Type of input: auditory, spoken, written</p> <p>Resources: the evaluation worksheet</p>



		Type of activity: explicit
	Activity 3 (15 minutes)	SELF EVALUATION Now, all members of the class are going to display the evaluation worksheet in a corner of the class and we will provide them some minutes to write down their weak skills and also, their strong skills. Some scaffolding is also provided. Type of input: written Resources: the written evaluation worksheet of the classmates Type of activity: explicit
S E S S I O N 3	(45 minutes)	Designing a popplet During this session we are implementing the most challenging activity developed through these three sessions, as we are fostering implicit cognitive skills of the students. We will encourage them to design a mind map using the App called <i>popplet</i> . In the mindmap they have to link the following concepts: <ul style="list-style-type: none">• Homogeneous substances, heterogeneous substances• Mixtures• Techniques: filtration, evaporation, sieving, extraction• Solid in solid, liquid in liquid, solid in liquid (types of mixtures)• The mixtures that we have been carrying out: vinegar with oil, sugar with water, chickpeas with rice, confetti with water.



	<p>Afterwards, we will ask them to print the mind map and keep it in their science folder.</p> <p>Type of input: visual, written</p> <p>Resources: a computer, worksheets completed in class during the previous sessions</p> <p>Type of activity: implicit</p>
<p>In terms of academic content, what are the students learning and what are they learning to do?</p>	<p>This lesson plan is integrated in a didactic unit related to mixtures and properties, and specific contents of the natural science area of the curriculum (119/2015 June 23rd) have been considered. Specifically, they are learning the following ones:</p> <ul style="list-style-type: none"> • Usage of material and specific laboratory techniques. • Planning experiences to check the properties of the substances and their behavior. • Instruments and objects of habitual usage in the laboratory: knowledge and usage. • Safety regulations in the laboratory: knowledge and application. • Properties of water as a solvent. <p>Also, some competences included in the Basic competences of the digital area, specifically the following ones:</p> <ul style="list-style-type: none"> • <u>Competence 5</u>. Building new personal knowledge through strategies for treating information with the support of digital applications. • <u>Competence 8</u>. To carry out group activities using collaborative work tools and virtual environments.
<p>In terms of language, what are the students practicing or learning to do?</p>	<p>They are learning new vocabulary related to a topic that they are interested to learn about, and they are using it in a functional way. In addition to this, they are learning it in a communicative and cooperative interaction. Although closed linguistic structures have been provided to them in order to scaffold correctly, we provide them opportunities to express themselves in a spontaneous way. So, they are processing input in a meaningful way and we are fostering real communication.</p>
<p>In what way is this lesson plan a good example of</p>	<p>This lesson is a good example because we have been taking into consideration the Howard Gardner's multiple intelligences to conform the team works. In addition to this, at the beginning of the first session we provide activities in</p>



what we learnt in the GEP course session?	order to learn vocabulary and sentence structures that they are going to use in further activities. We also promote cooperative structures defining roles that should be respected in order to achieve a common goal. Furthermore, we foster the learning of different skills of the language: writing, reading, speaking and active listening. Finally, we have taken into account an appropriate balance between the cognitive and the language level.
Other important information	<p>There are some aspects that should be taken into account. According to the Decree 150/2017 October 17th teachers should take into account student specific needs. So, in the designing of this action plan we have been conscious that:</p> <ol style="list-style-type: none">1) We are teaching to a group that has some difficulties to speak in English. So, that's the reason the scaffolding that we are providing is so controlled. We provide entire sentence structures to get used to write and to communicate following patterns that should be known.2) Students are used to work in groups, but not to develop interdependence roles in a collaborative way. So, we introduce basic roles that they can achieve and understand. We should implement more challenging proposals in the foreseeable future.3) In order to respect guarantee that we respect the cognitive level, we introduce controlled practice activities during the first session, the speaking skill during the second session (more demanding) and implicit questions during the third session.
ANNEXES (materials, handout, pictures... if not possible to include in the activity section.)	Annexes have been provided at the end of this document.



Generalitat de Catalunya
Departament d'Ensenyament
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 cognitivelevel and the right languagelevel , 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





Generalitat de Catalunya
Departament d'Ensenyament

9. At least one of the activities presented requires cooperation among students.	YES
10. Students are explicitlytaught how to work in groups (or pairs).	YES
11. Students are explicitlyguided 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 digitalcollaborativelearning .	YES





Generalitat de Catalunya
Departament d'Ensenyament

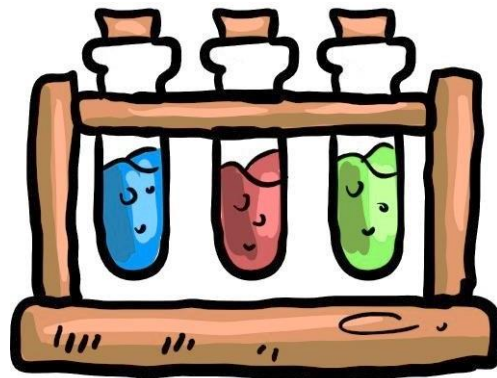
Joan Carles Mas Montosa. 5th Grade

Plantilla creada pel grup de formadores del Programa GEP (Generació Plurilingüe) del Departament d'Ensenyament. Curs 2018-2019



Experiments...

MIXTURES AND DISSOLUTIONS



Name:

Class:

Teacher:

Year:

EXPERIMENTS

Worksheet 2 - LANGUAGE SUPPORT: useful vocabulary

<i>English</i>	<i>Catalan</i>
Materials	
Glass	
Vinegar	
Spoon	
Syringe	
Test Tube	
Chickpeas	
Rice	
Sieve	
Tray	
Stove	
Sugar	
Casserole	
Funnel	
Filter paper	
VERBS	
Put	
Pour	
Add	
Mix	
shake	

EXPERIMENTS

Worksheet 2 - Language support: How to write my predictions and conclusions

Questions:

What do you think that is it going to happen?

What are your predictions?

PREDICTIONS

I think that...

The mixture	is	homogeneous	because	we <u>can't</u> distinguish clearly the different substances in the mixture.
	is	heterogeneous		we can distinguish clearly the different substances in the mixture.

Questions: What is the final result? Can you explain it?

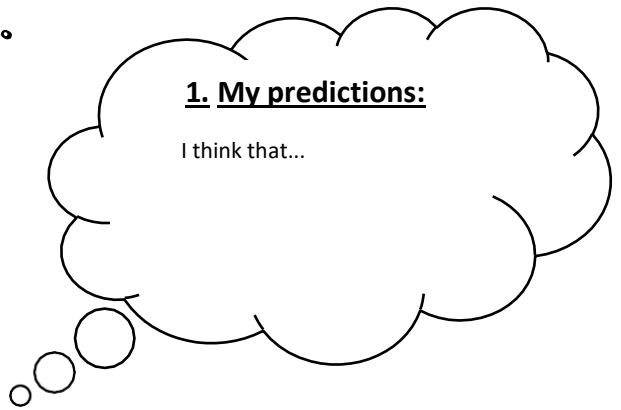
CONCLUSIONS

I think that...

Extraction Sieving Evaporation Filtration	is	a useful technique	to separate	oil chickpeas sugar confetti	from	rice. vinegar. lentils. water.
	requires using	a tool tools	called	syringe. sieve. stove. funnel and filter paper.		

WORKSHEET 3 EXPERIMENTING...

1. Extraction



1. What do we need?

Material:

(Read the following material. Then **match** the picture with the word).



- 2 glasses
- 1 bottle of oil
- 1 bottle of vinegar
- 1 wooden spoon
- 1 syringe



3. How do we do it?

(Read the following instructions to carry out the experiment. **Draw** the different steps to register what happens).

1. Pick up the bottle of oil. Then, pour some oil in the transparent glass.
2. Add some vinegar into the glass.
3. Mix both liquids with the wooden spoon.
4. Separate the vinegar from the oil by using the syringe.



STEP 1	STEP 2	STEP 3	STEP 4

4. Conclusions:

WORKSHEET 3 EXPERIMENTING...

2-SIEVING



1. What do we need?



Material:

(Read the following material. Then match the picture with the word).



- 1 cup of chickpeas
- 1 cup of rice
- 1 wooden spoon to mix
- 1 sieve
- 1 tray



2. How do we do it?

(Read the following instructions to carry out the dissolution. Draw the different steps to register what happens).

1. Put some chickpeas in a glass.
2. Then add some rice in the same glass.
3. Next, mix the rice and the chickpeas with the wooden spoon.
4. Hold firmly the sieve and place an empty tray under it.
5. Finally, shake the sieve. The rice should fall into the tray.
6. Put the rice and the chickpeas into two different glasses again.

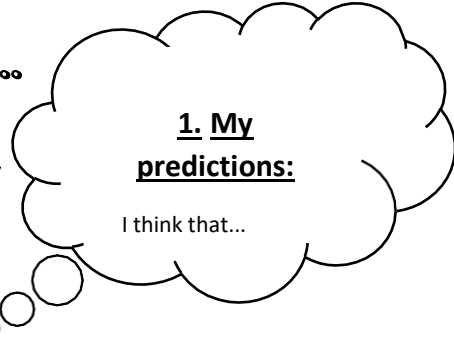


STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6

4. Conclusions:

WORKSHEET 3 EXPERIMENTING...

3-Evaporation





2. What do we need?

Material:



(Read the following material. Then match the picture with the word)





1 cup of sugar


1 test tube of water

1 wooden spoon

1 stove

1 casserole

1 glass



3. How do we do it?

(Read the following instructions to carry out the dissolution. Draw the different steps to register what happens).

1. First of all, pick up the test tube with water. Then, pour some water in the transparent glass.
2. Next, put some sugar into the glass.
3. Then, mix the sugar and the water with the spoon.
4. After, pour the water mixed with the sugar into a small casserole.
5. Finally, put the casserole on the stove and ask your teacher to switch it on.
6. Wait until all the water evaporates. Then, switch off the stove.
7. Last of all, remove the sugar from the casserole and put it into a glass.



STEP1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6	STEP 7

4. Conclusions:

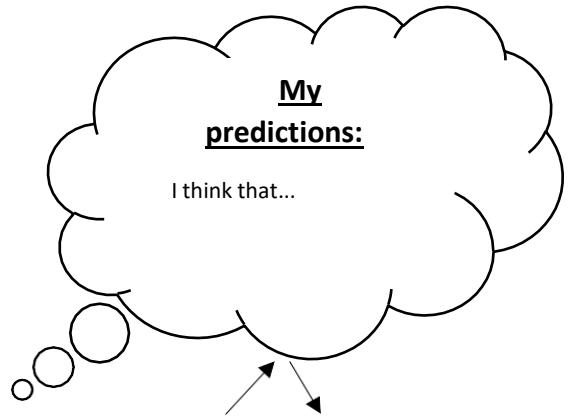
WORKSHEET 3 EXPERIMENTING...

4. Filtration



2. What do we need?

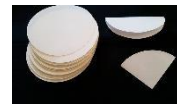
Material:



(Read the following material. Then **match** the picture with the word)



- 1 cup of confetti
- 1 test tube with water
- 1 wooden spoon
- 2 glasses
- 1 funnel
- Filter paper



2. How do we do it?

(Read the following instructions to carry out the dissolution. Draw the different steps to register what happens).

1. First of all, put some confetti in a glass.
2. Next, pour some water from the test tube in the same glass.
3. Then, mix both elements with the wooden spoon.
4. Now, put the filter paper in the funnel and hold firmly the funnel covered with the filter paper.
5. Place the funnel above an empty glass.
6. Finally, pour the mixture through the funnel until you fill the glass



STEP1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6

4. Conclusions:



ORAL EXPOSITIONS




Listen to the oral expositions and complete the information. Remember that you are going to use this information to develop a new task during next week. Pay attention.

Classmates	Technique	Mixture	Type of mixture	Tool required to apply the technique
Teacher	Extraction	Oil and water	Heterogeneous	A syringe





PEER EVALUATION

NAME:	Names of the classmates	Skills involved in the speaking	Weak point 	Satisfactory point 	Strong point 	RECOMMENDATIONS (<i>optional</i>)
MY ADVICES	Group/ Students:	Clarity				
		Speed				
		Memorization				
	Group/ Students:	Clarity				
		Speed				
		Memorization				
	Group Students:	Clarity				
		Speed				
		Memorization				

USEFUL SENTENCES:

I think that (John) needs to improve _____

The way (John) has been reading is _____

You can understand everything correctly

USEFUL VOCABULARY:

the pronunciation (la pronúncia)

the speed (la velocitat)

the memorization (la memorització)

USEFUL LINKERS

because (perquè)

but (però)

although (encara que)

Joan Carles Mas Montosa



SELF EVALUATION: MY SPEAKING NOTES

Activity	Date	MY STRONG SKILLS	MY WEAK SKILLS

Joan Carles Mas Montosa



GEP 1	Task 2: Reading, writing and Assessment in CLIL
Title of the lesson or topic	Changes of matter and effects of forces.
Author	Joan Carles Mas Montosa
Course / year / age	5 th level
Number of sessions	2 sessions of 45 minutes
Collaboration with...	No one (I'm doing this alone and in my own).
Main objectives of the sessions	<ul style="list-style-type: none">• Foster speaking interaction.• Foster the writing skills of the language.• Foster interaction and different potentialities between classmates.• Learning basic concepts of the topic that we are studying.• To help learners understand that keeping a record of new words is important.



	<ul style="list-style-type: none"> • Provide learners with opportunities to understand the key concepts and apply them in different context.
Short description of the sessions	In these sessions students will learn science theoretical concepts, but through dynamic learning structures and cooperation based activities. The fostering of speaking, reading and writing have been taken into account, as well as the Cummins matrix learning process. All specifications related to the materials used and the supports applied are included in the following section of this document.

<i>The descriptions of the activities below should contain:</i>		Timing
<ol style="list-style-type: none"> 1. <i>collaborative and cooperative activities instructions (including the timing and the language support)</i> 2. <i>type of support,</i> 3. <i>readings and writings planned,</i> 4. <i>assessment tools</i> 5. <i>materials used</i> 		
S E S S I O	Activity 1	<p>Watching a video.</p> <p>We watch 2:30 minutes of the following video: https://www.youtube.com/watch?v=BOr76Zx48QM</p> <p>Next, we comment the concepts of Physical changes and chemical changes of matter and we design a simple mindmap in the blackboard with the main ideas included in the video. We encourage the pupils to raise their hands and provide information related to the video they just have watched (it can be considered</p>
		10 minutes





N 1		a pre- reading activity to understand better the contents and some information they will find in the text that they are going to read).	
	Activity 2	<p>Running dictation.</p> <p>We provide to the pupils the photocopies named <i>Changes of matter</i> (included in the following pages) and we ask them to go outside and memorize all the words that they can, as in their photocopies there are some missing words that they should copy. We will split the class in groups of three or four students. They should go outside in turns. They should take into account that a student can't go outside two times in a row. They only can go out again when a whole round is completed and all members in the group have gone outside the classroom to read once. All members of the group will run to memorize information, but there will be other roles:</p> <ul style="list-style-type: none">• 2 correctors: checks that the spelling mistakes are correct.• The organizer: who decides the paragraph or words that should be memorized by the next student that runs, and also who checks that all new information is written in the correct section of the handout. <p>We will limit the time and we will set up a stopwatch.</p>	25 minutes



	Activity 3	Assessment. Once the time is over, we will provide them a photocopy with all the missing gaps (the same model that is displayed outside) and we will give them some time to correct the spelling mistakes and complete the missing information that didn't have enough time to complete. At the same time, they will complete the photocopy called <i>Team evaluation</i> and also the handout called Words that I've learnt if they consider they want to write words that they are interested to remember (both documents are included in the annexes section).	10 minutes
S E S S I O N 2	Activity 1	Dictogloss. We will play two minutes of the video named Forces and effects of forces: https://www.youtube.com/watch?v=AiyNRNfuF2M While students watch it they should write the missing words of the text provided in the photocopy named <i>Forces and effects of forces</i> . We will reproduce the video four or five times. Just afterwards we will write in the blackboard the words and students should correct the spelling mistakes.	10 minutes
	Activity 2	Analyzing examples, thinking critically and speaking.	15 minutes



Before starting the activity we will provide to the students **the Pictionary** (included in the annexes section). In it they can find words related to the pictures they should analyze. It can be helpful to trigger previous knowledge and also to learn the words that they should be familiarized with (essential if we want to scaffold correctly).

We split the class into groups of three or four students and we encourage them to speak about the pictures included in the photocopy. One student will be the first to start talking, and then they will talk in rounds (every picture will be commented by a different student each time). Once every member of the group has spoken, they will repeat the round again. Students should use the following sentence structures (that should be provided beforehand):

Speakers that start the conversation:

- “I think that there is a force interacting. Under my point of view it is a _____ (interacting or non-interacting) force because _____”

Then, the rest of classmates (in turns) should answer using the following sentence structures:

- I agree with you / I don't agree with you. It is a _____ (non- contact/ contact force).



	<p>In case they disagree they should share their point of view.</p> <p>While students are speaking the teacher can walk around the class (as a busy bee☺) and he/she can take advantage of the situation to assess the speaking process of the pupils by using a rubric. Through it we will evaluate some aspects related to the use of the language.</p>	
Activity 3	<p>Sharing knowledge and writing.</p> <p><u>Part 1:</u></p> <p>Now, we will encourage one volunteer (spokesman) per group, to explain to the rest of the classmates that are conforming groups their idea about the picture. Then, we write the statement in the boxes included in the photocopy and we comment the reasons in case someone disagrees or has some doubts about it.</p> <p><u>Part 2:</u></p> <p>Finally, as an after- reading activity we analyze the pictures and we write sentences about the consequences of applying force to an object:</p> <p>“Force can change the shape of objects”</p> <p>“Force can...”</p>	20 minutes



		<p>This activity is important because then, during the next session, we will check the validity of the previous knowledge acquired through this activity.</p>	
<p>In terms of academic content, what are the students learning and what are they learning to do?</p>		<p>This lesson plan is integrated in a didactic unit related to mixtures and properties, and specific contents of the natural science area of the curriculum (119/2015 June 23rd) have been considered. Specifically, they are learning the following ones:</p> <ul style="list-style-type: none"> • Analysis of the effects of a force or different forces on an object. • Chemical changes in relation to everyday phenomena: combustion, oxidation and fermentation. <p>We also encourage the learning of some main competences related to the <i>Learn to learn</i> and <i>sense of initiative and autonomy area</i>. Specifically,</p> <ul style="list-style-type: none"> • Self- knowledge towards learning dimension (learn to learn area). • Group learning dimension (learn to learn area). • Self- awareness / positive self- concept dimension (sense of initiative and autonomy area). • Decision making dimension (sense of initiative and autonomy area). 	
<p>In terms of language, what</p>		<p>They are learning new vocabulary related to a topic that they are interested to learn about, and they are</p>	



are the students practicing or learning to do?	using it in a functional way. In addition to this, they are learning it in a communicative and cooperative interaction. Although closed linguistic structures have been provided to them in order to scaffold correctly, we provide them opportunities to express themselves in a spontaneous way. So, they are processing input in a meaningful way and we are fostering real communication.	
In what way is this lesson plan a good example of what we learnt in the GEP course session?	<p>This is a good lesson plan because have been taken into account the following aspects (learnt in the GEP course formation):</p> <ul style="list-style-type: none">• There is a great variety of resources and support materials implemented (visuals as videos, “pictionaries”, speaking guidelines...). So, we respect the Howard Gardner’s multiple intelligences.• We have taken into account an appropriate balance between the cognitive and the language level (Cummins matrix).• We also promote active roles in cooperative that should be respected in order to achieve a common goal.• Pre- reading while- reading and after-reading activities have been designed when fostering reading tasks.• The designed assessment tools help students acquire self- awareness of the learning process.	



Other important information	<p>There are some aspects that should be taken into account. According to the Decree 150/2017 October 17th teachers should take into account student specific needs. So, in the designing of this action plan we have been conscious that:</p> <ol style="list-style-type: none">1) We are teaching to a group that has some difficulties to speak in English. So, that's the reason the scaffolding that we are providing is so controlled. We provide entire sentence structures to get used to write and to communicate following patterns that should be known.2) Students are used to work in groups, but not to develop interdependence roles in a collaborative way. So, we introduce basic roles that they can achieve and understand. We should implement more challenging proposals in the foreseeable future.3) In order to respect guarantee that we respect the cognitive level, we introduce controlled practice activities, as for instance when speaking activity of the second session (activity 2). By closed sentence structures we assure that everyone in class can participate equally.	
ANNEXES (materials, handout, pictures... if not possible to include in the activity section.)	All the materials and handouts are included after the self- assessment checklist.	



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



ANNEXES

SESSION 1

RESOURCES








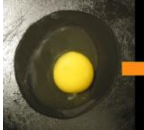





CHANGES OF MATTER



As we have studied throughout this unit, matter can change. But the change of the matter can be **physical** or **chemical**. What's the difference between them?

Pay attention, listen the teacher instructions and be ready to learn! You will **learn the difference** between physical and chemical changes through a **running dictation**. Complete the following chart taking into account the text provided by the teacher.

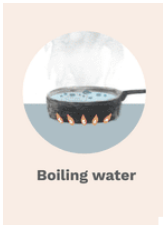


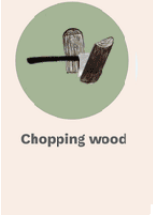
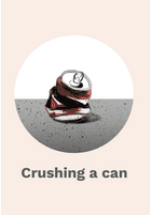
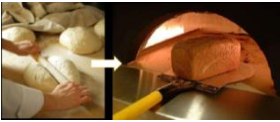

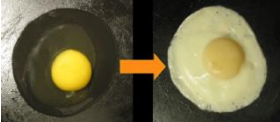



Physical changes	Chemical changes
<p><u>How do I know the change is physical?</u></p>	<p><u>How do I know the change is chemical?</u></p>
<p><u>What happens with the original substances?</u></p>	<p><u>What happens with the original substances?</u></p>
<p style="text-align: center;"><u>Examples</u></p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <input data-bbox="204 1585 363 1688" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="432 1585 580 1688" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="612 1585 772 1688" type="text"/> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">  <input data-bbox="293 1861 453 1964" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="533 1861 676 1964" type="text"/> </div> </div>	<p style="text-align: center;"><u>Examples</u></p> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">  <input data-bbox="1114 1442 1430 1570" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="1114 1585 1430 1713" type="text"/> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;">  <input data-bbox="1114 1592 1430 1720" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="1114 1736 1430 1863" type="text"/> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;">  <input data-bbox="1114 1742 1430 1870" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="1114 1877 1430 2004" type="text"/> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;">  <input data-bbox="1114 1865 1430 1993" type="text"/> </div> <div style="text-align: center;">  <input data-bbox="1114 2000 1430 2128" type="text"/> </div> </div>

CHANGES OF MATTER



(To be displayed in the corridor)

Physical changes	Chemical changes
<p><u>How do I know the change is physical?</u></p> <ul style="list-style-type: none"> In a physical change, there is <u>only a change of state</u>. The new substance has <u>the same properties</u> as the old one. A physical change may also include <u>changing the shape</u> of the substance. 	<p><u>How do I know the change is chemical?</u></p> <ul style="list-style-type: none"> In a chemical change one or more new substances are created. The new substance is different from the original. It has properties that are different than those of the starting materials.
<p><u>What happens with the original substances?</u></p> <ul style="list-style-type: none"> No new substance or substances are produced. In all these changes you can get the original materials back. 	<p><u>What happens with the original substances?</u></p> <ul style="list-style-type: none"> You can't get the original materials back so easily.
<p style="text-align: center;"><u>Examples</u></p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center; margin: 5px;">  <p>Boiling water</p> </div> <div style="text-align: center; margin: 5px;">  <p>Melting an ice cube</p> </div> <div style="text-align: center; margin: 5px;">  <p>Breaking glass</p> </div> <div style="text-align: center; margin: 5px;">  <p>Chopping wood</p> </div> <div style="text-align: center; margin: 5px;">  <p>Crushing a can</p> </div> </div>	<p style="text-align: center;"><u>Examples</u></p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center; margin: 5px;">  <p>Baking bread Dough becomes bread.</p> </div> <div style="text-align: center; margin: 5px;">  <p>Baking a cake Cake mix becomes a cake</p> </div> <div style="text-align: center; margin: 5px;">  <p>Frying an egg Raw egg becomes cooked</p> </div> <div style="text-align: center; margin: 5px;">  <p>Oxidation Steel becomes rust.</p> </div> </div>

TEAM EVALUATION

Evaluation of common goals

N- Not acquired SA- Satisfactorily acquired NA – Notably acquired EA – Excellently acquired

GOALS	N	SA	NA	EA
We have progressed in our learning				
Every member of the group has accomplished the assigned task				
We have maintained an appropriate noise level				
What can we improve the next time?				

Evaluation of the group rules.

RULES	N	SA	NA	EA
To respect the turn to speak				
Maintaining a proper tone of voice				
Asking for help when is required				
Helping a partner when he/ she need it.				
Speak to others with respect and education				
To accept the decisions of the group				
To accomplish our tasks				
Keeping silence when the teacher asks for it				
Do you consider we should add a new rule? Share it!				

What we do very well and we should continue doing

Something that we need to improve

The qualification we deserve as a group is...	N	SA	NA	EA
---	---	----	----	----

WORDS THAT I'VE LEARNED!

ENGLISH WORDS

TRANSLATION

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____



Plantilla creada pel grup de formadores del Programa GEP (Generació Plurilingüe) del Departament d'Ensenyament. Curs 2018-2019



SESSION 2

RESOURCES

PICTIONARY



INFLATABLE BALL



BENCH



MAGNET



ELASTIC BAND



CAR



PARACHUTE

FORCES AND EFFECTS OF FORCES

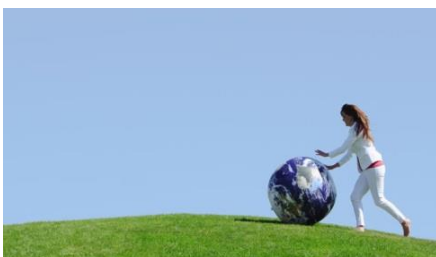
Watch the video that the teacher is going to display in the screen of the classroom and fill the gaps.



- Force is the capacity of a _____ to do work.
It can be _____ or _____.
- Force results to the interaction of _____.
- Forces can be divided into _____ and _____.
- Contact forces result when two interacting objects are in _____ with each other.
- Non-contact forces result when two interacting objects _____ in physical contact with each other.



Now, read again the information that you have written and try to match the concepts. There is a force interacting? It is a non-contact force or a contact force?





Now, analyze the pictures and list the effects that force can produce:

Force can change the shape of objects.

Force can _____



All good scientists check the hypothesis that they have. So, it is time to prepare some experiments to verify that everything we have said is true. Are you ready?



SPEAKING TIPS!

Let's analyze some examples related to what we have been learning!



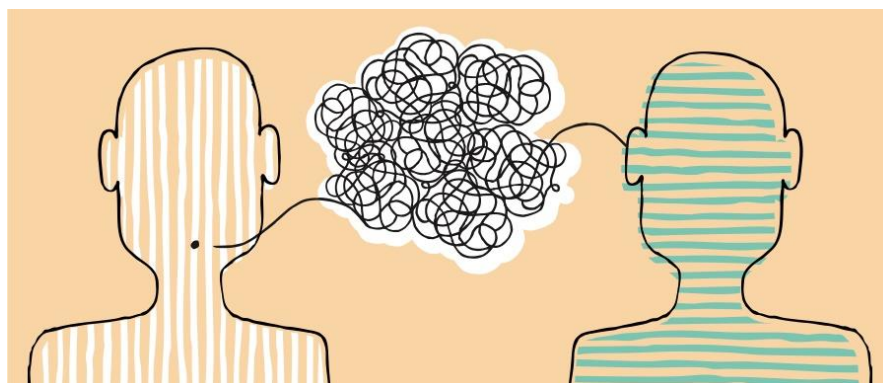
If you start the conversation...

"I think that there is a force interacting. Under my point of view it is a _____ (interacting or non-interacting) force because _____"

Do you agree? Do you disagree?

"I agree with you / I disagree. It is a _____ (non- contact/contact force)".

In case you disagree, please give reasons!



OBSERVATION RUBRIC					
STUDENT'S NAME:					
1. Not acquired 2. Satisfactorily acquired 3. Notably acquired 4. Excellently acquired					
Evaluation criteria	1	2	3	4	RESULT
ORAL COMMUNICATION DIMENSION (Language)					
Is able to follow oral instructions.	Has great difficulty or is unable to follow oral instructions. The teacher is obliged to help him or her individually and explain what they are supposed to do again.	Has little difficulty or is almost unable to follow oral instructions. The teacher should explain him or her again what are they supposed to do.	Has nearly no difficulty to follow oral instructions.	Has the ability to understand and follow oral instructions.	
Is able to follow the tips provided by the teacher (see the following speaking tips handout).	Has great difficulty to identify the sentence structure is required to use according to the communicative situation and also has difficulties to read it or say it in a comprehensible way.	Identifies the sentence structure is required to use according to the communicative situation, but he or she has difficulties to use it in a comprehensible way.	Identifies the sentence structure is required to use and has nearly no difficulty to use it in a comprehensible way.	Identifies the sentence structure is required to use and has no difficulty to use it in a comprehensible way. The sentence structure sounds spontaneous and clear.	
Is able to listen and to respect opinions of his or her classmates.	He or she is not participative enough. He or she has difficulties to speak when is required or interrupts the other classmates when they are speaking.	He or she is quite participative and speaks when is required, but usually interrupts the other classmates when they are speaking.	Generally, the student participates and shows interest during the activity. He or she respects the opinions of other classmates.	The student participates and shows interest during the activity and respect the opinions of other classmates.	
SCIENCE CONTENTS					
Is able to analyze real examples where forces intervene taking into consideration the theoretical concepts learnt through the session (contact and non -contact forces)	Is not able to identify how the forces intervene and demonstrates that has not understood correctly the main theoretical concepts of this session.	Is able to identify that a force intervene, but has great difficulty to distinguish correctly the main theoretical concepts learnt through this session.	Is able to identify that a force intervenes. Usually distinguishes correctly the main theoretical concepts learnt through this session.	Is able to identify that a force intervenes and also to distinguish correctly the main theoretical concepts learnt through this session.	