



The matter and its properties: how to classify materials as solids, liquids or gases.
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Lesson plan:

The matter and its properties: how to classify materials as solids, liquids or gases.

School	PrimaryMiddleHigh				
Year / Class	1	2	3	4	5
Subject :	Topic: Physical Science				
CLIL language	English				

Teacher / Teaching team profile	Teacher's role:	Main Teacher Co-teacher Other: _____	Subject taught: Math and Natural Sciences
	Teacher's role:	Main Teacher Co-teacher Other: _____	Subject taught: _____

Student group profile (general)	CEFR Level:	A1 B1	A2 B2	C1 C2
	Experiences of CLIL English mother tongue Other mother tongue	Migrant background Special Educational Needs :__ Other:		
	Experiences of CLIL Students have had experiences of CLIL both at Primary and at Middle school.			

Timetable fit	<ul style="list-style-type: none"> ○ Module ○ Lesson 	<p>Previous lessons:</p> <p>This lesson is part of the first module of Physics lessons.</p> <p>In this module, students learn what matter is, which are its phases and what their molecular structure is like. Furthermore, they study how to measure volume and mass and increase their knowledge and comprehension of volume units of measurements.</p> <p>The whole module is planned as laboratory activities and students work in small groups of four people.</p> <p>Each lesson lasts 2x50'.</p> <p>This one is the 11th lesson of a module of 16 lessons.</p> <p>The previous ten lessons have been organised as follows:</p> <ol style="list-style-type: none"> 1. How can we demonstrate that air exists? 2. How can we demonstrate that air occupies a space? 3. How can we measure volumes? Millilitre and Litre as units of measurement. 4. Does a solid have its own shape? And a liquid? And a gas? 5. Does a solid have its own volume? And a liquid? And a gas? 6. How can we measure the volumes of irregular objects? (Displacement method for measuring volume) 7. How can we measure the volume of water? And of air? 8. How can we measure volumes? dm^3/l and cm^3/ml as units of measurement. 9. How can we measure and calculate the volume of objects built up with small cubes? 10. Is a solid, a liquid or a gas compressible or is it incompressible? <p>Future lessons:</p> <p>The future work will focus on:</p> <ol style="list-style-type: none"> 1. How can we measure the mass of a solid? And of a liquid? 2. How can we measure the mass of air. 3. What is the molecular structure of solids, liquids and gases like? Properties of matter depend on how molecules are packed (students will watch the video https://www.youtube.com/watch?annotation_id=annotation_4109161969&feature=iv&src_vid=bMbmQzV-Ezs&v=21CR01rlmv4 " modified by their teacher using ed-puzzle. They will have to follow an organized schedule) 4. Models of molecular structures (from: La struttura particellare della materia nella scuola media inferiore: risultati di un'indagine e riflessioni didattiche" PierLuigi Riani, originariamente su La Chimica nella Scuola, 1995, XVII (3), 79-85. Riprodotto con l'autorizzazione direttore di CnS.) 5. Summative assessment at the end of the module.
Resources & tools	Schedules prepared by the teacher.	

	<p>Images:</p> <p>Activity 2: https://pixabay.com/it/extraterrestre-verde-gli-occhi-146107/</p> <p>Scaffolding Activity 4a: https://pixabay.com/it/pelo-di-capra-pelliccia-animale-612872/ https://pixabay.com/it/scimmia-symphalangus-syndactylus-448355/ https://pixabay.com/it/piuma-piume-macro-brown-ali-317828/ https://pixabay.com/it/pollo-galletto-pollame-gallo-1105313/ https://pixabay.com/it/raganella-anuri-rana-anfibi-324553/ https://pixabay.com/it/con-la-pelle-pelle-di-serpente-scala-394384/ https://pixabay.com/it/pesce-giallo-snapper-954063/</p> <p>Activity 4b: https://pixabay.com/it/pallone-ad-aria-calda-palloncino-296493/ https://pixabay.com/it/set-da-tè-teiera-coppa-25197/ https://pixabay.com/it/raincloud-tempesta-meteo-simbolo-47580/, https://pixabay.com/it/photos/?image_type=&cat=&min_width=&min_height=&q=honey&order= https://pixabay.com/it/photos/cioccolato/ https://pixabay.com/it/photos/?orientation=&image_type=&cat=&colors=&q=gelato&order=popular&pagi=2 https://pixabay.com/it/succo-vetro-limonata-paglia-35236/</p>
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Students' prior knowledge, skills, competencies	Subject	Language
	<p>Students know: The definition of matter; that even air is matter and occupies a space; what shapes and volume are; how to measure volume; which are the units of measurement for volume; how to calculate volume; the physical properties of matter.</p> <p>Most students are able to: Work in a laboratory; follow instructions to manage an experiment; plan a simple experiment to demonstrate a theory; write a methodology recount.</p>	<p>Specific vocabulary: Matter, solid, liquid, gas, volume, shape, physical properties, compressible, incompressible, state of matter, units of measurements, to measure, to calculate, ml, l, dm³, cm³.</p> <p>Structure: present form, past form (simple past tense: students have not studied it yet in L2; when we have found a verb in the simple past tense for the first time I told the students that it was a past form and I showed them how to form it with regular verbs; furthermore I told them the simple past tense of each irregular verb we have found).</p> <p>Function: we worked on giving instructions, describing a process, sequencing events to recount an experiment, describing cause and effect, writing a methodology recount.</p> <p>When students work in groups, they speak in Italian and switch to English only when the teacher is with them or when they have to write a composition or to prepare something that has to be said aloud to the whole class.</p>
	Relational competences	
	<p>These students are used to working in groups also in a cooperative way in order to solve problems and to finding working strategies; some of them need to improve their abilities to communicate on a person-to-person basis, defending their ideas and their working processes. Furthermore these learners need to understand well that their contribution is essential for the good result of the whole group.</p>	

Learning Outcomes expected for this	<p>Content:</p> <p>Teacher's aim: to enable learners to identify solids, liquids and gases.</p>
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<p>lesson</p>	<p><u>Learning outcomes:</u> To know differences and similarities between the phases of matter. To be able to organise materials depending on the physical matter properties. To be able to identify a material as a solid, a liquid or a gas. To be aware that fixed volume and incompressibility are strictly related. To be aware that matter can be found in different phases at room temperature. <u>Teacher's aim:</u> to enable learners to create a tool to classify materials.</p> <p><u>Learning outcomes:</u> To know what a binary key is and how it works. To be able to create a simple binary key. To be able to use a binary key. To be aware that a binary key is a good tool to classify materials. To be aware that there are different possible binary keys useful to classify materials. <u>Teacher's aim:</u> to develop learners' abilities to work in groups defending their ideas and their working processes.</p> <p><u>Learning outcomes:</u> To be able to work individually. To be able to share their own work in a group. To be able to defend their ideas. To be aware of the importance of the contribution of the whole group.</p> <p>Cognition: Comparing and contrasting (when students compare and contrast the properties of matter and when they compare the tool they have created with those of others). Reorganizing (when students reorganise the properties of the phases of matter through a diagram). Classifying (when students classify a material as solid, liquid and gas). Creating (when students create their own binary key to classify). Verifying (when students verify if the tool works or not). Reasoning to draw conclusions when students discuss (i.e. to find the correct criteria to build the binary key). Evaluating (when students evaluate their own and their classmates' work).</p> <p>Communication: <u>Teacher aim:</u> To develop learners speaking oracy. <u>Learning outcomes:</u> To know and be able to use the key vocabulary, the structures and the language functions that follow: <i>Key vocabulary/chunks:</i> binary key, arrow, rhombus, rectangle, diagram, table/chart, column, row, first, second, third, fourth, matter, material, solid, liquid, gas, fixed volume, fixed shape, compressible, incompressible, state of matter, to fall (fell), general vocabulary as in Activity 4. <i>Structures:</i> Sequence of events with present tense (first, next, then, at the end). Past tense (for recounting what has been done). Use of conditional 0 (to lead to logical conclusions). <i>Functions:</i> hypothesising asking and answering questions agreeing and disagreeing expressing an opinion analysing and drawing conclusions comparing and contrasting</p> <p>Culture: To be aware that a binary key is a useful tool to classify.</p>
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Methodology	<p>Language and content are integrated as follows:</p> <ol style="list-style-type: none">1. There are different strategies of interaction between students in order to modify their speaking needs several times during the lesson. Students need to recount an experiment to the whole class, they need to record their knowledge on a chart by themselves, they need to discuss in pairs or in a groups in order to find, for example, the best diagram that represents their ideas, they need to defend their opinion and to write a diagram using correct questions.2. Visual organisers, labelled images, sentence starters, substitution tables are proposed by the teacher in order to support learning and scaffolding learners output.3. The example of a binary key that resumes what students have already studied in Italian (animals) helps them to understand what a binary key is and helps the teacher to explain what has to be done.4. A whole class plenary at the end of both the activities and the whole lesson is done to check, revise and assess both contents and language acquisition.
Assessment	<p>The assessment is both formative assessment and peer assessment.</p> <p>The teacher monitors:</p> <ul style="list-style-type: none">• groups' activities• learners' interactions with a partner• learners' participation in all tasks and activities. <p>When students are working in groups, the teacher writes her/his observations on an Assessment sheet.</p>

ASSESSMENT SHEET

The teacher will monitor students' abilities when they work in groups and write her/his observations on this assessment sheet.

Name: _____
can

		Date	Date
A	Work independently		
B	Work in his/her group to create a shared product		
C	Share his/her own work with the group:		
	<i>He/she presents his work to the group</i>		
	<i>He/she uses evidences to support ideas</i>		
D	Defend his/her ideas into a group:		
	<i>He/she identifies points of similarities and differences</i>		
	<i>He/she expresses support/disagreement for other ideas</i>		
	<i>He/she builds on other learners' ideas</i>		
	<i>He/she clarifies his/her own points</i>		
	<i>He/she uses evidences to support ideas</i>		

Language structure aims:

Name: _____
can

		Needs improvement	2	Well 3	4	Very well 5
A	Ask questions					
B	Answer questions					
C	Recount experiments using sequencing of events					
D	Use conditional 0					

To complete use the evaluation rubric:

	Needs improvement 1	2	Well 3	4	Very well 5
The student can ask questions. (<i>Scaffolding Activity4</i>)	The student cannot ask questions even using the scaffolding suggested by the teacher	The student begins to use the scaffolding as suggested.	The student asks questions using the correct form only when he reads it on the scaffolding sheet.	The student begins to ask questions without reading but he is not always correct.	The student asks questions using the correct form.
The student can answer questions. (<i>Scaffolding Activity4</i>)	The student cannot answer questions even using the suggested scaffolding.	The student begins to use the scaffolding as suggested.	The student answers correctly only when he uses the scaffolding chart or answers in the short form.	The student begins to answer without reading but he is not always correct.	The student answers correctly and with a complete sentence.
The student can recount experiments using sequencing of events.	The student is not able to recount the experiment using a sequence of events.	The student begins to use the sequencing of events in the present tense but he does not use it always properly.	The student correctly uses the sequencing of events in the present tense	The student begins to use the sequencing of events in the past tense but he is not always correct.	The student correctly uses the sequencing of events in the past tense
The student can use conditional 0.	The student does not use conditional 0	The student begins to use the conditional 0, but not always properly.	The student uses conditional 0 in the correct form only when he reads it.	The student begins to use the conditional 0 without reading but he is not always correct.	The student uses conditional 0 to draw his conclusions.

Activity	Activity aims	Activity Procedure	Language	Interaction	Materials	Timing	Assessment
1	Brainstorming: recapping, warming up	<p>The teacher asks learners to recap what has been done. "What did we discover last time?" and /or "Can you summarise what we did last time?"</p> <p>Learners are supposed to answer by looking at the schedules they've worked on.</p>	<p>Communicative functions: Recounting experiments</p> <p>Structures: Sequencing of events in present tense or in past tense</p>	<ul style="list-style-type: none"> ○ Whole class ○ <i>Group work</i> ○ <i>Pair work</i> ○ <i>Individual work</i> 	Schedules completed by the students during the previous lab lessons	5'	<p>Students can use sequencing of events in present or in past tense for recounting what has been done.</p> <p>The teacher records students abilities: Student X can recount experiments. (<i>Assessment sheet</i>)</p>
2	Problem posing:	<p>The teacher reads aloud the text of "Activity2" and asks students "What does Maggie ask? What is her problem?" Students read the text again to scan for specific information and answer on their sheet.</p> <p>The teacher asks, "How can we help Maggie?" introducing so far the point of the lesson.</p> <p>Learners write their hypothesis and read them to the class.</p>	Hypothesising	<ul style="list-style-type: none"> ○ <i>Whole class</i> ○ <i>Group work</i> ○ <i>Pair work</i> ○ Individual work 	Text proposed by the teacher (<i>Activity 2</i>) (for the picture see Resources and Tools)	5'	Students can find the requested information in the written text and answer the question on their sheets.

2b	<p>Presentation of the binary key as a tool useful to classify...animals and ...</p>	<p>The teacher reads the schedule: <i>"Do you know this? We can use a binary key to identify whether a material is a solid, a liquid or a gas."</i> and she asks if anyone knows what a binary key is.</p> <p>Students are supposed to answer depending on their own knowledge. If someone knows what a binary key is, the teacher asks for an explanation. If nobody knows, the teacher will show at the IWB (Interactive White Board) some examples of binary keys used to classify vertebrates.</p> <p>Learners have already studied animals and can easily understand how the tool works.</p>	<p>Asking and answering questions.</p>	<ul style="list-style-type: none"> ○ Whole class ○ <i>Group work</i> ○ <i>Pair work</i> ○ <i>Individual work</i> 	<p>Text proposed by the teacher (<i>Activity 3, title</i>)</p> <p>Examples of binary keys (see, for example, <i>Scaffolding activity 4a</i>)</p>	5'	<p>Students can answer questions such as "Can you tell me what a binary key is?" and "When can we use a binary key?".</p>
3a	<p>Activating prior knowledge: Organisation of the properties of the phases of matter in a table looking at the experiences already done.</p>	<p>The teacher asks students to complete the table in <i>Activity 3a</i> in order to organise the properties of the phases of matter.</p> <p>Students are supposed to complete the chart by their own.</p>	<p>Key vocabulary: Table, matter, physical properties, solid, liquid, gas, fixed volume, fixed shape, compressible, incompressible</p>	<ul style="list-style-type: none"> ○ <i>Whole class</i> ○ <i>Group work</i> ○ <i>Pair work</i> ○ Individual work 	<p><u>To be completed:</u> Table: <i>Activity 3a</i></p> <p><u>To be used as a resource:</u></p> <ul style="list-style-type: none"> - List of the experiments already done - Schedules that students completed during the previous lab lessons 	10'	<p>Students can complete the table on their own.</p> <p>The teacher records students' abilities: e.g. Student X can work individually. (<i>Assessment sheet</i>)</p>

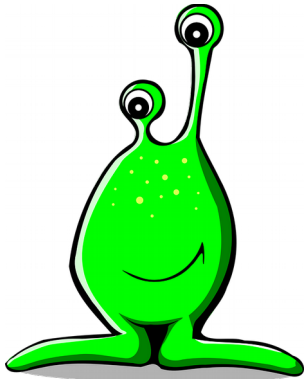
3b	<p>Activating prior knowledge: Sharing of work with group mates and production of a table shared by the whole group</p>	<p>Learners are asked to compare their tables in their working groups and obtain a shared product.</p> <p>If their tables don't match they have to discuss and choose the best solution.</p>	<p>Key vocabulary: Table, column, row, first, second, third, fourth, matter, physical properties, solid, liquid, gas, fixed volume, fixed shape, compressible, incompressible</p> <p>Communicative functions: Comparing and contrasting Agreeing and disagreeing Expressing an opinion Analysing</p>	<ul style="list-style-type: none"> ○ <i>Whole class</i> ○ Group work ○ <i>Pair work</i> ○ <i>Individual work</i> 	<p><u>To be completed:</u> Table: <i>Activity3b</i></p> <p><u>To be used as resource:</u></p> <ul style="list-style-type: none"> - Completed table (<i>Activity 3a</i>) - List of the experiments already done - Schedules that students completed during the previous lab lessons - Sentence starters and language frames as in <i>Scaffolding activity 3b</i> 	10'-15'	<p>Students can complete a shared table.</p> <p>Peer assessment: Students compare their work and decide which is the correct table.</p> <p>The teacher records students' abilities: e.g. Student X can work in group to create a shared product (in this case to complete the "group" table); he is able to share his own work with the group and to defend his ideas. (<i>Assessment sheet</i>)</p>
3c	<p>Activating prior knowledge: Sharing of the group's work with the whole class</p>	<p>The speaker of each group presents the results to the whole class</p>	<p>Communicative functions: Analysing</p>	<ul style="list-style-type: none"> ○ Whole class ○ <i>Group work</i> ○ <i>Pair work</i> ○ <i>Individual work</i> 	<p><u>To be used as a resource:</u> Completed table (<i>Activity3b</i>)</p>	5-10'	<p>Students know the differences and similarities between the phases of matter: they can answer questions such as "Can you tell us what the physical properties of solids/liquid/gases are? Use your table to answer".</p>

4a	Creation of a binary key that is useful for classifying materials	Students are asked to create a binary key in order to classify materials as solids, liquids and gases; looking at their tables (<i>Activity 3b</i>) they have to choose the useful criteria for a correct classification.	Key vocabulary: Binary key, arrow, rhombus, rectangle, table, matter, physical properties, solid, liquid, gas, fixed volume, fixed shape, compressible, uncompressible Communicative functions: Agreeing and disagreeing Expressing an opinion	<ul style="list-style-type: none"> ○ <i>Whole class</i> ○ Group work ○ <i>Pair work</i> ○ <i>Individual work</i> 	To be created: Binary key To be used as resource: Completed table (<i>Activity 3b</i>) Examples of binary keys used by the teacher in Activity 2 and projected on the IWB. Sentence starters and language frames as in <i>Scaffolding activity 4a</i>	15'	Students are able to choose correct criteria to classify. Students can create a binary key. The teacher records students' abilities: Student X can work in a group to create a shared product (in this case to create a shared binary key); he is able to defend his ideas. <i>(Assessment sheet)</i>
4b	Classification of materials: use of the binary keys just created to classify materials	Students are asked to split the group in two in order to work in pairs. Using their binary keys, learners are supposed to classify materials as solid, liquids and gases. They have to repeat the oral exercise twice: first one student asks the questions and the other answers; then they swap.	Communicative functions: Asking and answering questions Analysing and drawing conclusions Structures: Use of conditional 0	<ul style="list-style-type: none"> ○ <i>Whole class</i> ○ <i>Group work</i> ○ Pair work ○ <i>Individual work</i> 	To be completed: Worksheet of <i>Activity 4b</i> To be used as resource: Labelled images (<i>Activity 4b</i>) The binary key created during <i>Activity 4a</i> Sentence starters and language frames as in <i>Scaffolding activity 4b</i>	10'	Students can classify materials correctly; they can use a binary key. The teacher records students abilities: They can ask and answer questions correctly; they can draw conclusions using conditional 0. <i>(Assessment sheet)</i> The teacher records students abilities: Student X can ask and answer questions, he can use conditional 0. <i>(Assessment sheet)</i>

4c	Evaluation: Each group checks whether the binary key works or not.	Students work again in the original group. They are asked to compare their results and to summarise them in a short written text. If results don't match, students look over the binary key again.	Communicative functions: Asking and answering questions Comparing and contrasting Analysing and drawing conclusions Structures: Use of conditional 0	<ul style="list-style-type: none"> ○ <i>Whole class</i> ○ Group work ○ <i>Pair work</i> ○ <i>Individual work</i> 	<u>To be produced:</u> Table of <i>Activity 4c</i> Short text <u>To be used as resource:</u> The worksheet of <i>Activity 4b</i> The binary key built during <i>Activity 4a</i>	10'	Peer assessment: Students evaluate their classification and decide if their binary key works or not.
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4d	<p>Plenary: Sharing of the group's work with the whole class.</p> <p>Students check if:</p> <ul style="list-style-type: none"> - They have classified materials correctly; - Their tools are correct or not. <p>Students discover that there are different binary keys that can be used to classify materials.</p> <p>Students realize that volume can be used instead of compressibility and vice versa.</p>	<p>The speaker of each group presents their results to the whole class.</p> <p>Students compare their work with the other groups'.</p>	<p>Communicative functions: Analysing and drawing conclusions Comparing and contrasting</p>	<ul style="list-style-type: none"> ○ Whole class ○ <i>Group work</i> ○ <i>Pair work</i> ○ <i>Individual work</i> 	<p><u>To be used as resource:</u> Written text (<i>Activity 4c</i>) Labelled images of <i>Activity 4b</i> The binary key built during <i>Activity 4a</i></p>	10'	<p>Students can answer questions such as:</p> <ul style="list-style-type: none"> - "Steam is a solid, a liquid or a gas?" (skinny question: use it students answer looking at their work) - "Why can you say that?" or "Let us look at your binary key, draw it on the blackboard. Can you tell us what the criteria you used to build it are?" (fat question: students have to analyse their work to answer) - "Is your binary key the same as your group mates' one?" "Can you tell us why?" and "Is your key useful to identify a material as solid, liquid or gaseous at room temperature?" "Why?" (fat questions: students have to compare their tool with the others reasoning and analysing to draw conclusions)
5	<p>Plenary: Problem solving</p>	<p>The teacher asks, "At the end of this work, what can we say to Maggie? What do you think is Nutella? A solid, a liquid or a gas?"</p> <p>Learners discuss briefly in their groups, then the speaker answers.</p>	<p>Communicative functions: Analysing and drawing conclusions</p>	<ul style="list-style-type: none"> ○ Whole class ○ <i>Group work</i> ○ <i>Pair work</i> ○ <i>Individual work</i> 	<p>Text proposed by the teacher (<i>Activity 2</i>)</p>	5'	<p>Students can answer the question and identify Nutella as a liquid at room temperature.</p>

Activity 2



Can you help me?

"Hello guys!! How are you?

Till now, we worked on solids, liquids and gases and we studied what their shape is, if it is fixed or not, and if they have their own volume or not. Furthermore, we discovered whether they are compressible or not. Then we measured the volume of irregular objects and water.

Now I know really a lot...but...this morning I was having my breakfast... and ... some Nutella **fell** on the table.

What is Nutella? A solid, a liquid or a gas?

to fall, fell = cadere

Help Maggie to find out what Nutella is.

Give your answer:

What is Maggie's problem?

How can we help Maggie?

Activity 3

Activity 3a

Do you know?

We can use a binary key to identify whether a material is a solid, a liquid or a gas.

Work alone. Complete the chart: you can look at the list of the experiments we have done.

	Does it have a fixed shape?	Which is the experiment that helps you to answer?	Does it have a fixed volume?	Which is the experiment that helps you to answer?	Is it compressible?	Which is the experiment that helps you to answer?
Solid						
Liquid						
Gas						

List of the experiments we have done:

n	Title of the experiment	n	Title of the experiment
1	Is air able to slow down Maggie's spacecraft?	7	How much space does water occupy? Let's measure it!
2	Air needs space: "Are you sure? Is the tank empty?"	8	Does air have its own shape?
3	"How small is a millilitre"?	9	How much space does air occupy? Let's measure it!
4	Does the object that's in front of you have its own shape?	10	There are other units of measurements for volumes...
5	How much space does your object occupy? Let's measure it!	11	Measure or calculate?
6	Does the water that's in front of you have its own shape?	12	Compressible or incompressible?

Activity 3b

Work in groups. Compare your work with your group-mates' work: are your charts all the same?

If not, look again at the experiments we have done and complete a new chart:

	Does it have a fixed shape?	Does it have a fixed volume?	Is it compressible?
Solid			
Liquid			
Gas			

Scaffolding activity 3b:

Students are asked to use the suggested sentences starters.

Scaffolding activity 3b: "Compare your work with your group-mates' one: are your charts all the same?"	Scaffolding activity 3b: "If not, look again at the experiments we have done and complete a new chart."
<i>Language of comparing and contrasting</i>	<i>Language of expressing an opinion</i>
What does your chart look like? (My chart) and (yours) are similar because they both show that ... (My chart) and (yours) are different. My chart shows that ...while your diagram shows that ...	I think that ... because... I believe that... because... In my opinion, ...
<i>Language of agreeing</i>	<i>Language of analysing</i>
I agree with...because we both... I don't agree with because.....	After the examination of our experiments we can deduce that...

Scaffolding activity 3c:

When students present their work to the whole class, they are supposed to begin the description of their table with:

"After the examination of our experiments we can deduce that..."







Activity 4

Activity 4a

Work in groups: use the information on your chart and create a binary key to identify whether a material is a solid, a liquid or a gas. You can look at the binary keys that are on the LIM.

Activity 4b

Work in pairs: use your binary key and classify the materials on the table as solids, liquids or gases.
Repeat the exercise two times: first, you ask the questions and your friend answers; then you swap.

<p>Balloon: _____</p> <p>Hot air: _____</p>		<p>Basket: _____</p>
<p>Steam: _____</p>		<p>Tea pot: _____</p> <p>Cup: _____</p>
<p>Raindrop: _____</p>		<p>Sky: _____</p>
<p>Honey: _____</p>		<p>Wax: _____</p>
<p>Biscuit cone: _____</p>		<p>Icecream: _____</p>
<p>Ice: _____</p> <p>Lemonade: _____</p>		<p>Bubble: _____</p>

Activity 4c

1. Work in groups: Compare your table with the one of your group-mates. Do you have the same results?

If not, try to classify materials again and complete a shared table:

Material	It is a solid	It is a liquid	It is a gas
Balloon			
Hot air			
Basket			
Steam			
Teapot			
Cup			
Raindrop			
Sky			

Material	It is a solid	It is a liquid	It is a gas
Honey			
Wax			
Biscuit			
Ice cream			
Ice			
Lemonade			
Bubble			

2. Write a short text that explains why you have classified one of these materials as a solid, one as a liquid and one as a gas.

Use the suggested sentences starters:

If something has and, it is
 hasand, so it is

If something has.....but it does not have....., it is
 has but it does not have, so it is.....

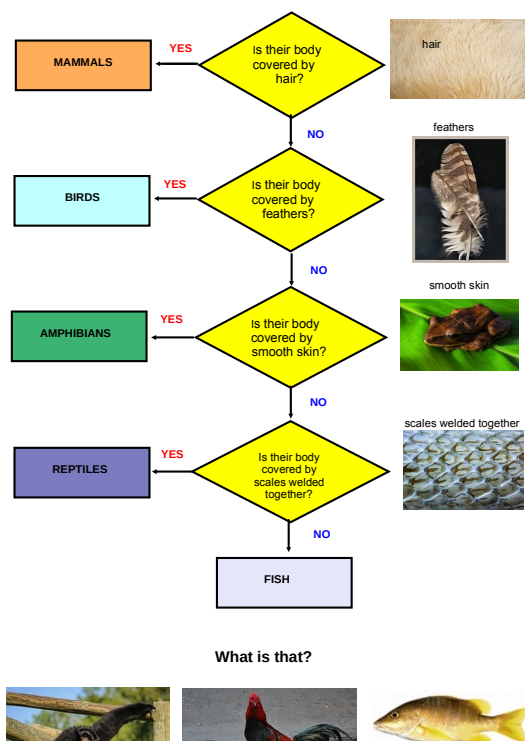
If something doesn't havenor ait is
 does not havenor....., so it is.....

Activity 5



















And now...what is Nutella?

Scaffolding activity 4a:

Students are asked to use the suggested sentences starters.

<p>Use the information of your chart and create a binary key to identify whether a material is a solid, a liquid or a gas.</p>	<p>You can look at the binary keys that are on the LIM.</p>
<p><i>Language of agreeing and Language of expressing an opinion</i></p>	<p><i>Example of binary key</i></p>
<p>I agree with...because ... I don't agree with because...</p> <p>and</p> <p>I think that ... because... I believe that... because... In my opinion, ...</p>	<p>That's a binary key!</p>  <p>What is that?</p>

Scaffolding activity 4b:

Use your binary key and classify the materials in the table as solids, liquids or gases.	Repeat the exercise two times: first, you make the questions and your friend answers; then you swap.																													
Labelled images	Asking and answering questions																													
<table><tr><td>Baloon: _____</td><td></td><td>Basket: _____</td></tr><tr><td>Hot air: _____</td><td></td><td></td></tr><tr><td>Steam: _____</td><td></td><td>Tea pot: _____ Cup: _____</td></tr><tr><td>Raindrop: _____</td><td></td><td>Sky: _____</td></tr><tr><td>Honey: _____</td><td></td><td>Wax: _____</td></tr><tr><td>Biscuit cone: _____</td><td></td><td>Icecream: _____</td></tr><tr><td>Ice: _____ Lemonade: _____</td><td></td><td>Bubble: _____</td></tr></table>	Baloon: _____		Basket: _____	Hot air: _____			Steam: _____		Tea pot: _____ Cup: _____	Raindrop: _____		Sky: _____	Honey: _____		Wax: _____	Biscuit cone: _____		Icecream: _____	Ice: _____ Lemonade: _____		Bubble: _____	<p>This is a support for less able learners</p> <table><tr><th>Question</th><th>Answer</th></tr><tr><td>Does it have a fixed volume?</td><td>Yes it does / No it doesn't</td></tr><tr><td>Does it have a fixed shape?</td><td>Yes it does / No it doesn't</td></tr><tr><td>Is it compressible?</td><td>Yes it is / No it isn't</td></tr></table> <p><i>Drawing Conclusions (Use of conditional 0)</i></p> <p>For the whole class:</p> <p>If it has ...it is has ..., so it is</p> <p>If it doesn't have ... but it has..., it can be doesn't have ... but it has ...,so it can be...</p> <p>If it doesn't have ... nor a ... it is does not have ...nor..., so it is...</p>	Question	Answer	Does it have a fixed volume?	Yes it does / No it doesn't	Does it have a fixed shape?	Yes it does / No it doesn't	Is it compressible?	Yes it is / No it isn't
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