



Students activity book - My kitchen is a mess!

<p>Resolve - brief explanations</p>	<p>Webster’s dictionary defines resolve as: the fixity of purpose ; a legal or official determination; a resolution or determination made, as to follow some course of action; firmness of purpose or intent; determination in finding a solution; a firm determination to do something; formal strong determination to succeed in doing something; the trait of being resolute according to the vocabulary.com.</p>
<p>A glossary of terms</p>	<p>Habit Resolve Purpose Determination Action Solution Resolute Problem solving Mixture of components Types of mixtures Methods of separating the components of a mixture</p>
<p>Basic instruments/ materials</p>	<ul style="list-style-type: none"> - Planning sheet; - Materials: clips, coarse salt, beans and sand; - Laboratory material from the different separation methods: magnetism, sifting, filtration, solvent extraction and evaporation.
<p>Short instruction of the training sessions or the activities</p>	<p>Step 1 - Presentation of the problem John was home alone during the Covi-19 school closure time. As he was missing the experimental classes of chemistry, he decided to do some experiments in the chemistry laboratory of his house, the kitchen. He mixed various materials at random in a container. He started by adding salt to some clips he had on his desk, then added some beans and finally went to get a piece of fine sand from his terrace. Clips + coarse salt + beans + fine sand</p>

	<p>He mixed, stirred to see what was happening. And, he came across a very strange mixture!</p> <p>Then, he remembered his mother would not like to see the mess he had made in the kitchen when she got home. And even if he threw everything in the trash, his mother would notice that he had spent clips, beans and salt.</p> <p>John started to figure out a plan to separate all the components of the mixture and in the end he would be able to put them in the right place without his mother noticing anything.</p> <p>How do you think John did it?</p> <p>Step 2 - Guidelines for solving the problem</p> <p>As John, you have to set out a plan following these steps:</p> <ol style="list-style-type: none"> 1. Define the problem; 2. Think about the problem; 3. Plan a solution; 4. Put the plan into action; 5. Reflect on what has been done.
<p>“a bag of tricks”</p> <p>useful pieces of advice and suggestions for the students</p>	<p>To be able to perform each of the previous steps, read carefully the following suggestions:</p> <ol style="list-style-type: none"> 1. <u>Define the problem</u> <ul style="list-style-type: none"> - write a list of what you know about the problem and identify the knowledge you will need to understand it (and eventually to solve it); - after you have a list of what you know, identify what you still don't know about the problem. 2. <u>Think about the problem</u> <ul style="list-style-type: none"> - reflect on the problem; - gather relevant information about the knowledge involved in solving the problem. 3. <u>Plan a solution</u> <ul style="list-style-type: none"> - consider possible strategies; - choose the best strategy. 4. <u>Put the plan into action</u> <ul style="list-style-type: none"> - be patient - the problem is not always solved on the first attempt; - be persistent - if the plan doesn't work immediately, don't give up and try a different strategy.

5. Reflect on what has been done

- after finding a solution, you should ask yourself the following questions:
 - . does the solution make sense?
 - . did I answer all the questions?
 - . what did I learn from this process?
 - . could I have solved the problem in another way?

