The scenario

Subject	Inorganic chemistry/Crystallization
Length	4:39
Main objectives	Learn the technique of crystallization
Detailed objectives	
Structure and description of experiments:	
1. Introduction	Description: The motivation for the experiment will be the investigation of the crystallization of a salt solution into a solid
2. Main subject	Description: How to transform a liquid into a solid? How do you separate a soluble solid from a liquid and purify it? Is temperature important to achieve crystallization? Investigating the crystallization of alum salt in water at a certain temperature
Part 1	
(0:40), **Experiment 1 (0:42)**	**Tools:** Alum salt, water, beaker, stir plate, thermometer **Description:** Add water to a beaker and stir and heat in the stir plate. With the thermometer check that the water is now hot and add 50 mg of alum salt. The mixture is heated until some of the liquid evaporates, and small crystals begin to form on the surface of the liquid. Subsequently, stop the stirring and heating and wait for the crystallization process to occur for 12 hours. After the salt dissolved in water, the molecules were able to reattach during the next 12 hours. When the molecules reattached, they solidified again, but into a new form (crystals) **Questions:** Does the crystallization process depend on the temperature or the solubility of the salt? – Yes, it depends on the temperature to be able to make the salt soluble and then transform into crystals at hot temperatures, and at cold temperatures form the crystals. **Conclusions:** Salt crystallization occurs when the salt concentration in a solution exceeds its solubility in a solvent (in this experiment, water), which is dependent on the temperature
3. Summary, evaluation and notes	**Application:** The main use of crystallization in the organic chemistry laboratory is for purification of impure solids: either reagents that have degraded over time, or impure solid products from a chemical reaction Is a separation process very commonly used in the industry of many different materials.

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	Level: primary school (ISCED 2 / 6th, 8th grade)

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