

The scenario

Subject (field/title)	Thermal properties of matter / Boiling of water
Length of movie	3:32
Main Goals	Changes in the state of matter
Detailed Goals	The boiling of water at atmospheric pressure
Structure and description of the experiments	
1. Introduction	Description: The movie presents the phenomenon of boiling water
2. Main topic	Description: The movie presents boiling as evaporation in the entire volume of a liquid.
Part 1	
	<p>Tools: Beaker, water, electric stove, thermometer.</p> <p>Description: Pour water into the beaker and place it on the electric stove. We heat the water by observing its temperature changes using a thermometer. When the water reaches a temperature close to 100°C, water vapour bubbles appear in the beaker, i.e. the water has started to evaporate in the entire volume of the liquid.</p> <p>Questions: Does water evaporate at temperatures other than 100°C? Can water boil at temperatures other than 100°C?</p> <p>Conclusions: Boiling differs from evaporation in that the first one takes place at a constant temperature defined as the boiling point, and it is evaporation in the entire volume of the liquid. In contrast, the second one takes place at any temperature but only on the surface of the liquid.</p>
3. Summary and notes	<p>Point out to students that boiling is a physical phenomenon and that every substance has a boiling point that depends on the type of substance and the pressure acting on that substance.</p> <p>Level: primary school</p>