The scenario

Subject	**Thermal properties of matter / Formation of dry ice as a result of rapid cooling of the gas**
Length	3:58
Main goals	Get familiar with sublimation and properties of dry ice
Detailed goals	to show that a sublimation is a process of changing solid into gas without liquid phase, to show that decompression of gas causes temperature drop
Structure and description of experiments:	
1. Introduction	Alongside naphthalene and iodine dry ice is one of most common substances which shows sublimation, even with no external heat source because of its temperature.
2. Main subject	Formation of dry ice as a result of rapid cooling of the gas
Experiments	We start with a special container, in which expanding carbon dioxide will decrease its temperature low enough to be solidified. After few seconds of decompressing we can see white powder of solid carbon dioxide - dry ice. Its temperature is below -80 degrees Celsius. What will happen if we put it into glass of water? Its floating, so its density is smaller than density of water. It creates cloud - at so low temperature water (as air humidity) freezes and creates a cloud. Can such cold material be held on someone's hand? Yes, because of so called Leidenfrost effect. Dry ice sublimates and creates thin layer of gaseous carbon dioxide which insulates skin from the piece of dry ice. The same effect causes dry ice to hover over the surface of a piece of aluminium, for instance. When forced to change state of aggregation quicker, it simply sublimates with no liquid left. We can hear the voice of gas running out from a piece of metal very quickly.
3. Summary, evaluation and remarks	During the lesson, you can present what dry ice looks like and what properties it has. **Level:** primary school

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