“STEAM-STORM” FROM FINLAND!

MAKING ART WITH WATER AT 20 DEGREES CELSIUS BELOW THE FREEZING POINT

Kids Inspiring Kids in STEAM, Finland

School: Mankola School, Jyväskylä. Teacher: Tapani Aaltonen

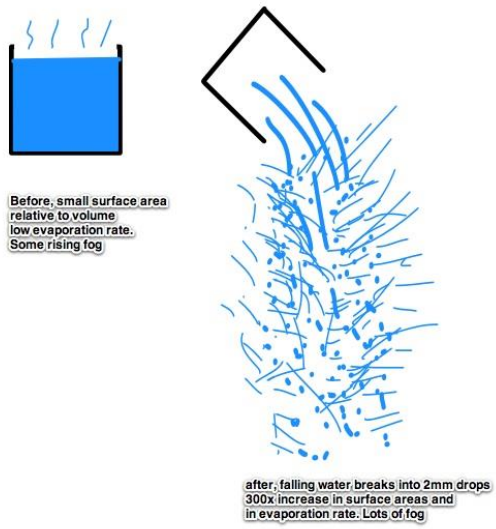
Co-operation: Kristof Fenyvesi, Pirjo Häkkinen
(University of Jyväskylä - www.experienceworkshop.org)

We did a physics experiment, in which we threw boiling water in to the air. If it is cold enough the water evaporates in midair and creates this beautiful pattern. It was -20°C.

The water is not "freezing in midair" as popular videos spreading on the internet often describe the phenomenon. **Water is actually “doing” the opposite: it is evaporating into water vapor.** Then water vapor is very quickly condensing in the cold air, as a cloud of visible "steam" (micro-droplets of water), which then very quickly freeze into a dust cloud of tiny ice crystals, because these droplets are so small.

The boiling water does not freeze instantly. In most of the videos, you can see and hear it splattering on the ground.

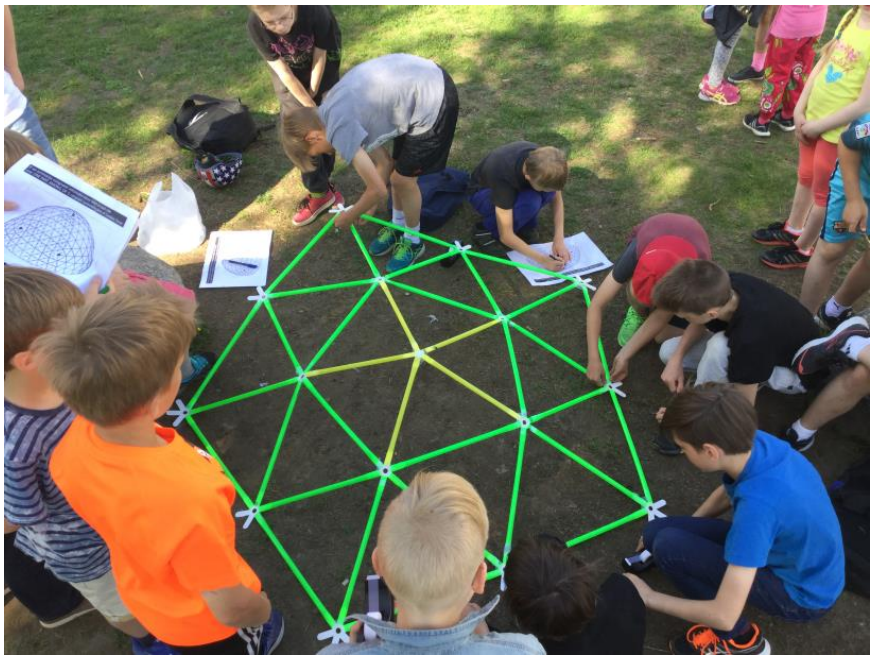
The process explained at https://www.metabunk.org/debunked-boiling-water-freezing-when-you-throw-it-in-the-air-at-40-degrees.t2902/

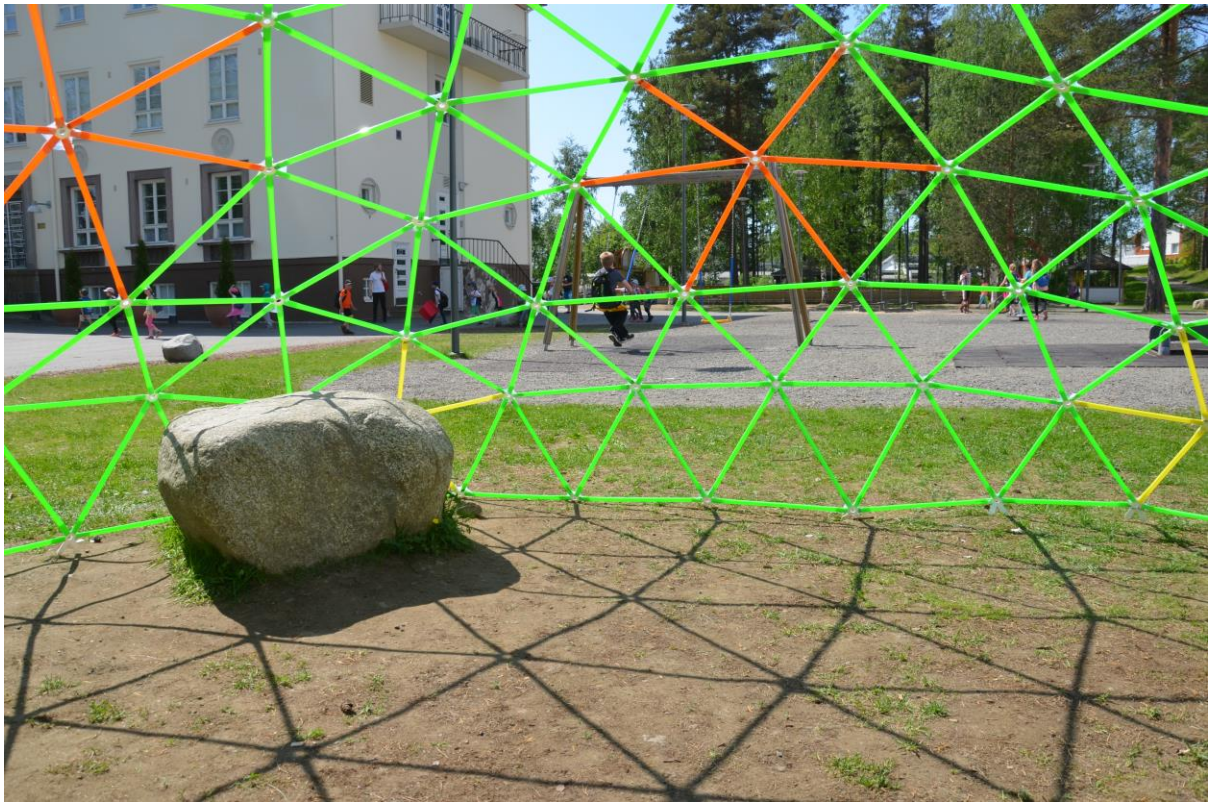


In some situation, boiling water freezes faster than cold water because it evaporates faster and then there is less water to freeze. In the video we shot on the phenomenon, we have used the Finnish DJ, Darude's soundtrack, called 'Sandstorm'.

Background: Making Art with 4Dframe tool above 20 degrees Celsius above the freezing point

Mankola KIKS-team has joined the project with the leadership of Tapani Aaltonen teacher. During 2016 Spring, we had a lot of open-air KIKS-activities organized by University of Jyväskylä - Experience Workshop colleagues, Kristóf Fenyvesi and Pirjo Häkkinen in our school. We made the structural model of the wire-frame of the world largest ice-dome and math-art bridge models as pictures below show:






MANKOLAN KOULU