



# **(ENG) State of water**

**Introduction**

**Step 1 - Motivational Stage**

**Step 2 - Investigational Stage**

**Step 3 - Consolidation Stage**

# Introduction

---



---

#Online activity #In-class activity #Inquiry-based learning  
#Experiential learning #Simulation #Teamwork #Theatre

Pupils learn about the importance of water for life and the structure of the water molecule. The states of the water are tested by dancing.

## Learning Objectives



understand the states of water molecules

### ACTIVITY DETAILS

## Activity Details

**Connection of the activity with Art** —

Dance, Performance Art



**Link to local, national School Curriculum** —

General & Safety/Role of chemistry in everyday life



## Equipment required —

- Connection to the Internet



## Duration of activity —

45 minutes



## Sources —



## Step 1 - Motivational Stage

---



Ask the pupils the following questions:



*“ Why is water important to life? ”*

---



*" Why are there different states of water and what are they? "*

---

## Step 2 - Investigational Stage

---



### STUDENTS' TASKS

---

**Water H<sub>2</sub>O is a basic requirement for known life. Clean water is odorless, tasteless, and transparent.**

In its solid state, water is ice, and as a gas, it is water vapor. A water molecule consists of two hydrogen and one oxygen atom. Water forms hydrogen bonds that make it special.

In the exercise found online (Live Art collective Other Spaces), the special quality of hydrogen bonds is tested by dancing as a water molecule and experimenting with what it would feel like to move as ice, water, and gas.



## THE ANGLE OF WATER 104.45° - PART 6: H2O

Performers: Timo Jokitalo & Kati Korosuo and Antti Halonen, Timo Jokitalo, Eeva Kemppi, Esa Kirkkopelto, Kati Korosuo, Mikko Lehtonen, Kaisa-Liisa Logrén,...

**READ MORE VIMEO >**

([especially parts 02:05-06:40](#)).

**More information about the importance of water for life**

## The amount of water in human beings —

The amount of water decreases with age. A human embryo is 95% water, the water content of an adult is only about 50-70. Two-thirds of this is inside the cells. Water transports essential nutrients to the body's cells and removes waste products from them.



## Amount of water in plants —

Plants are 80-90 percent water. Cucumber is one of the most water-rich vegetables. Its water percentage is 93.



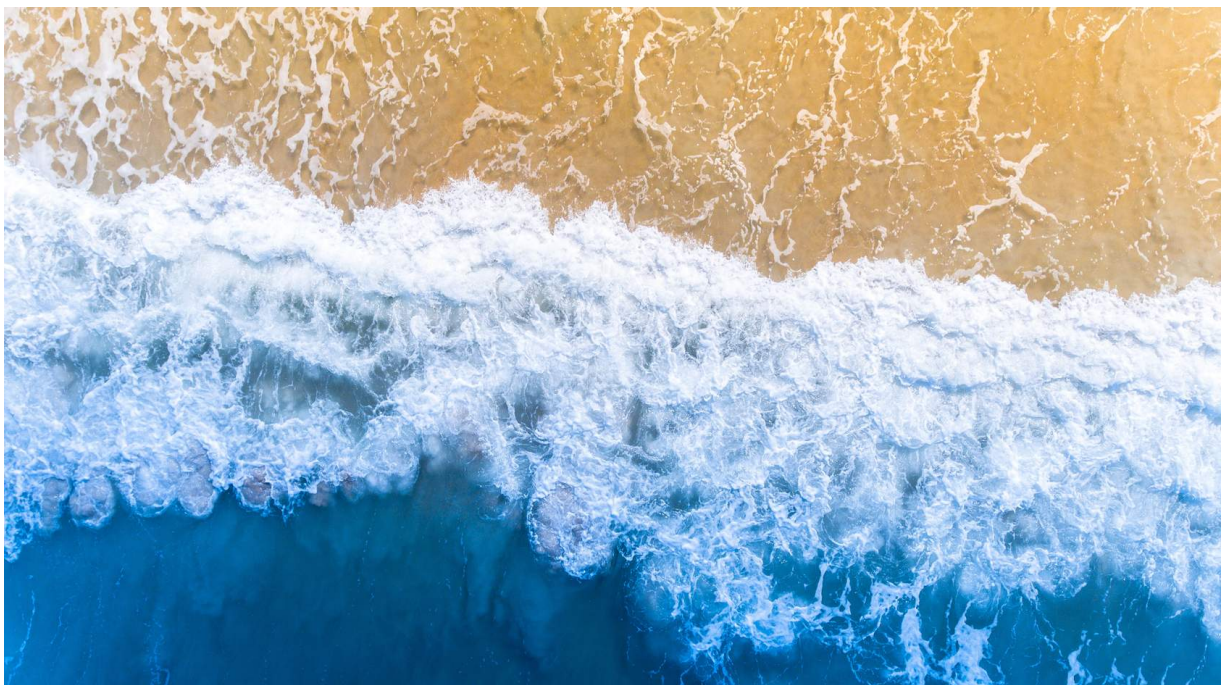
### **The amount of water in the air** —

Typical room air contains about 10 grams of water per cubic meter. If the moisture in the air of a 50 square meter room were condensed, about one and a half liters of water would accumulate.



## The amount of water on earth —

If all the water on earth were distributed evenly, there would be a 3.7 kilometer layer of water everywhere. There is water not only in seas, lakes and glaciers, but also e.g. in the depths of the earth's mantle.





## Step 3 - Consolidation Stage

---



Dance together as water, ice and gas according to the instructions in the video link.



## THE ANGLE OF WATER 104.45° - PART 6: H2O

Performers: Timo Jokitalo & Kati Korosuo and Antti Halonen, Timo Jokitalo, Eeva Kemppi, Esa Kirkkopelto, Kati Korosuo, Mikko Lehtonen, Kaisa-Liisa Logrén,...

**READ MORE VIMEO >**

---

**End of the activity**

EXIT