THE PROJECT ABSTRACT

1. Preparing the planets of our solar system.

What do we know about them?
How much are the pressure and temperature there? Visiting the planets with the phone.

What an exceptional place the Earth is!

2. Modelling the air layer of our Earth.

Measuring and calculating, forming a numerical scaled layer of plasticine.

Did you know we have so little air?

3. Modelling the greenhouse effect.

Examining the heat retention capacity of carbon dioxide: it would be 30°C colder without it. However, too much of it heats up the Earth.

What can you do?

Let's learn about the effects of atmospheric carbon dioxide, and let's act!

"There is no plan B because there is no planet B!"

Student experiments, surprising and thought-provoking experience, effective skills and attitude development.

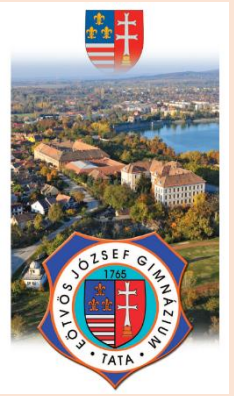
Eötvös József High School
Tata, Hungary

http://www.eotvos-tata.sulinet.hu/jogyakorlatok.htm

Magyar Csabáné
chemistry-physics teacher

Pataki Zsuzsanna
chemistry teacher

Szamper Aranka
physics-mathematics teacher
Hamvas Béla High School
Oroszlány, Hungary



Earth Day -
Our Earth is our worth

About our special atmosphere for everyone

SCIENCE ON STAGE EUROPE

Cascais
2019

We make a numerical scale model and information cards about the planets of the solar system.

Our most important goal is to make children realize how wild and unbearable conditions prevail on the two closest planets for humans.

First, children place the name cards to the appropriate spheres. Next, they observe how far the planets should be moved from the Sun in the model. We will be surprised to see that Earth has 42 m and Neptune has 1300 m numerical scale distance from the Sun.

We can also visit the planets. QR codes can be placed on the name cards, so children can easily open a small animation with their phones.

Earth Venus

We can now expand Earth. How thick will be the layer on the surface of a school globe or a beach ball (30 cm) that is proportional to our atmosphere?

The diameter of Earth is 12740 km, and the Karman line is 100 km high. Knowing these, the bigger ones can be expected to determine the thickness of the atmosphere in the model on their own.
Let's see this layer! The groups make 2.4 mm thick pancakes from plasticine.

Let them draw the conclusion! We must take care of it!

We carry out an experiment to show that carbon dioxide can heat up much more than air when exposed to the same amount of infrared radiation.

The production and pouring of carbon dioxide is interesting in itself, even if the children do not meet it for the first time. The 3-4 Celsius degree temperature difference at the end of the heating is a really shocking and thought-provoking experience for everyone.