STEM Discovery weeks in Kääpa school

STEM around us



22 April – 9 May 2016 Kääpa Basic School Estonia





Introduction

- We think that STEM subjects have to be exciting.
- We have taken part and organized several STEM-oriented projects for 20 years.
- We have held STEM weeks for three years.
- We had several events during STEM Discovery week and a week after.
- Please have a look at what we did.

Earth Day 22 April 2016

- We spoke about the history and aims of Earth Day
- Pupils watched videos how Earth Day is celebrated in different countries
- Pupils discussed how to go green
- They wrote poems and made posters to express their thoughts







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AWAY SCARP PAPERY WASTER PAPER, GLASS BOTTLES, AND OTHER PACKAGING , REDUCE RECYCLING TAKE CARE REUS DIFFERENT EARTH DAY 22. APRIL THE AREA WHERE YOU LIVE MAKE LEFTOVERS INTO COMPOST Y AND WORK CLEAN AND 8.KLASS

EARTH IS DYING

AND EVERYONE IS LYING

RUSTY REVOLUTION

THIS IS OUR PLANET

HELP TO SAVE THIS PLANET

DUSTY STORMS

AND RUSTY PEOPLE

YOU DO THIS TO MOTHER EARTH?

Turn off the lights when you leave the room. Turn off the running water when you don't need it. tind new owners to old things.

Life is chemistry, food is chemistry. Baking and selling pastry.

- When preparing for baking pupils had discussion about food ingredients and additives
- Pupils understood that food consists of chemical substances which we need to get energy and build up our body
- Pupils discussed why it is important not to waste food
- The recipes were from the countries of our Erasmus+ partner schools



In the hot oven chemical reactions occur in the dough and we get tasty pastry.

Eggs, sugar, flour, cream, salt, Milk, water, oil, plums – everything comes from nature.

(recipe from Vaalan Yhtenäiskoulu, Finland)



A recipe from Osnovna Škola Zaprude, Croatia

Crostoli-kroštule

1½ cups plain flour
¼ tsp salt
3 egg yolks
1 tsp caster sugar
1 tbsp sour cream
2 tbsp rakija*/rum
1 tsp vanilla extract
1 tsp finely grated lemon rind
Cooking oil, for frying
2 tbsp caster sugar
2 tbsp icing sugar



Pupils presented their research papers and creative work

- Year 8 pupils have to do some research in any subject or a creative work in arts or technology
- Pupils presented their work to the teachers and school mates at a student conference
- Some examples of STEM topics are on the next slides

Organic farming and organic food in south Estonia



Measuring hand grip strength of class mates

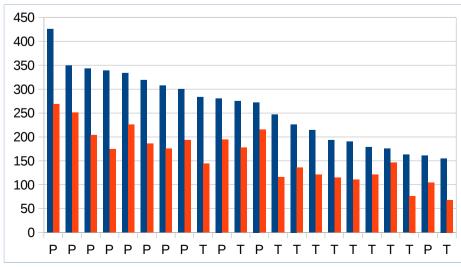


Do sport and your hand grip is stronger.

P-boy; T-girl

Blue – max strength (N)





Overview on pupils' opinions about study visits to companies, museums and nature. Most pupils considered them useful and would like to have more out-of-class learning.



A pupil explained how to make a robot and showed a line following Arduino robot made by himself.



Seven pupils and four teachers participated in the **Erasmus+ project meeting in Zagreb**. In our project *"Inspiring Studies and Future Career"* we pay attention to STEM subjects and careers. We visited Technology museum and Rimac electric supercars company, pupils had electronic candle workshop and they made presentations about inventors and STEM scientists.







Electronic candle workshop guided by German teachers and pupils from Friedrich-Spee-Gesamtschule.



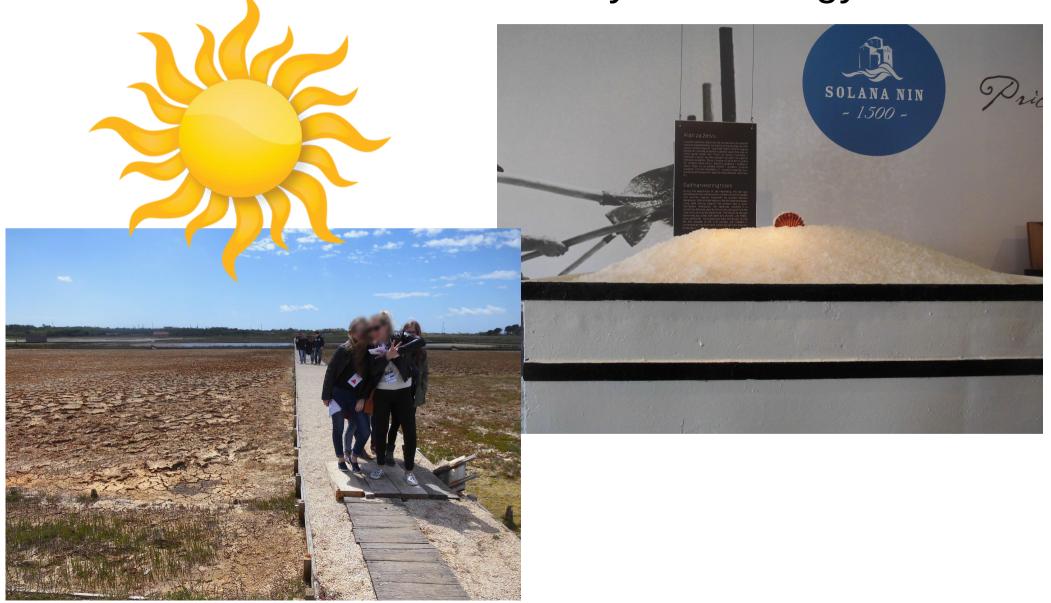
Pupils of all partner schools had prepared a presentation about one scientist or inventor. Our team introduced a Croatian inventor Slavoljub Eduard Penkala with a small play which the students had written and prepared.





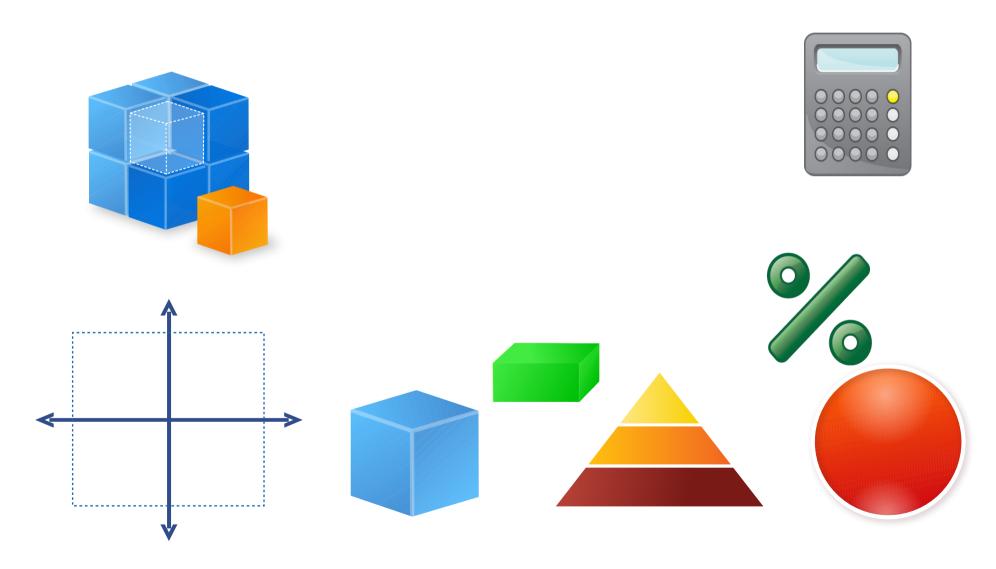


We visited a salt production company. Ecological salt is made from sea water by Sun energy.

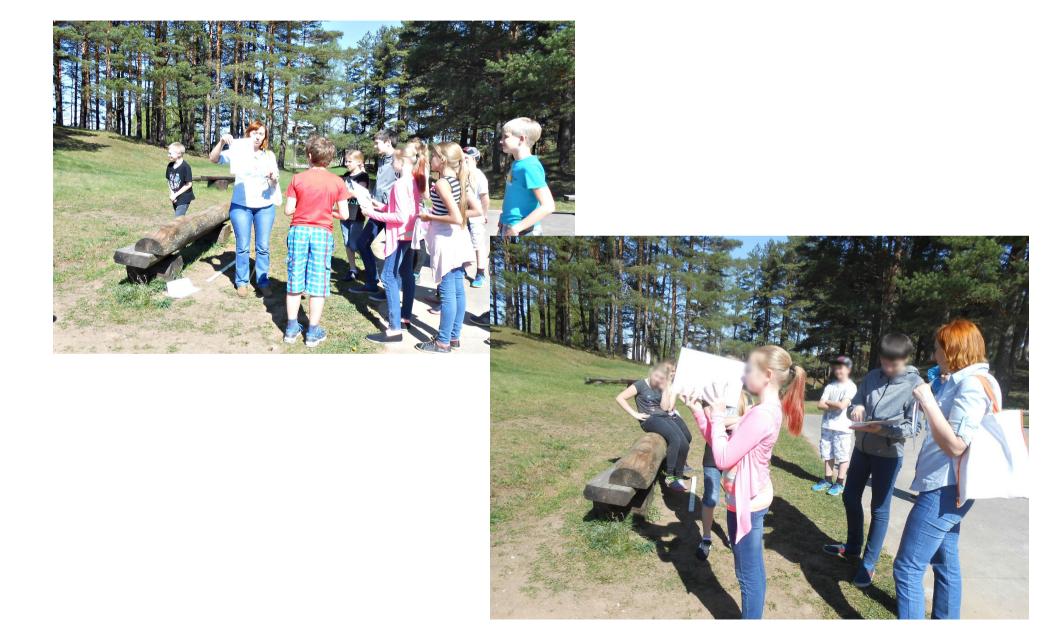


5th class had a Maths week

Two maths teachers prepared motivating tasks both indoors and outdoors. Children said they were not tired.



Year 5 pupils had an outdoor learning lesson: how to measure a hill. We had a guest teacher from another school who helped to teach.





Year 8 pupils learned a lot about the soil in the school park. The guest teacher helped here as well. First we needed a hole.



Then we could see the soil horizons



Is it a sandy or clay soil?



What is the temperature and pH? Everything was written into the protocol. Both teachers and pupils were happy:)

