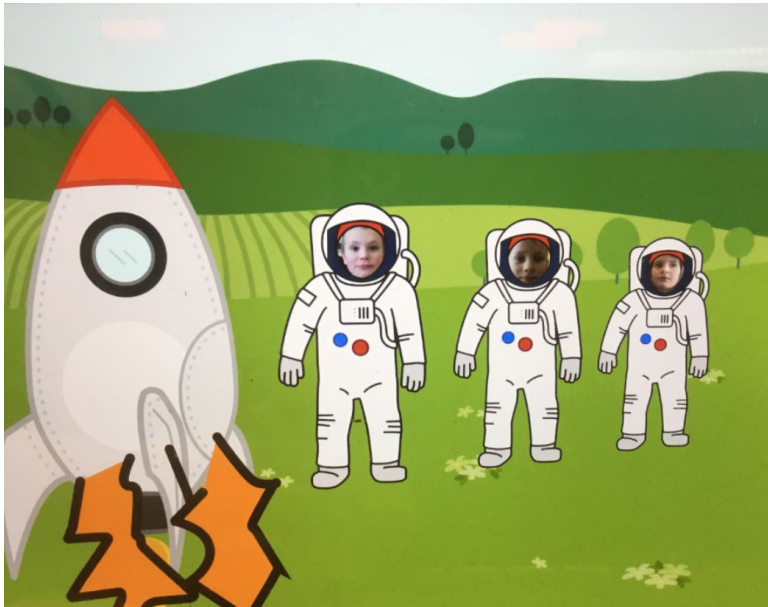


Project diary, team Moon Flight: David, Ilona and Onni Kaukon koulu -elementary school, 1st Grade



In the picture, astronauts Onni, David and Ilona are beginning their animated trip to the Moon.

The team consisted of first-grade pupils. We didn't require them to write their own diary. This diary is written by StarT-ambassador Anna-Maija Partanen from LUMA-Centre Lapland. In the end of the project, we however, discussed with the children and recalled the different phases of the project. Clips of that discussion are attached to this diary here and there.

The teachers in Kaukon koulu -elementary school had decided that this school year the multidisciplinary, phenomenon-based MOK -projects in their school are done using programming as a tool. Other subjects would be connected to the projects through the content. Suitable tools for 1st and 2nd graders are Bee Bot -robots and ScratchJr -programming environment. The pupils had already been working with Bee Bots. In the beginning of this project, the children were given the opportunity to learn to know ScratchJr during two lessons.



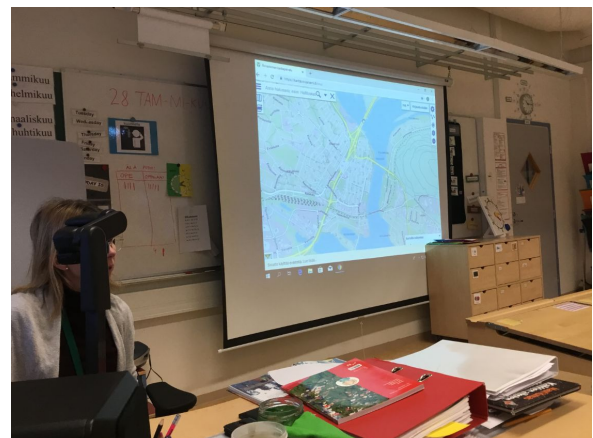
Thursday 24th of January 2019

After the introduction to ScratchJr, Anna-Maija presented us what kind of projects you can do with Bee Bots and ScratchJr. She gave examples like making a gymnastic choreography (inspired by dance with a robot competition) with Bee Bots and children, building our own Bee Bot -city, using Bee Bot as a calculator on the number line, where also new types of numbers can be discovered. With ScratchJr you can make an animation or a quiz. Many children were interested in building a Bee Bot -city. And five children wanted to make an animation with ScratchJr. We did some brainstorming with the whole class to find ideas about topics and types of animations that could be done with the tool. Two themes arose from that discussion: space and a normal school day of first graders with an emphasis on clock times. In the end, every pupil in the 1st and 2nd Grade was asked to write on a piece of paper the most interesting project idea in his/her mind. Few pupils were absent from this lesson. Teacher Johanna helped them to choose their most interesting project ideas later.

Children memorized with Anna-Maija the beginning of the project and explained their motivation for choosing a ScratchJr animation project: <https://youtu.be/8uDp2hGS4ig>

Tuesday the 29th of January 2019

Today, teacher Johanna and Anna-Maija led us to study themes connected to the topics of the chosen projects.



We studied what cities and towns are like in general. We looked at a city from above and studied a map. Then we discussed about the city of Rovaniemi, what kind of buildings, roads and bridges there are in our hometown.



Anna-Maija asked us what kind of things we have been wondering concerning the space. One pupil asked whether it is true that stars are all suns. Another asked: Is the space infinite and how can we know that? Anna-Maija told that in the space we need special equipment to protect yourself from dangerous radiation. We wondered if those living in the Southern hemisphere feel walking heads down. Anna-Maija told us, that for everyone of us, downwards is always towards to the centre of the Earth. That is because of gravity. We already knew that in ancient times the ships were directing their course according to the Sun and stars. We had lots and lots of questions for an entire lesson. It was hard to stop discussing these amazing topics. We memorized the discussion:

<https://youtu.be/k9sKh0TvoTQ>

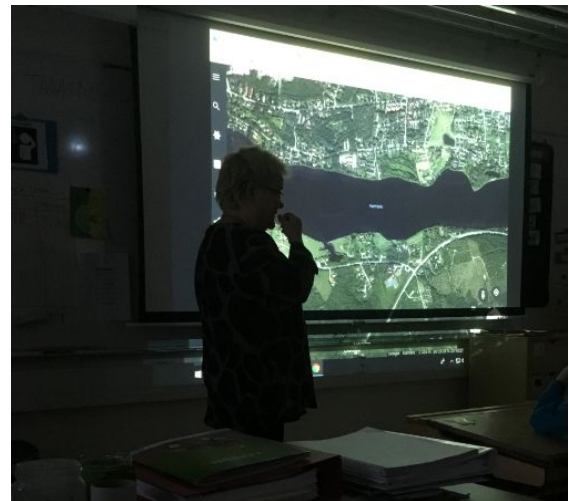
Today we also started planning our own projects. Anna-Maija asked if we had ideas of our own for an animation on space. Since we didn't have any ideas ready, she gave us few suggestions. She asked if we wanted to animate the Northern Lights or different objects in the space like planets or comets. Would we like to make an animation of different asterisms or of the first trip of man to the Moon. Would we, perhaps, like to describe the trip of a probe to Mars? All three of us got very interested in making an animation of the first trip of man to the Moon. So, the topic of our animation was decided.

Thursday the 31st of January, 2019

We already had studied with the whole class the themes of two teams. But the ordinary school day of children was not yet discussed. Anna-Maija suggested to teacher Johanna that since the children knew so well their own school day, an introduction to the school day of African children might be interesting to hear about and that knowledge would bring some perspective to the lives of Finnish children. Anna-Maija has a friendship school in Bungoma, West Kenya. She showed us with Google Earth -program where on the Earth is Finland and Rovaniemi and our own school, Kaukon koulu. Then she zoomed the viewpoint to the space, let the Earth rotate and searched lake Victoria from the big continent of Africa. Near lake

Victoria there is a city called Bungoma. She zoomed in closer and closer to the surface and found the buildings of Richmister school. We watched a video made by the fifth graders in that school last June and Anna-Maija gave a slide presentation of the school day of first and second graders in Kenya. Their school begins already at half past six and it lasts until three o'clock.

While watching the Earth from the space by Google Earth, we noticed a region in space which seemed to be more light in color than the other parts. Anna-Maija explained that it consists of a tremendous number of stars, which are so far that we can not see them separately. But together they send enough light that we can see them. Our Sun is part of that group of stars, galaxy, which people have named Milkyway.



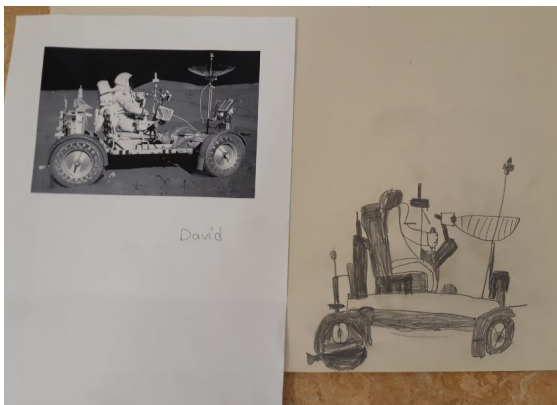
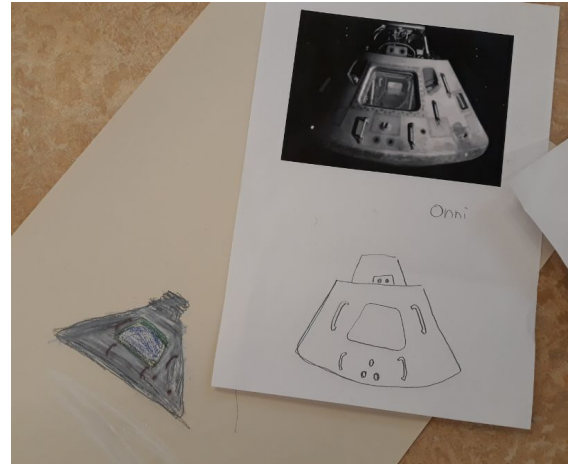
Then we continued working with our own projects. Our team first watched a video from the internet. It presented the first trip of man to the Moon. We then divided the trip into periods. Each of us was to animate our own part of the trip. The team members memorize:

<https://youtu.be/cOzkD5pz7TU>

We started by giving our own faces to the astronauts in the animation. We had found sprites in ScratchJr which had the equipment of an astronaut, but whose face was empty. We memorized that: https://youtu.be/pkPT2Hmtt_o We also searched for suitable backdrops for the different phases of our animation.



Friday the 1st of February 2019



In addition to the built in sprites in ScratchJr, we needed other vehicles for travelling in the space. Ilona drew more flames for the rocket, and drew the space capsule and its stand for the return trip. David drew the moon rover and Onni the capsule which finally brought the astronauts to the surface of the Earth. Ilona recorded the countdown and the famous quote of Neil Armstrong in English.



The drawing work was supervised by teacher student Hannah from the university of Lapland. We memorized it: https://youtu.be/q_yx9CoH6lc

Then we had everything ready for coding. See us coding through the link: <https://youtu.be/nBIKcJHRKHU>. Below you can see Ilona's code for starting the trip and travelling to the Moon. She wanted the astronauts to notice Milkyway. The teachers were amazed how fast we had learned to code.



Tuesday the 5th of February 2019

Today we had a discussion with Anna-Maija in our gym. It was recorded for the diary. We continued programming and we finished our animation.



Friday the 8th of February 2019

Today we had an exciting day. First in the morning the 1st and 2nd graders presented their projects to the rest of the school, to all the 3rd to 6th graders, teachers and other staff. Ilona and David presented our animation together. Onni was not at school. The audience laughed, and we got great applause.

