## EGU General 2019

### Kuressaare Vanalinna School (KVK)

KVK is a basic school. We have 363 students and 36 teachers. The working environment is cozy and friendly. We try to reach every child individually and to equally pay attention to both talented and less-skilled children. This school year our school got 25 years old.

Drone photo with all KVK students

ArcGis map about volcanoes

Every student learning in an Estonian school has to prepare a creative work by the end of basic school. The student can choose the subject according to his/her own interests. Geography is a popular subject in which many students do their creative works. Works are made of hurricanes, volcanoes, nature zones, karst caves, etc. In creative works, the students have previously used Youtube, GoogleMaps, ArcGis, etc.

Creative works

The volcanic model that erupts

Cooperation with scientists and students

Outdoor lesson - treasure hunt with students of Tartu University. Pupils learned to use their mobile phones to look for a lost treasure.

Learning to use mobile phones

**Treasure hunt** 















Creative works consist of videos.

KVK nature club's different nature trips have been made into videos (seen on Google Maps): https://bit.ly/2GsDKss









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# **USING TECHNOLOGY IN GEOGRAPHY LESSONS FOR OUTDOOR AND INDOOR LEARNING**

### Outdoor activities

#### Outdoor learning days in spring

Various subjects have been integrated into the outdoor study days: biology, geography, physical education, mathematics, mother tongue and foreign languages, as well as the use of technology. The students were orienteering, learning about plants (plant bingo), herbarizing tree leaves and determining the cardinal points. Students used Endomondo on their mobile phones, which allows them to monitor their activity, e.g. burnt calories, route on the map, average speed and more.



Orienteering with map and mobile phones



Inquiry Learning Spaces (ILSs) are personalized learning resources for students, including labs, apps, and other types of multimedia. ILSs follow an inquiry cycle. The basic Go-Lab cycle consists of the phases Orientation, Conceptualisation, Investigation, Conclusion and Discussion. The aim of an ILS is to provide students with an opportunity to conduct scientific experiments, being guided through the inquiry process and supported at every stage.



In this Inquiry learning lesson the students become familiar with different erosion types, creating research questions and hypothesis, conducting experiments and drawing evidence-based conclusions. In the virtual lab the students can understand how do certain factors affect the erosion of soil by water.



#### In this Inquiry learning lesson the students must become familiar with the volcanism phenomenon, creating research questions, conducting experiments and drawing evidence-based conclusions.

### Students opinion about this ILS:

- I learned a lot about volcanoes and I liked this volcanic model.
- The lesson was interesting, exciting. I received new knowledge about volcanoes.
- all the textual materials. It was a good change to the common lesson.
- We liked the lesson very much.
- Nice change to common lesson.
- We got a lot of new knowledge about volcanoes.



Our school students participated in the GPS challenge "Estonian anthem to the map" - challenge where the words of the Estonian anthem were drew on the map by hiking. To celebrate the 100th anniversary of Estonia, our students drew the word 'iial' (never). Different teams all over the country drew different words and the final result - the full text is on the map! http://gpskunst.ee/eesti/

Estonian hymn to the map

#### Using drone

We learn how to use a drone with students. Acquired skills are used in creative works and for recording various nature trips.



Learning to use the drone



Learning in the bog



Good mood trips on the map



Pig on the map

## Ülle Kreos - Kuressaare Vanalinna School, ESTONIA

### Indoor activities

#### GoLab and Graasp to learn about Inquiry learning

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#### GRAASP inquiry learning spaces

#### Erosion - ILS

www.glencoe.com



Concept map

#### Volcanoes - ILS



Working students

- Such a nice lesson! I really liked it!
- I liked the videos of volcanoes, games and



http://www.prehistoric planet.com



Students in the computer lab

This Inquiry lesson uses an impact calculator, which allows students to change projectile diameter, trajectory angle, projectile velocity, density and target density. They can see the size and depth of the crater and compare it to well-known objects created by people.



### Creating maps in ArcGis and Google Maps

GoogleMaps.



- indoor and outdoor.
- trip.
- in the future.

Integration and digital literacy, creativity and entrepreneurship - the most important areas for tomorrow 's school!

### Cosmic object hits the ground - ILS

In our classes, students have learned to create their own maps of Estonian islands, nature reserves, their dream trips and more. They have learned to use different websites to find information they need.

In the final class students created a travel plan, looking for information on different websites: Booking.com, TripAdvisor, Viator etc. They made a travel budget and designed a map of their route and sights to visit in

#### The main goals to be achieved are:

Using technology motivates students to learn more about Science. It gives them the opportunity to learn-by-doing; and by learning both

The students can use their own mobile phones to do something interesting and useful.

Using technology makes lessons more interesting and offers various possibilities for creative works.

Students will gain practical experience and knowledge on how to plan a

It provides a good opportunity to collaborate with other teachers - IT teachers, English teachers, etc.

Students are well prepared to study at the next school level and to work