Gymnázium Vysoké Mýto

Plugging into Nature with New Technologies

Erasmus+ KA2 project

IMPLEMENTATION

It is to be said that nearly all the project activities were planned to be done by each partner school and were described in detail in the application which was the main source and guidance for the implementation of the activities; thus all of us were "in charge" of the implementation.

1st Project Year (2016/2017)

In the first year we elaborated a pre-questionnaire on three main areas (how can technology enrich the nature experiences, how kids are using technologies, impacts of technology in science) and the results were summarized and interpreted (A4, http://bit.ly/pin-quest). Teachers and trainers searched for ideas for how to connect nature and science with new technologies so that a publication about methodology could be created. The students investigated local aspects of biodiversity and prepared materials for Nature Chronicles which they shared and presented during the first meeting in Iasi (A5, http://bit.ly/pin-chron, http://bit.ly/pin-iasi). The students learnt how to identify and record the number of species they found in a certain area and document their findings using digital cameras; they used smartphone apps and/or field guides to identify the plants and animals they discovered and enriched the investigative process (A7). For this systematic three-year-long observation the Czech team chose a 7km long bike path connecting the towns of V.Mýto and Choceň and the observations were both uploaded on www.inaturalist.org (http://bit.ly/pin-bikepath) and also published via a students´ website (https://cyklostezka-vm-ch.webnode.cz/) - both of these are now valuable materials with the evidence of the biodiversity along a common road. Many more online materials (A8) were created and made available both for the scientists and the interested public - some of them were connected with the subtopics chosen by the Czech team, specifically fungi and medical herbs (e.g. http://bit.ly/pin-mushrooms). During all of the first project year first data on local ecosystems were successfully collected (A9) - the students of the whole school were involved in several BioBlitzes (http://bit.ly/pin-biobl2) - and selected teams of volunteers worked collaboratively on selected topics (fungi, medical herbs, biodiversity along the bike path) - all our findings and results were then shared and presented during our next project meeting in Granada in the autumn 2017.

2nd Project Year (2017/2018)

In the second project year we focused on developing citizen science project (A 10). After searching the options first and then trying out the Biolib citizen science programme, we chose the programme www.inaturalist.org - unlike Biolib it includes worldwide observations and unites people interested in nature observations from all over the world and thus we could easily share our observations with our project partners too. The Czech students worked in several independent team sharing a few common accounts (thus fully respected the GDPR and protected our students) - the most enthusiastic and hardworking team was lead by boromir. We found it useful to organize our observations

(mainly in the form of photos, but a lot of recordings were uploaded too - http://bit.ly/pin-birds) in a few projects which the website www.inaturalist.org enables to create (http://bit.ly/pin-gvm-inat). We also realized that Inaturalist is a great tool for our BioBlitzes so we started using it for this purpose too (A 12, http://bit.ly/pin-bioblitzes). At the end of the project work the number of observations made by our students was amazing - over 4,000 - many more than expected. Several times we had an opportunity to see that our observations may be useful for scientists and their studies as they contacted us, asked questions or asked for permission to use our photos in their scientific work and publications (e.g. http://bit.ly/pin-inat-post). Besides our intensive work described above we managed to meet all the other requirements meant for this stage: we worked on scientific protocols and interpretation of scientific data (A 11), second data & inventories were collected (A 13, http://bit.ly/pin-invent) , macro-scale photography was dealt with both theoretically and practically (A 18, http://bit.ly/pin-macro) , biodiversity was investigated through visits to the Natural History Museums or Botanical Gardens, interviews with scientists, practical work in class (A 14, http://bit.ly/pin-museum) - many of these activities were done collaboratively during the project meeting in the spring 2018 in Vysoké Mýto (http://bit.ly/pin-vm).

3rd Project Year (2018/2019)

In the third project year we worked on the last tasks set and described in the application which included naturalist expeditions (A 16), both carried out by individual students / small teams or by a numerous team of students from the whole school who participated in the school excursion to the Lake District in autumn 2018 (http://bit.ly/pin-snowflakes, http://bit.ly/pin-lakedis) - and again we found www.inaturalist.org very useful not only as an identification tool, but also as a convenient cloud and a way of our active participation in citizen science (http://bit.ly/pin-inat-cumbria) . Instead of spring 2019, the symposium was held in spring 2018 during the project meeting in Vysoké Mýto which enabled all project partners to be involved and practise their presenting skills (A 17, http://bit.ly/pin-symp) . Biodiversity was also studied in labs and science experiments were carried out (A 18). We also finalised our inventories (A 19) - in case of our school team, the inventory concerned the biodiversity in the chosen area (http://bit.ly/pin-inventory). The last task - making science more attractive via researches and experiments - was fulfilled too (A20). Similarly to the previous years, all our achievements and outcomes were shared and presented during the last two meetings, one in Cockermouth (GB) and one in Torino (Italy).