

## Project summary

# Secrets of nature

(Learning animate and inanimate nature through experiments)

Grantee: PhDr. Tomáš Kudrna

Projects partners:	1. Úspech, n.o. (SK)
	2. POL-EKO aparatura sp.j. (PL)
	3. Jana Laštovičková Grygarová (CZ)
	4. KDRIŮ Közép-Dunántúli Regionális Innovációs Ügynökség Nonprofit Kft. (HU)

### Project events

**1 Jul .2016, Praha, Organisational meeting-** preparation of summer school program (selection of experiments for workshop with children, training of trainers, materials for training, budget)

**27 Jul 2016, Čakovičky, Videoconference-** checking of completion of tasks given on Organisational meeting, dated 01 Jul 2017

**23-24 Aug .2016, Žďár nad Sázavou, Summer school** - Presentation of the Science experiments for children , experiments in practice, motivation of children , workshop for participants of the project- presentation of portable laboratory, techniques of experiments, safety principles, idea sharing (workshop pro children- 9 participants, 2 lecturers, translator, workshop for trainers- 8 participants, 2 lecturers, translator)



**11 Oct 2016, Praha, Meeting with translators and selected partners schools** -definition of set up of exercises, correction and review of translations from project partners

**14 Jan 2017, Žďár nad Sázavou, Project meeting with partners** - preparation of presentation of experiments in pre-schools and primary schools in every country of V4, selection of experiments, translation during the presentation, training of new lecturers

**23 Feb.2017, Úvaly, Praha-Bohnice, Presentation of experiments in CZ schools** - presentation of selected experiments in pre-school Sofia school, 70 minutes, 17 children



**24Feb2017, Říčany, Presentation of experiments in CZ schools** - presentation of selected experiments in pre-school and primary school ZŠ Nemo school, 80 minutes, 19 children



**16 Mar 2017, Wodzislaw Śląski, Presentation of experiments in PL schools** - presentation of selected experiments in pre-school, 60 minutes, 25 children, presentation of selected experiments in primary school, 60 minutes, 22 children



**23 Mar.2017, Veszprém, Presentation of experiments in HU schools** - presentation of selected experiments in pre-school, 60 minutes, 23 children, presentation of selected experiments in primary school, 50 minutes, 11 children



**30 Mar 2017, Žilina, Presentation of experiments in SK schools** - presentation of selected experiments in pre-school, 2 x60 minutes, 36 children



**31 Mar 2017, Košice, Vranov nad Toplou, Presentation of experiments in SK schools** - presentation of selected experiments in pre-school, 60 minutes, 9 children, presentation of selected experiments in primary school, 90 minutes, 20 children



**26 May.2017, Čakovičky, Videoconferences with partner about evaluations, results and tips/closing**

## Outputs of the project

**1. Small portable laboratory with experiments in 4 languages** – Laboratory was completed, it is a plastic box which contain written instructions and all aids for execution of 57 natural experiments. The portable laboratory was handed over to pre-schools and schools where the presentations took place (8 sets of laboratory ).



**2. CD with the selection of the most interesting experiments** - it was produced CD which contain manual for teachers, worksheets for children, illustration photos a further materials, 20 CDs in local language was sent to project partners in every country.



**3. Worksheets for children-** was produced 11 worksheets including instructions, photos and working part for children, 20 pieces in local language was sent to project partners in each country.



**4. Manual for experiments for teachers-** manual with 57 natural experiments was completed which is 7 experiments more than in the original plan, the manual contain not only instruction but as well motivation for execution of the experiment, photos of the procedure or photos of the result of the experiment and explanation of the whole experiment. 20 pieces of manuals were handed over to project partners in every country.



**5. Workshop for teachers-** workshop was held during summer school 23.-24.August2016 (8 participants) and during Project meeting with partners on 14 January2017 (3 participants)

**6. Pilot projects in selected schools in CZ, SK, HU and PL-** pilot projects were held in every country with participation of lectures from Summer school and grantee Tomáš Kudrna, in CZ participated 36 children and 5 visitors, in PL 47 children and 7 visitors, in HU 34 children and 6 visitors, in SK 65 children and 7 visitors.

**7. International network-** web pages [www.prirodovednepokusy.cz](http://www.prirodovednepokusy.cz) were created in English and the instagram page of prirodovednepokusy was founded. There is an internet link on the official web pages of project partners for web page of the project.

## Partners' participation in the project

**Úspech, n.o. (SK)**- financial consultation of the project, help with the development of the final product Portable laboratory, graphics of all publications, organisation of presentation in SK, support of project within own activities.

**POL-EKO aparatura sp.j. (PL)**- help with the development of the final product Portable laboratory, graphics of all publications, organisation of presentation in PL, support of project within own activities.

**Jana Laštovičková Grygarová (CZ)**- organization of the Summer school, lectures during the Summer school, help with the development of the final product Portable laboratory, graphics of all publications, support of project within own activities.

**KDRIŰ Közép-Dunántúli Regionális Innovációs Ügynökség Nonprofit Kft. (HU)**- with the development of the final product Portable laboratory, graphics of all publications, organisation of presentation in Hungarian, support of project within own activities, corrections of translations.

The project contributed enormously to the system of preparation and education of teachers and children from pre-school and primary schools in all V4 countries by invention of the interactive aid portable laboratory and processing of natural science education system through experiments. The projects outcomes are summarised in 4 languages which supported and made easier common understanding and co-operation of teachers and children in pre-schools and schools of V4. This active regional co-operation helped to extend innovative idea of children's education according to the curriculum in the pre-schools and primary schools in Czech Republic, Poland, Hungary and in Slovak Republic. The project's outcome make it possible to share best practice from one country into other countries, to provide full educational package in the area of natural science to different institutions and schools.

The project's outcome and suggested educational system in the area of natural science was applied successfully at school with mentally and physically handicapped children (Vranov nad Toplou) which caused the extension of its further usage: training of manual skills, training of basic analytical thinking.

The project's outcomes were presented and developed further through V4 project Open playground – We are equal, not identical.

The afternoon clubs started to be implemented based on the presentation within the project in the following institutions: Sofia School, Úvaly, Nemo School Říčany, Tip toes School, Brandýs nad Labem.