

TITLE:

New possibilities of providing basic natural science education through experiments

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ABSTRACT:

The thesis stems from the basic need to support and develop natural science education. Based on didactic, technical-economic and ergonomic requirements, a teaching tools kit has been created, which facilitates 100 natural science experiments.

The kit includes a methodological manual; further methodological support is also provided on the webpage of the kit's manufacturer.

To complement the kit, a concept of an optional teacher training course *Natural Science Experiments for Preschools and Primary Schools* has been created. The course will take place at the Pedagogical Faculty of Charles University in the school year 2013/2014.

During the course of the thesis, didactic research methods were used to choose, process, test, organize, and optimise educational experiments. The pedagogical methods used included questionnaires and expert testimonials.

The thesis provides a substantial response to the current educational needs in the field of natural science pre-literacy already at preschools and natural science literacy at primary schools.

KEYWORDS:

science experiment, natural science literacy, experiment tools kit, university course