



Soil and its selected properties on the example of an individual project for the grade 1 students of upper secondary school

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key words: science education, project method, key competences, soil testing

According to the requirements of the new core curriculum for Chemistry, students shall acquire knowledge through research and use the acquired chemical knowledge in their everyday life. However, in the recommended conditions and mode of implementation of the curriculum it is confirmed, that students' autonomous observation constitutes a basis for experiencing, inferences, analysis, and generalisations of phenomena [1]. It is obvious that teachers should create proper didactic situations, during which school students have a possibility to develop attitudes, skills and competences. More about competences we can find in the recommendations of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning [2].

The detailed content of the core curriculum for the subject of chemistry at the fourth stage of education (basic level), we read: "4. Chemistry of soil. Student: 1) explains what the sorption properties of the soil are; plans and performs study of the sorption properties of the soil. " In the school year 2012/2013 chemistry teachers decided to offer students of a first-class to be involved in the project "Soil in the chemist's eye." It was considered that the method of the project is known from lower secondary school level and the teacher will have an opportunity to recognize students, who in the future, will choose the class with advanced chemistry program and determine the level of their skills, in particular the research skills.

What we can offer to students does not necessarily take place in a well-equipped chemical laboratory. On the contrary, this process should be based on the well-known school subjects items, articles, objects and phenomena, which students meet in everyday life. The well-chosen methodologies and ways of showing the world will be, more understandable and skills will become a permanent part of the students, knowledge.

Project characterization:

- a) The proposed project is problem-oriented, in which students formulate a research goal, verify the hypothesis experimentally based on their own plan in relation to the research problem,
- b) Time duration: 7 days
- c) Type of project: individual project

During special meetings students present their own projects (giving the teacher a complete project documentation), participate in surveys and participate in the revision meeting.

The poster will be presented to show the most interesting pieces of students' work with photographic documentation, analysis of the final survey, and analysis of student records.

1. <http://www.reformaprogramowa.men.gov.pl>

2. Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning (2006/962/EC). OJ L 394, 30.12.2006, p 10.