



A field day of soil regulation methods

Axel Kempter (1) and Carmen Kempter (2)

(1) Speyer, Germany (axel.kempter@t-online.de), Geschwister-Scholl-Gymnasium Ludwigshafen, (2) Speyer, Germany (carmen.kempter@gmail.com)

The subject Soil plays an important role in the school subject geography. In particular in the upper classes it is expected that the knowledge from the area of Soil can be also be applied in other subjects. Thus, e.g., an assessment of economy and agricultural development and developing potential requires the interweaving of natural- geographic and human-geographic factors.

The treatment of the subject Soil requires the desegregation of the results of different fields like Physics, Chemistry and Biology. Accordingly the subject gives cause to professional-covering lessons and offers the opportunity for practical work as well as excursions.

Beside the mediation of specialist knowledge and with the support of the methods and action competences, the independent learning and the practical work should have a special emphasis on the field excursion by using stimulating exercises oriented to solving problems and mastering the methods. This aim should be achieved by the interdisciplinary treatment of the subject Soil in the task-oriented learning process on the field day.

The methods and experiments should be sensibly selected for both the temporal and material supply constraints.

During the field day the pupils had to categorize soil texture, soil colour, soil profile, soil skeleton, lime content, ion exchanger (Soils filter materials), pH-Value, water retention capacity and evidence of different ions like e.g. Fe³⁺, Mg²⁺, Cl⁻ and NO₃⁻.

The pupils worked on stations and evaluated the data to receive a general view of the ground at the end. According to numbers of locations, amount of time and group size, different procedures can be offered. There are groups of experts who carry out the same experiment at all locations and split for the evaluation in different groups or each group ran through all stations. The results were compared and discussed at the end.