



Transferring Knowledge from a Bird's-Eye View – Earth Observation and Space Travels in Schools

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In spring 2014, four commercial cameras will be transported by a Dragon spacecraft to the International Space Station (ISS) and mounted to the ESA Columbus laboratory. The cameras will deliver live earth observation data from different angles. The “Columbus-Eye”* project aims at distributing the video and image data produced by those cameras through a web portal. It should primarily serve as learning portal for pupils comprising teaching material around the ISS earth observation imagery. The pupils should be motivated to work with the images in order to learn about curriculum relevant topics of natural sciences. The material will be prepared based on the experiences of the FIS* (German abbreviation for “Remote Sensing in Schools”) project and its learning portal. Recognizing that in-depth use of satellite imagery can only be achieved by the means of computer aided learning methods, a sizeable number of e-Learning contents in German and English have been created throughout the last 5 years since FIS’ kickoff. The talk presents the educational valorization of remote sensing data as well as their interactive implementation for teachers and pupils in both learning portals. It will be shown which possibilities the topic of remote sensing holds ready for teaching the regular curricula of Geography, Biology, Physics, Math and Informatics. Beside the sequenced implementation into digital and interactive teaching units, examples of a richly illustrated encyclopedia as well as easy-to-use image processing tools are given. The presentation finally addresses the question of how synergies of space travels can be used to enhance the fascination of earth observation imagery in the light of problem-based learning in everyday school lessons.