

Instructing physics, chemistry, and biology via environmental science projects for diploma program students

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University outreach in high schools can be an effective tool for encouraging and motivating students to develop scientific inquisitiveness. As researchers, we can provide expert knowledge in our fields and expose students to techniques and approaches that can help them answer questions stemming from their own particular interests. Students taking personal initiatives to satisfy their curiosity can improve their preparation for future university studies and gain additional perspectives for the theory learned in the classroom. Within this context, projects addressing environmental issues from a multidisciplinary perspective serve as opportune examples to help students understand various scientific disciplines and, at the same time, the interaction between humans and their surrounding ecosystem.

During my Marie Skłodowska-Curie fellowship, I performed outreach activities at the International School Utrecht. I gave talks to diploma program students on various topics concerning scientific research. As part of their diploma program project, the science coordinator and I organized a field trip to the Eastern Scheldt for the students to perform scientific experiments and take samples to address environmental topics and questions of their own choosing. The Eastern Scheldt, a former estuary now transformed into a tidal bay after the construction of the Eastern Scheldt Storm Surge Barrier, is the largest natural park in the Netherlands. It thus presented an interesting location for students to think about anthropogenic effects on the environment. In this presentation I will discuss various ideas that students developed, their learning experience, and their overall impression on this scientific arrangement.