

# Annual Meeting of the Swiss Physical Society 2024



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Type: **Talk**

## **[93 A] Physics and Sustainability at School**

*Friday 13 September 2024 14:50 (10 minutes)*

In this contribution, we present an innovative physics course on the topic of energy for upper secondary school students, contextualized within the Earth's environment and climate change. By immersing students in real-world climate issues and encouraging both critical thinking and problem-solving, this course aims to foster a generation of environmentally conscious individuals equipped to address the challenges of our changing planet.

The content of the course is mapped to the official physics curriculum and delves into climate related topics such as the greenhouse effect. Among others, students engage in order of magnitude calculations concerning key climate phenomena, such as the projected sea level rise attributed to global temperature increases, or the aviation industry's contribution to global greenhouse gas emissions. Practical activities involve climate-oriented laboratory experiments and computer simulations. In addition, students are provided with an overview of recent scientific findings, encouraging advancements and innovative technology concerning sustainable development.

An early version of this course has already been tested on a class of 16 high-school students in Geneva in 2022, accompanied by a study on its effects on motivation of students. We will report the outcomes of this teaching experience and the related motivation study and describe how this teaching project has been evolving since, as well discussing its future perspectives.

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**Session Classification:** Physics education and communication: Good practice examples within the Swiss Physics Community