Teaching-learning materials compiled by the PARSEL consortium
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Cooperating Institutions and Universities within the PARSEL-Project:

Junior Climatologists Required! "How can we avoid global climate change? – Reflexions on Air Pollution, Tornados and Global Climate Change"

A Module for Science Instruction – especially Chemistry – for Grades 7 to 10

Abstract

In the PARSEL module **"Junior climatologists required! – How can we avoid global climate change? – Reflections on air pollution, tornados and global climate change"** the young students will have the opportunity to obtain information which will help to explain complex processes using simple and reliably working scientific experiments. One central aim of this module is that the children experience the fact that scientific work does not only include conducting experiments but also includes looking for information and working with sources. A further substantial part of scientific work is being amazed by and marvelling at things. This, in turn, calls for questions to be raised and assumptions to be formulated as well as for creative planning of possible experimental setups. We want to achieve a sensitisation for climate-related questions in the students, thereby offering them the opportunity to partake in decision-making process as an active member of society. To be able to act responsibly and to have an influence on something requires judgment of situations, data and facts. In our workshop we want to show the young students that scientific knowledge and competencies lay the valuable and essential groundwork for judging appropriately and acting effectively.

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Institution: Department of Chemistry Education, Freie Universität Berlin, Germany

Subject: Science and/or Chemistry

Grade level: 7th to 10th grade

Curriculum content: Composition of air, cause and effect of air pollutants, combustion as a chemical reaction

Kind of activity: Inquiring, laboratory activity, reasoning, reflected judgment, group activities etc.

Anticipated time: 10 lessons of 45 minutes in total

Overall objectives/competencies: Planning and realisation of investigations and reports, scientific inquiry, research and evaluation of data, gaining knowledge, reflected judgement, communication and working in groups

Attached files		
1.	Student activities	Describes the scenario in more detail and the tasks the students should carry out
2.	Teaching guide	Suggests a teaching approach
3.	Assessment	Gives suggested formative assessment strategies