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Physics learning promoting culture
and addressing societal issues

Contribution ID: 83

Type: **Poster**

Introduction to Measurement Uncertainties for Middle School Classes

Tuesday 4 July 2023 13:40 (20 minutes)

By teaching measurement uncertainties students in middle school should gain competences in critical thinking, conducting experiments and analysing results in a proper way. In the first author's master thesis, a teaching concept for the beginning of natural science classes was developed and evaluated in a middle school in Vienna. The concept was evaluated and improved in three cycles using the design-based research method. Students are performing an experiment that leads them to measurement uncertainties. Sources for uncertainties and the trustworthiness of the experiment are discussed. Using simple methods of statistics such as the arithmetic mean, the experiment will be analysed.

How would you like to present your contribution?

Hybrid from my own country (later in the conference day, best for Americas ...)

Target education level (primary)

Lower-secondary education

Target education level (secondary, optional)

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Presenter: LOIDL, Hannah

Session Classification: Hybrid session - later

Track Classification: Lab work and experiments in physics education