



GIREP-EPEC

Transforming physics learning via Research & Practice
LEIDEN, 2025

Contribution ID: 243

Type: **Poster**

Use of ISLE in STEM lessons to promote scientific thinking

Monday 30 June 2025 16:30 (1 hour)

Teaching materials for middle school based on the ISLE approach were developed following the design based research circle. All together there are 7 teaching units of 100 minutes each for 7th grade (13 -14 year-olds) covering topics that can be explained within the particle model of matter. The materials were tested with 46 students in a rural Austrian middle school. The material development process and the results from the testing will be presented.

Education level

Age 12-15 (Secondary education)

Physics topic

Interdisciplinary topics

Research focus

Competence-based education

Research method

Mixed method (qualitative & quantitative)

Organizing preference criteria

Research focus

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Session Classification: Poster session

Track Classification: Educational research methodology (METHOD)