

Title: PISA-like tasks supported by a physics experiment

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Abstract: As part of this thesis, a search was conducted of released tasks from the international PISA survey (Programme for International Student Assessment) which focuses on testing 15-year-olds' knowledge in reading, mathematics and science literacy. Several tasks were selected on the basis of the research, to which new activities proposed by the author of the thesis were added. The thesis consists of 6 activities *Dollhouse*, *Climadiagram 1*, *Climadiagram 2*, *Radioactivity*, *Temperature changes* and *Shadows*. The last two mentioned activities were created based on PISA tasks, the other four activities were created by author of the thesis. Each activity was prepared in the form of worksheets for students and with solutions and methodical comments for teachers. These worksheets were tested in real teaching at a grammar school and also evaluated by teachers working at primary or secondary schools.

Keywords: PISA, scientific literacy, physics experiment, physics teaching and learning