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Improving the teaching and learning of space mathematics.

Clarke, Barbara et al., International perspectives on learning and teaching mathematics. NCM/Göteborg University, Göteborg (ISBN 91-85143-01-4). 569-584 (2004).

This chapter presents results from two studies implementing a framework of space mathematics that emphasised investigating and visualising together with describing and classifying. Two key ideas were (i) part-whole relationships and (ii) orientation and motion. A number of schools participated in the project and many lessons were developed. While early primary school classes were used, the lessons are applicable to higher levels of primary school too. Teacher knowledge and their feedback on the lessons and program were evaluated. Some classroom scenarios together with the lesson plans will illustrate the value of teachers using questioning and concrete material. When teachers were clear about the purpose for lessons they could facilitate deeper understanding by students. Videotapes helped teachers understand the framework. Teachers were also provided with some task-based interview schedules to assist them in assessing their students' knowledge before they started. They worked with facilitators who worked in the classrooms and modelled good teaching practice.

Classification: G42