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Preschool children's collective mathematical reasoning during free outdoor play.

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Summary: This paper illustrates how young children (age 1–5) use mathematical properties in collective reasoning during free outdoor play. The analysis of three episodes is presented. The results from the analysis of the argumentation show that the children used a variation of mathematical products and procedures, to challenge, support and drive the reasoning forward. When needed, they utilise concrete materials to illustrate and strengthen their arguments, and as an aid in order to reach conclusions. The children also use abstract social constructs, such as jokes, as part of their reasoning.

Classification: E51 B61

Keywords: mathematical reasoning; play; preschool children; sense making

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