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Children creating ways to represent changing situations: on the development of homogeneous spaces.

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Summary: This paper focuses on children creating representations on paper for situations that change over time. We articulate the distinction between homogeneous and heterogeneous spaces and reflect on children's tendency to create hybrids between them. Through classroom and interview examples we discuss two families of tasks that seem to facilitate children's development of homogeneous spaces: (1) making selected features directly visible, instead of requiring intermediate steps and calculations; for example, to be able to directly compare different sets of data combined in a single graph, and (2) exploring well-defined figural components that can be used in graphing, such as line segments or sequencing from left to right, that are introduced as a resource.

Classification: D42

Keywords: visualization; graphical representations; mathematics of change over time; primary education

<http://revistas.pucsp.br/index.php/emp/article/view/4679>