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Drake, Corey; Land, Tonia J.; Bartell, Tonya Gau; Aguirre, Julia M.; Foote, Mary Q.; Roth McDuffie, Amy; Turner, Erin E.

Three strategies for opening curriculum spaces.

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Summary: Many teachers experience the tension between using published curriculum materials and teaching in ways that are responsive to children. Teachers are often expected to use a particular mathematics curriculum series, but they still want to be able to build on and connect to children's multiple mathematical knowledge bases (MMKB). Children's MMKB include children's mathematical thinking and children's home- and community-based mathematical funds of knowledge. Children's experiences using mathematics as part of home or community activities, as well as family practices that involve mathematics, are all part of children's home- and community-based mathematical funds of knowledge. Children's mathematical thinking includes the multiple strategies that students use to solve problems, if given the opportunity, as well as common confusions or misconceptions that children might have. In several of its standards, the Common Core State Standards for School Mathematics (CCSSM) calls for students to use multiple solution strategies. Students make sense of problems and develop multiple solution strategies by connecting problems to their own experiences both in and out of school and by using and building on all of their MMKB. In this article, the authors suggest three strategies for opening spaces for children's MMKB in the curriculum materials, and they provide examples of those strategies. They focus on lesson changes that stay consistent with the stated lesson objective while opening spaces for children's MMKB. (ERIC)

Classification: D32 D42

Keywords: curriculum; problem solving; mathematical concepts; misconceptions; activities; teaching strategies; multiple mathematical knowledge basees

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