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Tracking decimal misconceptions: strategic instructional choices.

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Summary: Understanding the decimal system is challenging, requiring coordination of place-value concepts with features of whole-number and fraction knowledge. Moreover, the learner must discern if and how previously learned concepts and procedures apply. The process is complex, and misconceptions will naturally arise. In a constructivist learning environment, teachers encourage student conjectures because errors and incomplete understandings often present powerful learning opportunities. However, when ignored or inadvertently reinforced, misconceptions can impede future learning. Strategic instructional choices help students develop understanding and address potential misconceptions. Understanding decimal notation and making decimal comparisons are central concepts in fourth grade. This article describes how one teacher helps her students achieve these goals by making several key decisions in the lesson sequence presented herein. (ERIC)

Classification: F40 D70

Keywords: arithmetic; mathematical concepts; misconceptions; concept formation; decimals

<http://www.nctm.org/Publications/Teaching-Children-Mathematics/2016/Vol22/Issue8/Tracking-Decimal-Misconceptions.-Strategic-Instructional-Choices/>