Summary: To build cognitive foundation for number, twenty-six low-performing, low-SES first graders did mathematical physical-knowledge activities, such as "bowling," during the first half of the year. As their arithmetic readiness developed, they tried more word problems and games. At the end of the year, these children did better in mental arithmetic and word problems than a comparison group that received traditional mathematics instruction with textbooks and workbooks throughout the year. (Contains 3 figures and 2 tables.) (ERIC)