

Beginning to Develop an Understanding of Mathematical Proof

First Graders Have Something To Prove

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This mathematics unit is designed for first grade students and can be adapted for students in second grade. It can be used throughout the first grade year when students are beginning to compare sets and learning addition and subtraction. It can be used for whole class instruction, small group intervention, independent math activities or intervention. The lessons are designed to help young students begin understand the need to justify their mathematical thinking. Students will work with sets of manipulatives and graphs to compare quantities in order to subtract. Students will play a simple movement game to show their understanding of the concept of “truth”. Students will create story problems for both addition and subtraction with given numbers. Through play the teacher will facilitate the students’ application of reasoning. The game will also help develop discussion techniques and help concrete thinkers to begin to reason abstractly. This unit draws from several mathematics practices already common in many first grade classrooms, however, the activities have been extended or altered to provide a more thorough and accurate delivery of instruction about the concept of mathematical proof.