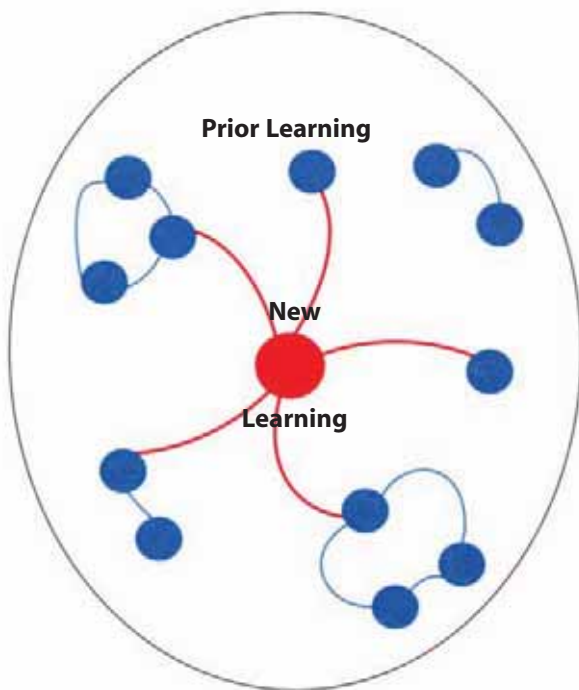
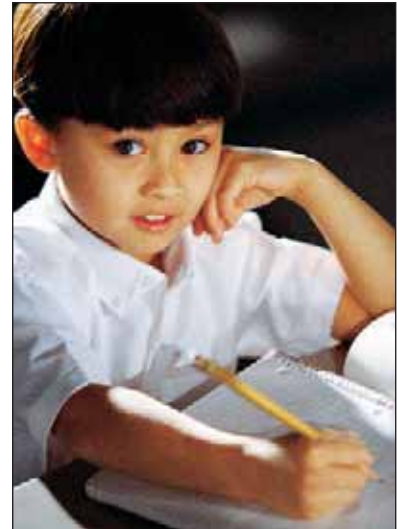


Teaching and Learning for Understanding

Addison Wesley Mathematics Makes Sense has been built on the belief that mathematics is more than a list of isolated facts, that mathematics as a whole can make sense for students, teachers, and parents. Fundamental to this belief is our understanding of the importance of mathematical connections: Math makes sense for students when they see how mathematical ideas are connected to the real world, to other mathematical ideas, and to what they are learning in other subject areas.

Children come to us with experiences and understandings they have already developed into personal networks of understanding. As they work with new ideas, their active engagement leads them to fit new learning within their established understanding. The more ideas students connect, the more solid their understanding.



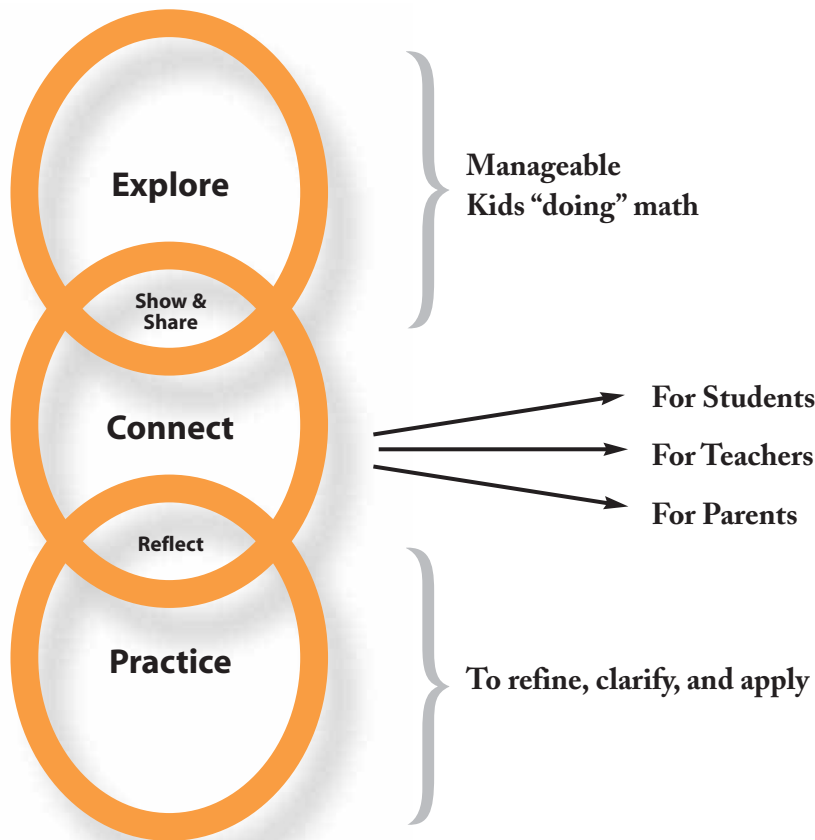
Teaching for understanding reaps many benefits for students:

- When students understand mathematical procedures, they can recall them easily and apply them in a variety of settings.
- When students understand the main concepts and connections of mathematical topics, they rely on reasoning more, and on memory less.
- Conceptual understanding provides the basis for acquiring new knowledge and solving unfamiliar problems.
- Conceptual understanding helps students spot and correct errors in their problem solutions.

The tools that we use to build understanding are our existing ideas, the knowledge that we already possess.

– John A. Van de Walle, Elementary Mathematics Consultant

In *Addison Wesley Mathematics Makes Sense*, the lesson framework delivers instruction in the way in which students learn most effectively.



Supporting the lesson framework of *Addison Wesley Mathematics Makes Sense* is an over-arching understanding of how students' mathematical understanding, skills, and strategies develop from the early years (pre-school) through elementary school.

Developmental Continuum — A Useful Tool

- Based on current research on key developmental stages
- Enables teachers to view each student's achievements and challenges within a broader perspective
- Provides a tool for teachers to use with parents and support teachers when discussing student progress