

Math

Think about how the children learn to read. First learning the letters with someone pointing the letters out and recognizing them throughout the day while driving, working around the house, etc.

Learning math facts can begin that simple. Recognizing that $0 + 1 = 1$, all the 0's and then the 1's and so on. This can begin as soon as the child recognizes numbers.

Learning math facts must begin with an adult modeling and pointing out the grouping. The coming together and the separating. Children prior to second grade and some second graders need visuals.

Never allow the use of fingers to be the visual because these cannot be taken away and can become a dependency.

Research shows that there are four stages to a student's learning. The first stage is the **acquisition stage** where the goal is helping the child learn the skill accurately. This is the stage of instruction where the child learns how to get the correct answer. The second stage is the **fluency stage** where the learner acquires the information at an automatic level. At this stage, working out a math problem is automatic. This is where timed tests become very important. After fluency is **maintenance**. This stage the goal is to maintain a high level of performance over time. The fourth stage is **generalization**. During this stage the children can perform the skill at various times and in new situations.

Learning math facts will not come from just doing more and more math skills at various levels. If a child knows the basic facts (the acquired skill), the student can now do the problems with appropriate speed (fluency) and if the student has had practice doing various problems over a period of time (maintenance), then a project such as requiring a student to compute a problem to real life (algebra/geometry/calculus) would promote generalization and success.

Suggestions to learn facts:

- Work with your child
- Triangle for fact families
- Orally give facts as you drive, cook, child is bathing
- Show the rainbow
- Show the magic 10
- Learn doubles
- Learn the 9's trick
- Convert board games (candy land, chutes + ladders) using fact cards
- Deck of cards to draw and add or subtract

- Internet interactive games
 - + www.math-play.com
 - + www.aplusmath.com
 - + www.funbrain.com
 - + www.softschool.com