

Fact Fluency

Basic fact fluency is the fast (2-3 seconds) and accurate recall of basic math facts. A basic fact is a single digit and another single digit computation. Students must master the basic facts in order to access higher math concepts.

How do students learn basic facts?

Learning the basic facts is more than just the rote memorization of facts. Researchers have identified three stages in the process of acquiring basic facts:

1. *Counting all.* During this early stage, students use objects or verbal counting to determine answers. For example, when adding $3 + 6$, a student in this stage counts every item.
2. *Reasoning.* During this stage, students move beyond counting all. They use known facts and relationships to determine the answer of an unknown combination. For example, when adding $6 + 7$, the student knows that $6 + 6$ is 12, so $6 + 7$ is one more or 13. The addition and subtraction strategies that students use in the reasoning stage are:

Counting On/Back ↳ 1, 2, or 3 only	Doubles Strategies ↳ Doubles +1/-1 ↳ Inside Doubles	Make a Ten
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3. *Mastery.* Students who reach this stage are able to quickly and accurately recall their basic facts. The Common Core State Standards for Mathematics states that students should master basic addition and subtraction facts by the end of second grade.

Do strategies really help students learn their basic facts?

Memorizing every fact as an isolated piece of information is a difficult task for many students. If they cannot commit a fact to memory, they may resort to a less efficient strategy, such as counting by ones. Students can successfully learn their basic facts if classroom experiences focus on reasoning strategies rather than rote memorization. Students are empowered to use what they know about one fact to help them figure out another. With time and consistent practice using these strategies, they learn to recall facts quickly and accurately.