Los Angeles Unified School District
Office of Curriculum, Instruction, and School Support

Math Myths and Misconceptions: Preventing Misconceptions

Foundational Steps to Assist in Learning the Basic Facts of Addition
Facilitator Support Information for Modules 4a and 4b

To the Session Facilitator: The examples and information given below are intended to be background information for you. *Note, this page is formatted for **legal sized** paper (8.5" x 14")*

Learning the facts is still important, however students should not be asked to commit the facts to memory until they have some conceptual understanding of the operation.

An addition fact is defined as the sum of two one-digit addends*.

3 + 4 = 7 is a fact 12 + 3 = 15 is not a fact because 12 is not a one-digit addend

* *The 10 facts have been included on this information sheet, as they are historically viewed as part of the set of foundational addition problems for students to master, even though 10 is a two-digit addend, and by definition, not a basic fact component.*

Students will need strategies to help them learn the 100 basic addition facts (110 if including the 10's). The following list contain those prerequisite skills that student will need in order to facilitate learning the basic addition facts. Students should be able to do the following *before* working with written number problems:

1. Count backwards as well as forwards while performing a physical task, such as tying shoes. (Assists with automaticity in thinking).
2. Give one more or take one less from any given number. (6 and 1 more is 7; 9 and 1 less is 8). Call out a number and hold up one finger to add, hold one finger down to subtract.
3. Give two more or take two less from any given number. (7 and 2 more is 9, 5 and 2 less is 3). Call out a number and hold up two fingers to add, hold two fingers down to subtract.
4. Double any number from 1 to 10.

Addition Facts 0 to 9 and including 10's

- Adding 1 to a number…say the next number (Premise 2)
- Adding 2 to a number…it's already been covered (Premise 3)
- Doubling a number…it's already been covered (Premise 4)
- Adding 0 to a number…say the same number (additive identity). 4 + 0 = 4
- Adding 10 to a one-digit number…say the other factor and "TEEN" (11, 12, 13, & 15 are the exceptions in pronunciation). 8 + 10 = "8~TEEN"
- Adding 9 to a one-digit number…say one less than the other factor and "TEEN" (Premise 2. Adding 1, 2, & 3 to 9 are the exceptions). 7 + 9 = "6~TEEN"
- Adding 8 to a one-digit number…say two less than the other factor and "TEEN" (Premise 3. Adding 1, 2, 3, & 4 to 8 are the exceptions). 6 + 8 = "4~TEEN"
- Adding neighbors…double the smaller number and add one, or double the larger number and subtract one (Premise 2 & 4). 6 + 7 becomes (6 + 6) + 1; or 6 + 7 becomes (7 + 7) – 1.
- This leaves 6 basic addition facts. Memorize one of them and the rest become "unlocked" using the various strategies and premises listed above.

5 + 3; 6 + 3; 6 + 4; 7 + 3; 7 + 4; 7 + 5