Math News

EAGLE MOUNTAIN SAGINAW ISD — Curriculum and Instruction

Our Learning Goals:

- Use a variety of strategies to solve addition and subtraction problems with answers up to 1,000
- Use estimations to determine if an answer is reasonable or makes sense

Why Is my Child Learning Strategies?

The Texas Essential Knowledge and Skills (TEKS) are the standards Texas teachers follow to ensure a quality education for all students. Our standards specifically state that it is important for students to solve problems using multiple strategies and mathematical relationships.

"Students with good number sense can think and reason flexibly with numbers, use numbers to solve problems, spot unreasonable answers, understand how numbers can be taken apart and put together in different ways, see connections among the operations, figure mentally and make reasonable estimates." "In contrast, students with poor number sense tend to rely on procedures rather than reason, often do not notice when answers or estimates are unreasonable and have limited numerical common sense." (Marilyn Burns, About Teaching Mathematics)

## How Will My Child be Assessed?

Students will be assessed informally and formally throughout the unit with opportunities to learn from their peers and their own mistakes. An assessment will be given at the end of the unit with both open ended and multiple choice questions.

Strategy 1: Adding by Place Value

Once students understand place value, this is one of the first strategies they utilize. Each addend is broken into expanded form and like place values are combined. When combining quantities, children can work from left to right because the magnitude of the numbers is not changed.

23 + 48

Show your thinking using pictures:
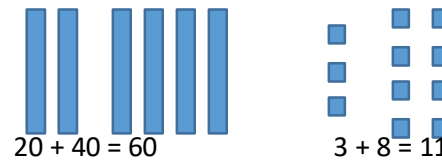
$20 + 40 = 60$ $3 + 8 = 11$

$60 + 11 = 71$

Or using the partial sums algorithm:

$$\begin{array}{r} 23 \\ +48 \\ \hline 60 \\ +11 \\ \hline 71 \end{array}$$

Or using equations:

$20 + 40 = 60$

$3 + 8 = 11$

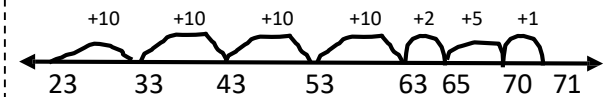$60 + 11 = 71$

Strategy 2: Adding One Number in Parts

Students begin with one of the addends and add up using numerical relationships such as tens and ones, make ten facts or landmark numbers.

23 + 48

Show your thinking using pictures:

23,   33, 43, 53, 63, 65, 70, 71

Or using a number line:

Or using equations:

$23 + 10 + 10 + 10 + 10 + 10 = 63$

$63 + 7 = 70$

$70 + 1 = 71$

Strategy 3: Compensation

The goal of this strategy is to decompose the numbers into easier, friendly numbers. When compensating, remove a specific amount from one addend and give it to the other addend. Choosing which number to adjust is an important decision that is linked students' number sense

23 + 48

$(23-2) + (48+2)$

$21 + 50 = 71$

Think: I am going to take 2 away from the 23 & give it to the 48 because 50 is easier to mentally add than 48.