

# MATH NEWS

Grade 2, Module 4, Topic B

## 2<sup>nd</sup> Grade Math

*Module 4: Addition and Subtraction within 200 with Word Problems to 100*

### Math Parent Letter

This document is created to give parents and students a better understanding of the math concepts found in the material taught in the classroom. Module 4 of the material covers strategies for adding and subtracting within 200. This newsletter will discuss Module 4, Topic B.

Topic B. Strategies for Composing a Ten

#### Words to know

- algorithm
- addends
- compose

$$\left\{ \begin{array}{r} 10 \\ + 8 \\ \hline 18 \end{array} \right.$$

$$\begin{array}{r} 10 \\ + 8 \\ \hline 18 \end{array}$$

#### Things to remember!!

1. Be sure to line up the digits in the one's, ten's, and hundred's when writing an addition problem vertically.

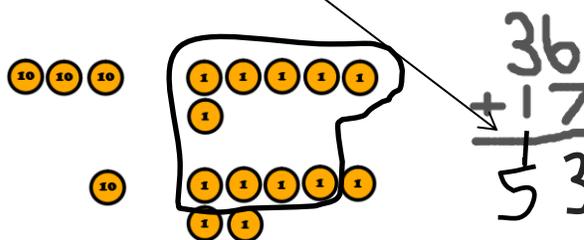
## Focus Area of Topic B

*Apply understanding of place value strategies to addition algorithm*

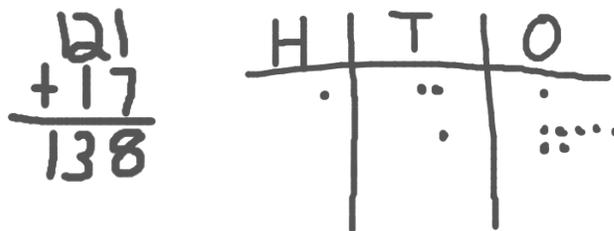
Throughout this module students will be applying the strategies that they learned to add and subtract in Module 4, such as the arrow way, number bonds, and counting on. Students apply their understanding of place value strategies to the addition algorithm, moving from horizontal (number sentence) to vertical notation. Their understanding of vertical addition starts with concrete work with number disks, moving to pictorial place value chart drawings, and ending with abstract calculation.



Consistent use of number disks on a place value chart strengthens students' place value understanding and helps them to model the standard addition algorithm including the composition of a ten. This will also be denoted in the algorithm as shown below.



Finally, students move to a more abstract chip model. As their understanding between their drawings and the algorithm deepens, they move to this more abstract approach in which place value disks are replaced with circles and dots.



### Objectives of Topic B

- 1: Use manipulatives to represent the composition of 10 ones as 1 ten with two-digit addends.
- 2: Relate addition using manipulatives to a written vertical method.
- 3: Use math drawings to represent the composition and relate drawings to a written method.
- 4: Use math drawings to represent the composition when adding a two-digit to a three-digit addend.