The background is a light peach color with a teal-colored horizontal band at the bottom. Various math symbols and school supplies are scattered around. In the top left, there's a black scribble on an orange square, a blue and orange pencil, a blue paperclip, and two orange rings. In the top right, there's a large dark green 'X' and a small orange pencil. On the left side, there are two large orange brackets and a large orange plus sign. On the right side, there's a small orange pencil. In the bottom left, there's a black division sign and two black dots. In the bottom right, there's a large orange pencil, an orange paperclip, and a target-like symbol with an orange ring and a teal center.

# VERTICAL MATH

Presenters: Sharon Karlok & Ashley Protasiewicz

# ENGAGING STUDENTS

Vertical Math allows students to:

- ✱ work through problems collaboratively
- ✱ corrections are made in real time
- ✱ encourages participation and fosters communication



# HOW VERTICAL MATH WORKS

Students are  
placed into  
heterogeneous  
groups

Each person  
takes turns at  
roles

All work must  
be shown

Groups are not  
to collaborate  
with other  
groups

Groups are to  
raise their  
hands to check  
for accuracy  
and to move to  
the next  
problem

# QUICK CHECK

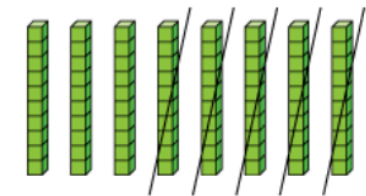
3 – 5 questions checking understanding

Analyze data whole group

Move students into groups

- reinforcement
- independent
- enrichment

Which equation shows the problem?



☐  $8 - 5 = 3$

☐  $8 - 3 = 5$

☐  $80 - 50 = 30$

☐  $80 - 30 = 50$

| Question ▾ |                                   | Standard  | Max Points ▴▾ | Correct ▴▾ | Partial Correct ▴▾ | Incorrect ▴▾ |
|------------|-----------------------------------|-----------|---------------|------------|--------------------|--------------|
| ► Q1       | <div><div></div><div></div></div> | 1.NBT.C.6 | 1             | <u>9</u>   | -                  | <u>5</u>     |
| ► Q2       | <div><div></div><div></div></div> | 1.NBT.C.6 | 1             | <u>11</u>  | -                  | <u>3</u>     |
| ► Q3       | <div><div></div><div></div></div> | 1.NBT.C.6 | 1             | <u>12</u>  | -                  | <u>2</u>     |