

# Intro to Building

Grade 3

Place Value Bundles

4 levels

## Probing Questions

- What strategy are you using to solve these puzzles?
- How can you show there are no ones/tens/hundreds?
- How does the expanded form match the pictures?

## Something to Think About

This objective prepares students to learn addition and subtraction strategies based on place value by developing the ability to compose and decompose tens and hundreds.

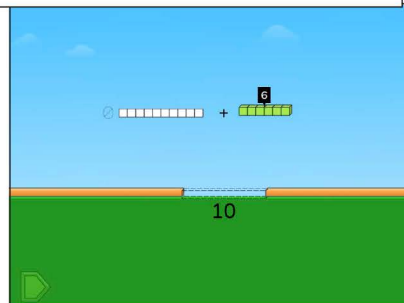
## Uncover the Thinking

These are all addition problems with a missing addend. Ask students what strategy they're using to solve the problems

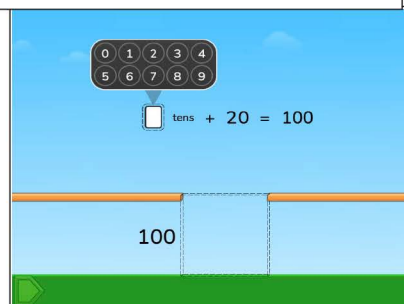
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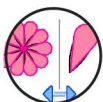
In the first two levels, the puzzles are very visual.



In levels 3 and 4, more symbols are used in the puzzle but the solution is still shown visually.



Place Value Bundles - 1



# Petals Regrouping

Grade 3

Place Value Bundles

5 levels

## Probing Questions

- In these puzzles, what represents a one/ten/hundred?
- What do you do when there are more than ten petals/flowers?
- What do the black arrows in the bottom-left mean?

## Something to Think About

This objective prepares students to learn addition and subtraction strategies based on place value by developing the ability to compose and decompose tens and hundreds.

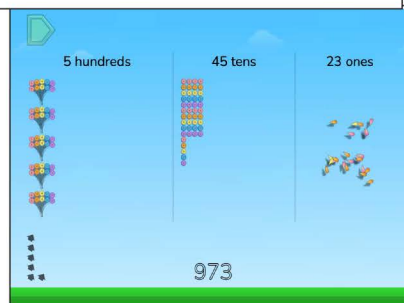
## The Bigger Picture

This game gives students experience building 1-, 2-, and 3-digit numbers. This model is used in the next game to develop regrouping.

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The black arrows in the bottom-left indicate the maximum number of clicks to solve the puzzle.



Level 4 puzzles always start with single petals.



Place Value Bundles - 2



# Petals Random Regrouping Ones

Grade 3

Place Value Bundles

3 levels

## Probing Questions

- How do you know how many tens/ones there are?
- How will you write this number?

## Uncover the Thinking

This game is a great assessment tool. Ask students to share their strategies. Look for counting by different units, counting across decades, and students who use various effective and ineffective shortcuts.

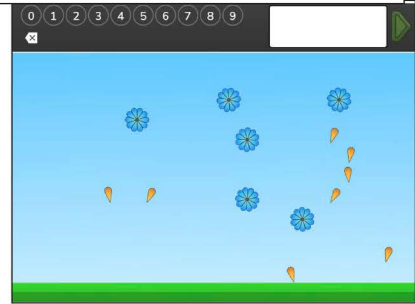
## Stop the Animation

The animation clearly shows the regrouping process and can be used to facilitate stuck students or discuss regrouping in the classroom.

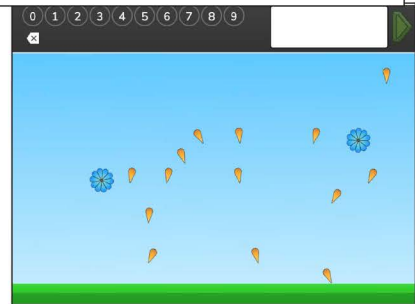
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Level 1 reviews the game before extending it.



Students may struggle when regrouping is required in Level 2.



Place Value Bundles - 3



# Petals Random Regrouping Tens

Grade 3

Place Value Bundles

4 levels

## Probing Questions

- How do you know how many hundreds/tens/ones there are? How will you write this number?

## Use the Scrub Bar to Pause the Animation

The animation clearly shows the regrouping process and can be used to facilitate stuck students or discuss regrouping in the classroom.

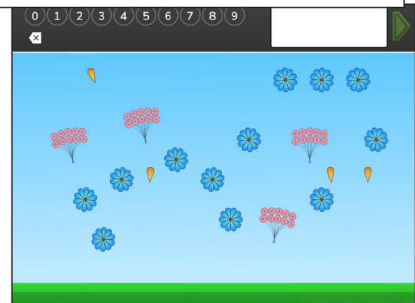
## Uncover the Thinking

This game is a great assessment tool. Ask students to share their strategies. Look for counting by different units, counting across tens and hundreds, and students who use various effective and ineffective shortcuts.

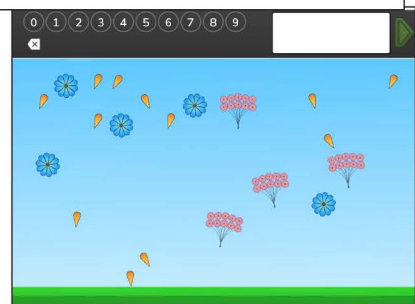
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Levels 1 and 2 may require regrouping tens.



Levels 3 and 4 may require regrouping ones or tens.



Place Value Bundles - 4



# Building Blocks

Grade 3

Place Value Bundles

5 levels

## Probing Questions

- Probing Questions
- How did you decide to choose that many ones?
- Now that you've chosen the ones, how do you decide how many tens to choose?

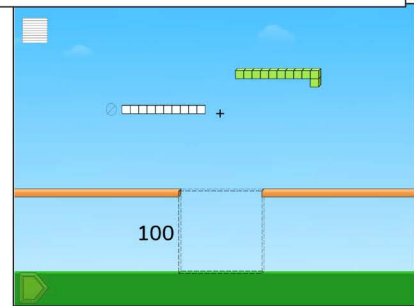
## Supporting Struggling Students

Students may want to choose the number of tens first and then the number of ones. The game reinforces choosing the ones first and then the tens. Consider using base ten blocks to help students.

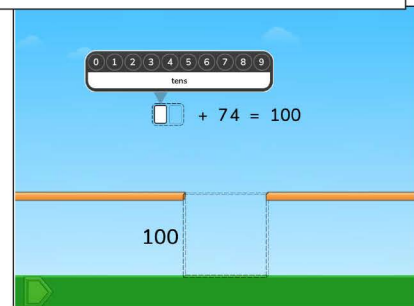
## Something to Think About

Students tend to disregard the ten created when the ones are added and get the sum of 110.

The game transitions from visual to symbolic.



All levels use the same visual model.



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Place Value Bundles - 5