



Adding within 10

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Overview:

Students will use indi to practice adding within 10.

Objectives:

- I can add within 10.

Standards:

- **K.OA.5:** Fluently add and subtract within 5.
- **1.OA.6:** Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.
- **1A-AP-10:** Develop programs with sequences and simple loops, to express ideas or address a problem.
- **1A-AP-11:** Decompose (break down) the steps needed to solve a problem into a precise sequence of instructions.

Materials & Preparation:

- **Background knowledge:**
 - Students should be familiar with solving addition problems within 10 using various strategies.
 - Students should also be familiar with indi and have completed the challenge cards that come in the Student Kit.
- **Materials:** The challenges can be found [here](#). The handout can be found [here](#). The handout is optional, if you want students to practice writing equations.
- **Implementation:**
 - It's recommended that this lesson is launched whole class, but you could also introduce it to students in small groups during math centers.
 - This lesson does not teach strategies for addition. It is designed to allow students to apply whatever addition strategies they're familiar with in order to solve problems and build fluency. This is a good opportunity to incorporate strategies you've introduced or manipulatives students have used to help solve addition problems (base-10 blocks, number cards etc.) .
 - The challenges in this lesson begin with problems within 5 (challenges #1-5) and then move to within 10 (#6-10). Depending where your students are, they might not be able to finish all of the challenges.
- **What's next:**
 - Consider establishing the activities in this lesson as a math center to allow for more practice.
 - Check out the next lesson in this collection: Subtract within 10.



Lesson Steps:

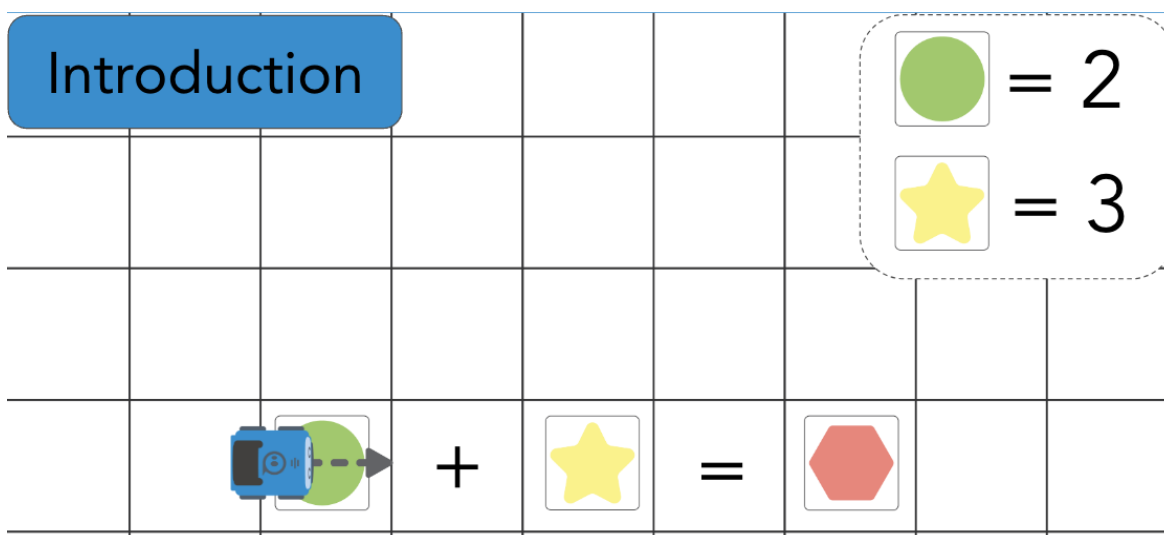
Introduce



1. Project (if possible) and lay out the indi program shown in the image below. Introduce what students will be doing, for example:

→ *indi is going to help us practice adding numbers today. This program has a green, yellow, and red tile. The tiles are going to be equal to different numbers. Green is worth 2 and yellow is worth 3. So our addition problem is: 2 plus 3.*

→ *Red is a little special. Red is always going to be our sum—the answer to our addition problem.*



→ *Let's see if we can solve this one.*

If you are incorporating addition strategies students have used previously, use that strategy to solve the problem. For example, you might use: base-10 blocks, counting on fingers, using counting objects, or drawing tally marks.

→ *Two plus three equals 5. Let's run our indi program again and say the number sentence out loud.*

Teacher Tip: If you want students writing down the number sentences you can use the optional handout or have them write on dry erase boards, if available.



Practice



The steps here will vary slightly depending on your chosen implementation. Also, depending on how much time you have, students might not get to all the challenge cards, which is fine.

1. Break students into groups, distribute indi and the challenges or handout (if you've printed them) or project Challenge 1.
2. Allow time for students to work through the challenges. Circulate and support as needed.
3. After students have had a chance to complete at least two challenges, consider pausing and having one group model for the class how they solved a problem and what strategies they used.
4. If students finish early, they can build their own programs and addition problems.

Teacher Tip: If you make a copy of the presentation that has the challenges in it, they can easily be modified to include larger numbers if your students are ready for them.

Reflect



1. Come back as a group and discuss what was learned. Possible discussion questions include:
 - *What was the red tile in each addition problem?*
 - *What strategies did you use to add? [If time, have students model them.]*
 - *Are there any addition problems you think are tricky? What makes them tricky? What can we do to remember how to solve them?*