Count on by 1s

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Overview:

Students will use indi and number cards to practice counting on by 1s.

Objectives:

- I can count by 1s.
- I can count on from a given number.
- I can count to answer “how many?”

Standards:

- **K.CC.2**: Count forward beginning from a given number within the known sequence.
- **K.CC.5**: Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many objects.
- **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 able to identify numbers 1-20 and have experience counting objects in different configurations. They should also be familiar with indi and have completed the challenge cards that come in the Student Kit.

- **Materials**:
  - Use 1-20 number cards you already have or you can print your own here. You can also use base-ten blocks in addition to or instead of number cards.
  - Two students per indi Student Kit is recommended but adjust according to your classroom needs.
- **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. Once students understand the logistics, this lesson can be used as a center itself.
  - This lesson is set up similarly to the previous lessons in this collection, so students should be familiar with the format. The challenges can be found here. There are a few different ways you can implement this:
    - Project the different challenges and have students complete them all at the same time.
    - Print the challenges and let students complete them at their own pace.
    - Instead of using the challenges, have students build their own programs.

- **What’s next**: Make this lesson into a center activity to have students continue to practice counting on. Move on to the next lesson in this collection: Count on by 10s.

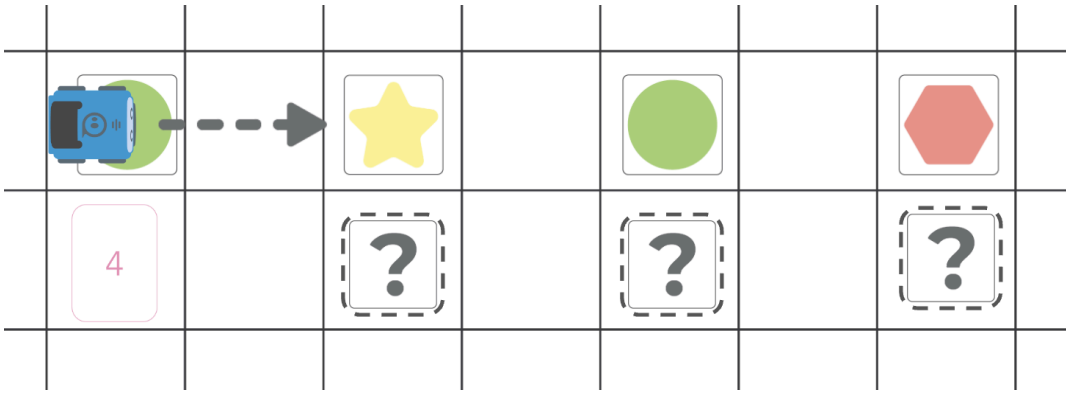
Lesson Steps:

Introduce

1. Set up indi and the tiles to match the image below. Don't put number tiles where the question marks are. Work through the program calling on students for support. For example:

   → *Let's look at our program. indi is starting on 4 and we're going to count up from there. What comes after 4? [5; place a number card down] Good–and after 5? [6; add a number card]. And last? [7; add a number card]*

   → *Now that we have all our numbers, let's run our program and count along.*



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, the number cards, and challenges (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 built their program, which numbers they used, and counting out loud as indi completes the program. Alternatively, if you notice one group is really stuck, come together and try to solve the challenge as a class.
4. If students finish early, they can build their own programs.

Reflect

1. Come back as a group and discuss what was learned. Possible discussion questions include:
   - → *How did you figure out which numbers you needed?*
   - → *Were there any programs that were easy? Which ones? What made them easy? How about programs that were really tricky? Which ones? What made them tricky?*
   - → *What is the difference between counting on, like we did today, and just counting the tiles? [When you count the tiles, the last number tells you how many you have. When you're counting on, the last number doesn't always tell you how many tiles you have.]*