

# Hundreds Board Math

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**Reporting Category** Number and Number Sense, Measurement

**Topic** Counting by ones, fives, and tens and backwards from ten

**Primary SOL** K.4 The student will

- count forward to 100 and backward from 10;
- identify one more than a number and one less than a number; and
- count by fives and tens to 100.

**Related SOL** K.16

## Materials

- Hundreds board
- Linking cubes

## Vocabulary

*count, ones, fives, tens, one more than, one less than, skip counting, patterns*

## Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Students use the Hundreds Board to count by ones to 100. They will place their finger on each number as they count. Talk with the students about the patterns as they move to the right by counts of 1. Have students use the vocabulary of “one more than a number.”
2. Have students place a linking cube on the number 10. Students will move the linking cube backwards while counting (10..9..8..7..6..5..4..3..2..1). Use the vocabulary of “one less than a number” as they move to the left by counts of one.
3. Beginning with the number 5, students will skip count by 5s marking the multiples of 5s with a linking cube. Have students describe the pattern (5, 10, 15... ends in 5 then 0, then 5, and repeats, etc.).
4. Beginning with the number 10, students will skip count by 10s marking the multiples of 10s with a linking cube. Have students describe the pattern (10, 20... as ending with 0 in the ones place and the number in the tens place gets one ten bigger, etc.).

## Assessment

- **Questions**
  - “When counting by ones to 100, how do you know if a number has been left out?”
  - “What are some numbers that come before 20? What are some numbers that come after 20? How do you know?”
  - “What happens when you count backward from 10?”
  - “What happens when you count by 5s?”
  - “What happens when you count by 10s?”
  - “Would you rather have two cookies or five cookies? Why?”

- **Journal/Writing Prompts**
  - “Draw what you know about the number 6.” (Repeat with other numbers as appropriate.)
  - “Show one more than 6.” (Repeat with other numbers as appropriate.)
  - “Show one less than 6.” (Repeat with other numbers as appropriate.)
  - “How many 5s are in a 10?” (Repeat with other numbers as appropriate.)
  - “Tell your favorite number, and tell why it is your favorite.”
- **Other**
  - Put 15 objects in a bag, and let students grab a handful from the bag. Have them count the number of objects they grabbed. Ask students to show or draw one more than, one less than, the same as, two more than, and two less than (as appropriate) the number of objects they grabbed. Repeat with new handfuls of different objects.

### **Extensions and Connections (for all students)**

- Sing along with recordings that feature counting by fives and tens.
- Have the class stand in a circle. Designate one student to begin counting off in sequence backward from 10 to 0. Give the starting student a necklace to signify that she/he is to start the counting. Also, have this student predict who will be number zero. The student who says the last number in the sequence (zero) sits down. The starting student then takes the necklace and places it on the student to his/her right. This new starting student must now predict who will be number zero when counting backward from 10 to 0. The process continues, skipping those who are sitting down, until only one student is left standing. (Note: This game is also effective for skip counting to 100 by fives or tens.)
- Put between 15 and 30 beans in a bag. Have the students pass the bag around the circle. Ask students to predict the number of beans in the bag. When they hear the bell ring, this is the signal to “spill the beans.” Have the student who “spilled the beans” begin putting the beans back in the bag one by one as the class helps him/her count until all the beans are back in the bag. Continue the game with a new number of beans for each round.
- Distribute hundred charts to pairs of students. One student records on the hundred chart, while the other student punches in +5 on the calculator. Each time the = is pressed on the calculator, the appropriate square must be colored on the chart. Have students describe the patterns that are formed.
- The 100<sup>th</sup> day of school provides many opportunities to reinforce counting by tens. Student projects might include posters containing 100 objects and literature relating to the 100<sup>th</sup> day of school.

### **Strategies for Differentiation**

- Use manipulatives for counting experiences that include a variety of textures, e.g., foam shapes, plastic straws, ceramic tiles, plastic and metal bottle caps. Use grid paper to assist students in lining up objects into vertical columns.