Countdown from 100

Grade 1

Activity 123

Relevant Chapters in the *Digi-Block Comprehensive Teacher's Guides:*
  Book I, Unit 2-6: Seeing Patterns in the Count, pages 50 - 52
  Book II, Unit 2-5: Seeing Patterns in the Count, pages 41 - 43

Overview

Students count backwards from 100 to zero as a game is played. The premise of the game is to remove the number blocks indicated on a die from a place value mat and unpack (regroup) blocks-of-10 as needed.

Objectives

Thinking Skills: Students make connections between packed blocks, number words, and digits.

Mastery Skills: Students learn when to unpack a block-of-10 to make more ones available.

## Materials

Each pair, or small group of students needs:
- 1 block-of-100
- 1 die (#1 – 6)
- 1 place value mat with digit cards
- 2 activity sheets, optional (Cut the activity sheets along the dotted line and tape together to form one long recording strip. Have additional recording strips on hand in case students run out of room.)

Class Introduction   **(10 minutes)**

Play a round of the game with a student volunteer to clarify directions and answer questions. Set up two place value mats by putting 1 block-of-100 in each hundreds place.

- Roll the die. The number shown indicates how many single blocks to take off the mat.
- For the first move, both players will need to unpack (regroup) the block-of-100 and move the 10 blocks-of-10 to the tens place. Then they will need to unpack a block-of-10 and move the ten single blocks to the ones place. There will be 9 blocks-of-10 and 10 single blocks on the mat before a players removes the first number of blocks indicated on the die. For example:

Hundreds	Ones	Tens
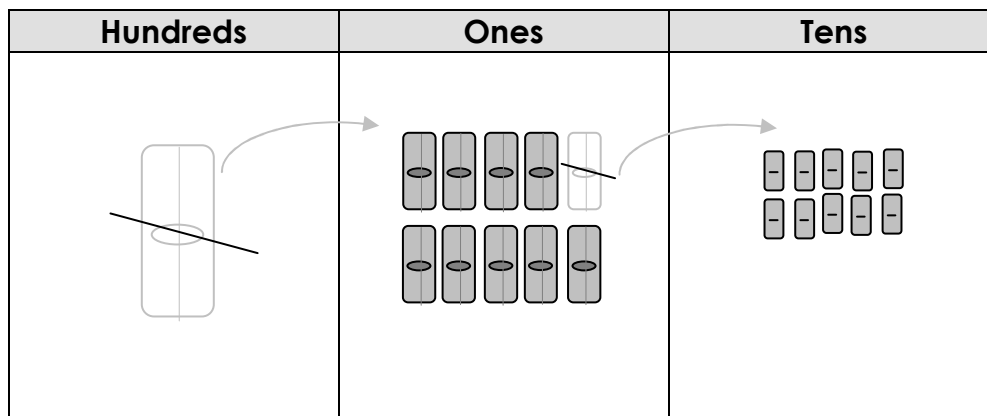
- On subsequent turns, students will decide when they need to unpack (regroup) a block-of-10.

The first player to reach exactly 0 is the winner. If a player rolls a number that makes a number less than zero, skip a turn and keep trying until the exact number needed is rolled.

Optional: As students are playing, they can record the number of blocks-of-10 and ones they have on the activity sheet. Cut the activity sheet along the dotted line and tape together to form one long recording sheet. Have additional strips on hand in case students need more recording space.

Activity   **(10-15 minutes)**

Provide pairs or small groups of students with materials and have them play a few rounds of the game.

- As students are working, encourage them to name the quantity of blocks on their game boards by blocks-of-10 and ones, as well as by number name ("2 blocks-of 10 and 5 ones," and "twenty-five.")
- Encourage students to compare numbers after they finish each round. Ask, **Who has less? How many blocks have you taken off your mat altogether? How do you know?**

Closure   **(5-10 minutes)**

Discuss students' reactions to the game. Ask:
- **How many rolls did it take to get 0 blocks?** (If they did not keep track, ask them to estimate the number of rolls.)
- **How do you know when to unpack (regroup) a block-of-10?**
- **How do you know how many total blocks were on your game board without counting every single one?**

Assessment

As students play the game, observe and note the following. Do they:
- Count with accuracy?
- Know when they need to unpack (regroup) a block-of-10?
- Recognize the number represented by the packed blocks by naming blocks-of-10 and ones (3 blocks-of-10 and 5 ones is 35)? Or do they need to use a counting strategy (10, 20, 30, and then 31, 32, 33, 34, 35)?
- Accurately record and name each number after each turn?
- Know who has less?

Extensions

❑ Have students record the game as repeated subtraction from 100 using number sentences however they choose. This is a perfect transition from the game to a paper and pencil algorithm. For example:

    100 - 6 = 96
    96 - 3 = 93

93 - 5 = 88

and so on...

❑ Have students write all their numbers from 100 down to zero on the recording sheet and have them practice counting backward. Ask some "minus one" questions around the tens numbers (i.e., **What is 80 minus 1? What is 5 blocks-of-10 take away one single block?**)

❑ Have students play the game by subtracting 2-digit numbers. They can use two dice to form the digits in the numbers.

❑ Have students play a version of this game starting with a 3-digit number, for example: 130, 200, 304, etc.