



Count with Calculators



Objective To introduce counting forward and backward on the calculator.

Key Concepts and Skills

- Use calculators to count up and back. [Number and Numeration Goal 1]
- Identify +, −, =, and ON/C or AC keys on the calculator. [Patterns, Functions, and Algebra Goal 2]

Terms to Use clear, all clear, plus, add, minus, take away, subtract, equals

Materials solar-powered calculators; large display signs or transparencies with [ON/C] or [AC], [+], [−], and [=]

A Core Activities

▶ Counting Forward and Backward with a Calculator

Distribute calculators and allow time for free exploration. As a review, pose a few questions and have children display the answers on their calculators. For example, ask: *How many wheels are on a bicycle? How many fingers are on one hand?* Remind children to use **[ON/C]** or **[AC]** before each new question.

Explain that there are different ways to count with calculators. One way is to press each number key in order, clearing between each one. Lead children in pressing, then clearing, each number on their calculators as they slowly count aloud together. When they get to 10, ask if anyone remembers how to enter it. If necessary, refresh their memories about the procedure for entering two-digit numbers.

Next, introduce a faster way to count, using the calculator to supply the next counting number. Show the large [+] sign and ask children to find this key on their calculators.



California Content Standards
NS 1.2 Count, recognize, represent, name, and order a number of objects (up to 30).

- Whole Group
- Small Group
- Partners
- Center

Planning Tip Make display signs for the [+], [−], and [=] signs that are similar to those you made for the [ON/C] or [AC] key in Activity 4-7. Each child or pair of children should have a calculator for this activity, so you may need to conduct it with small groups.

Key sequences for counting forward by adding:

1. Press **[ON/C]** or **[AC]** to clear.
2. Press **[1]** to display 1.
3. Press **[+]** **[1]**.
4. Press **[=]**. What number do you see now? (2)
5. Keep pressing **[+]** **[1]** **[=]** to continue counting forward.

Lead the class in counting up by adding, using the key sequence instructions in the margin. After they've counted through at least 10, ask why they think using the [+] sign works for counting by 1s. (*Counting by 1s is like adding one more each time.*)

Finally, have children do a choral count backward from 10 to 0. Show the [-] sign display and ask children to find the key on their calculators. Remind the class that this is called a minus (or take-away) sign. Model the key sequence for counting back, explaining that they can count backward on their calculators if they take away, or subtract, 1 each time. You might point out that this is the opposite of the way they counted forward. (Children who go past 0 will get negative numbers. You might mention the thermometer as a familiar example of the use of numbers below 0.)

Leave calculators in the Math Center and encourage children to count as high as they can on the calculators. Periodically have them stop and read the number on the display. Also have children use different starting numbers for counting up and back.

▶ **Playing *Monster Squeeze*** (Revisit Activity 3•6, p. 150)

Play a few rounds of *Monster Squeeze*. Allow children to choose the number and move the monsters in response to the guesses. If children seem ready, play a few rounds of mental *Monster Squeeze*—using clues only, no monsters.

B Teaching Option

LITERACY CONNECTION

▶ **Reading about a “Quack-U-Lator”**

Read *Little Quack* by Lauren Thompson (Simon & Schuster, 2003). Children can follow along with the book's Quack-U-Lator problems using their calculators.

Key sequences for counting backward by subtracting:

1. Press **ON/C** or **AC** to clear.
2. Press **1** **0** to display 10.
3. Press **-** **1**.
4. Press **=**. What number do you see now? (9)
5. Keep pressing **-** **1** **=** to continue counting backward.

NOTE The term *equals* may still be unfamiliar to many children. Use it casually in conjunction with synonyms such as “that makes” and “is the same as” to connect to everyday language.

NOTE Children will learn how to use the “repeat” function on a calculator in Activity 6-14.