

Tools for Instruction

One Less

Objective Identify the number that is one less than a given number to 10.

Materials per student: 10 counters

Students should know how to count forward and backward between 0 and 10, inclusive. They also know how to count the members of a set that contains up to ten objects. Students have learned to recognize and write numerals, but they may need help making the connection to the quantities that those numerals represent.

Extending students' sense of quantity is one goal of this activity. Students develop efficient counting methods through hands-on experiences with objects and work with written materials. They are led to compare numbers, which builds their ability to identify numerical relationships. Ultimately, this activity prepares students to fluently count backward to find one less than a number, a necessary skill for later work with place-value concepts and subtraction.

Step by Step 10–15 minutes

1 Review counting forward and backward between 0 and 10.

- Have the student place her hands on the table. Ask her to count her fingers by tapping her leftmost finger on the table and saying "one." Then she should tap each of her other fingers on the table in turn from left to right, while counting to ten.
- Next, have the student start from her rightmost finger and say "ten." She should then tap her fingers from right to left as she counts backward from ten to one.

2 Use counters to find one less than a number.

- Give the student 10 counters. Have her take three counters and put them together to form a set.
- Ask: *How many counters are in your set?* (3) If the student has trouble answering, have her count again.
- Challenge the student to predict by asking: *How many counters will be in your set if you take one away?* If the student is unsure, suggest that she take one counter from the set, then count. Then ask: *How did you know there would be 2?* Guide her to understand that one less than three counters is two counters.
- Have the student form sets that represent other numbers. Have her predict how many there would be in each set if there were one less. Be sure to include sets of 1 and 10. For each, have the student explain how she knows the number that is one less.

3 Find the number that is one less without using counters.

- Say: *Write the number 4. Now write the number that is one less.* Then ask: *What number is one less than four?* (3)
- Have the student write other numerals. For each, tell her to write the number that is one less and tell how she knows. The goal is to help the student relate the number that is one less without using counters.
- If the student has difficulty writing the numerals, then provide assistance.
- If the student has difficulty determining what "one less" is, then have her model the problem with counters.

4 Say the number that is one less.

- Announce a number between 1 and 10, inclusive. Say: *What number is one less than my number?*
- Allow the student to announce another number between 1 and 10, inclusive. Ask: *What is one less than your number?*
- Help the student to count back if needed.

Check for Understanding

Say a number between 1 and 10, inclusive. Ask: *What number is one less?* The student can simply say the number. However, allow the student to use counters or paper and pencil to work out the answer. Repeat with two or three more numbers.

For the student who struggles, use the chart below to help pinpoint where extra help may be needed.

If you observe...	the student may...	Then try...
the student's verbal answer is incorrect	need to use materials to help envision "one less."	writing your number and one or two numbers that come after your number. Then point to your number. Ask: <i>What number is one less than this?</i>
the student names a number that is one more than your number	may need help in identifying "before" and "after," or may not understand what "less" means.	writing your number for the student to see. Then point to the space after your number and say: <i>The number you named comes here, after my number.</i> Point to the space before your number and say: <i>The number that is one less comes before my number.</i>
the student names a number that is less than just "one less"	need reinforcement in identifying "one less."	giving the student several counters and have her continue to take away one counter at a time, counting the number remaining. After each count, ask: <i>How many are there now?</i>