

Mathematics: Number and Operations in Base Ten

1.NBT.1

Cluster Heading: 1.NBT.A Extend the counting sequence

Content Standard: 1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Practice Standards: MP.2 Reason abstractly and quantitatively, **MP.6** Attend to precision, **MP.7** Look for and make use of structure.

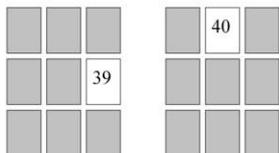
Problem/Task Suggestions

“Crossing the Decade” Concentration

Students play this game like a traditional memory or concentration game.

You will need to create a set of number cards for each of the pairs of numbers that cross the decade (e.g., 19 & 20, 29 & 30, 39 & 40, etc.)

Students place all the number cards that end with “_9” face down in an 3x3 array on the left and all the number cards that end with “_0” face down in an 3x3 array on the right. Students work in pairs or trios and take turns. The first student selects a card from the left array, stating the number name and the counting number that follows (“I have 39, I need 40”). S/he then picks one card from the array on the right, hoping to find the target number. If the student does not find the pair, both cards are replaced face down in the original spots, and it's the next student's turn. When a student finds a matching pair s/he keeps that pair of cards. The student with the most matched pairs wins.



Differentiation

Supports Game can be taught to the whole group by using larger cards, a sentence pocket chart, or magnets and magnetic board. Teacher picks from left to begin, states the number name and the number right after and then picks from the right.

Extension Students can gain experience in counting backward by picking from the right array first and then looking for the correct number in the left array.

Solution <http://www.illustrativemathematics.org/illustrations/405>

Formative Assessment Suggestions

Observation of Students

Does the student

- Demonstrate the ability to cross from one decade to the next?
- Remember to include the decade number when counting, forward and backward?
- State the name of the numbers correctly?

Questions to Guide Student Thinking

- How could you represent that number?
- What number comes before and after the number you have?
- What can you use to determine the order of numbers?
- What does that number mean?
- Why do you need to be able to count to the next decade and why is that important?

Misconceptions

Students may:

- Not know what comes next when counting and crossing from one decade to the next.
- Not have conceptual understanding or knowledge of the counting sequence beyond the “teen” numbers.

Vocabulary Considerations

Number name, number before, number after

Source: <http://www.illustrativemathematics.org/illustrations/405>