

Compose and decompose numbers 11–19 to gain foundations for place value (Standard K.NBT.1)

**Standard K.NBT.1** Compose and decompose numbers from 11–19 into ten ones and some further ones. Use objects or drawings and record each composition or decomposition by a drawing or equation. *For example,  $18 = 10 + 8$ .* Understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

- Compose and decompose numbers from 11-19 into a group of ten ones and some more ones
- Use objects and drawings to represent numbers 11-19 as a group of ten ones and some more ones
- Connect physical representations (objects) to visual representations (drawings)
- Understand that the numbers 11-19 are made up of two digits
- Connect and use physical and visual representations to create equations to represent numbers 11-19 as ten plus a single-digit number equals a two-digit number ( $10 + 3 = 13$ )
- Move flexibly between recognizing and writing equations with the total on both sides of the equal sign

Teacher Note: In kindergarten, students compose and decompose numbers from 11–19 into ten ones and some further ones. They do not unitize a group of ten ones as a “ten.” In first grade, students extend this understanding to unitize a group of ten ones as a “ten.” They also understand two-digit numbers as having multiple “tens.”

**K.CC.1** Count to 100 by ones and by tens  
**K.CC.3** Read and write numbers using base ten numerals from 0 to 20  
**K.CC.4** Understand the relationship between numbers and quantities  
**K.OA.3** Decompose numbers less than or equal to 10. Record each decomposition by a drawing or equation

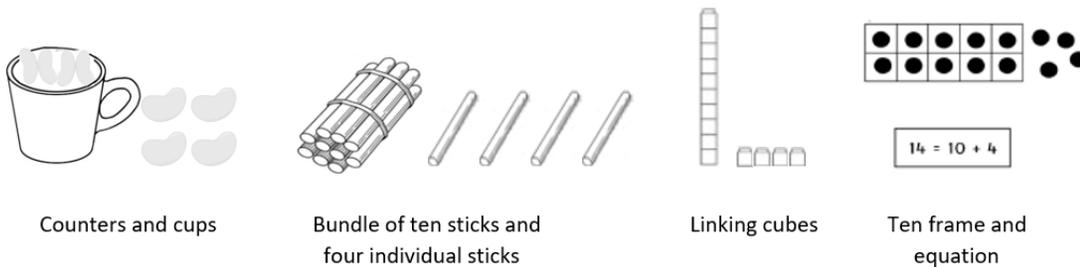
**1.NBT.2** Understand that the two digits of a two-digit number represent amounts of tens and ones  
**1.NBT.3** Compare two two-digit numbers based on meanings of the tens and ones digits  
**2.NBT.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones

Critical Background Knowledge

- Related Standards: Current Grade Level (see above)

ten, ones, digit(s), group, number, decompose, compose, equation, equal, plus, number names 1-19

**Groupable Base-ten Models**



- Use a variety of groupable objects such as counters with cups, linking cubes, and bundles of sticks to represent a teen number
- Use ten frames to represent a teen number
- Use drawings to represent a teen number
- Write equations based on physical and visual representations
- Move from counting all to recognizing a group of ten ones and some more ones
- After much exposure to groupable base-ten models, use pregrouped base-ten models such as base-ten blocks to represent a number 11-19

Images Sources: <http://www.dpi.state.nc.us/docs/curriculum/mathematics/scos/kindergarten.pdf> and p. 159