

**Virginia Essentialized Standards of Learning
Instruction Resource
Mathematics Sample Activities**

Grade 6 Mathematics-NNSCE

VESOL Code	VESOL Reporting Category	VESOL Text	Complexity Continuum
M-6 3	Number, Number Sense, Computation, and Estimation (NNSCE)	Compare whole numbers 0 through 80 on a number line.	Whole numbers 0 through 80 could be compared with the words “smaller,” “larger,” “same,” or with the symbols $<$, $=$, $>$.

Instructional Example

Objective:

Students will compare whole numbers up to 80 using a number line and $<$, $=$, and $>$.

Vocabulary:

number line, greater than, less than, equal, whole number

Materials: *Sample activities range across a continuum of complexity and may include materials such as:*

- Objects (tiles, beads, balls, erasers, etc.) to make piles to compare
- Similar objects with different attributes on hand for generalizing the skill
- Card with symbols $<$, $=$, $>$
- Number line
- 2 sets of number cards (0-80)

Procedures for Instruction:

These sample activities can be used at various points on the complexity continuum. Many possibilities exist for lesson creation between the examples presented here. It is important to start instruction where the student is currently functioning and implement the appropriate instructional strategy with them. Once data indicates that the student is ready for the next level of instruction, proceed to it after reviewing the level the student has mastered. Let the data be your guide.

Sample Activity 1

Using manipulatives, students compare groups of 0-10 objects using the language “same, less, and more.” Students identify symbols for less than, same, and more than; $<$, $=$, and $>$.

**Students must know the meaning of “less, same, and more”; if they do not, start with instruction on these concepts using groups of objects with a large range. For example, use a group of 1 cup and a group of 10 cups to introduce the concepts of less and more so students can visually see the difference*

between the two groups. When introducing the concept of “less, same, and more,” initially begin with two groups of objects that have all the same attributes except for the number in the set. As students master quantity concepts, use a variety of manipulatives to compose the groups. For example, start with only blue blocks in both groups and when students have the concept with only blue blocks, add some green blocks, or blue balls. This helps students generalize the concepts to a multitude of objects, not just blue blocks.

Beginning instruction tasks involve students comparing two groups of 0-10 similar objects, describing one group as less, same, or more than the other. Present students with two groups of objects. Start with a large range between the two groups of objects, (i.e. use a range of 5 or more so that one set has 2 objects, and the other 7) and then narrow the range to make the task more difficult. Demonstrate how to compare the first group to the second. “There are 3 blocks in this group. (Point to each as you explain.) There are 10 blocks in this group. This group of 3 has LESS than this group of 10.” Connect vocabulary to the associated symbol for “less than.” Show the symbol card and ask the student “What’s this?” so they can use their means of communication to identify and use “less than” to compare one set to another.

Provide explicit instruction associating symbol cards with comparison sets one concept at a time. Continue in like manner until students compare groups of similar objects as less than, same, or more than, pairing symbols (<, =, and >) with each concept.

Move instruction to comparing dissimilar objects. Using scaffolded supports, evidence-based practices (EBPs) and effective feedback, students successfully complete multiple practice opportunities across varied sets to identify the correct comparison (less than, more than, same/equal).

Generalize vocabulary acquisition by asking “What symbol is this ____?” showing each of the symbols so students can use their means of communication to name the symbol, or ask students to select from a field of three which is _____ (less than, more than, same/equal). Vocabulary instruction can be offered both during task completion and in isolation. Some students may benefit from discrete trial teaching, introducing one symbol card at a time. Start with the comparison symbol and a non-related distractor (such as a ball, tree, book etc.). Once students discriminate between the symbol and the distractor, use two symbol cards and eliminate the distractor. After students can identify the correct symbol between two, add a third non-symbol distractor. Repeat the same process, finally introducing a third symbol as the distractor. Use EBPs such as wait time, prompting, and/or errorless teaching for students to experience mastery success selecting comparison symbols. Provide practice opportunities for students to apply vocabulary concepts to comparing sets as described above.

Sample Activity 2

Students compare the magnitudes of numbers 0-20 using “ same, less, or more.” Students will compare whole numbers 0-20 using the symbols <, =, and >.

**Students must have number-value correspondence to proceed with this lesson. If students do not have number-value correspondence, use number cards and manipulatives to teach students the value of numbers 0-20.*

In this sample activity, students compare one whole number to another from 0-20, describing the first number as less, same, or more than the second number. Present students with two cards, leaving a

space in the middle. Students may use manipulatives to create a visual comparison or verbally compare the first card to the second, such as “5 is less than 18.” Teacher provides explicit instruction with examples and non-examples, scaffolded supports and EBPs for students to complete large discrepancy comparisons (i.e. 3 is less than 16, 20 is greater than 2 etc.) When students are successful with wide range comparisons, reduce the range of numbers, using cards from 0-10 or 11-20 for comparisons to one another. Present students with the two numbers, leaving a space in the middle for the symbol card, so that students can place the correct symbol, first from two symbol choice cards, and then a field of three.

Sample Activity 3

Students compare magnitudes of numbers 21-50 using $<$, $=$, and $>$.

Building upon the process above, students compare one whole number to another from 21-50, describing the first as less, same, or more than the second number. Present two number cards to the student and have the student select the correct symbol card from a field of three cards.

Sample Activity 4

Students will compare magnitudes of numbers 51-80 using $<$, $=$, and $>$.

In this sample activity, students compare one whole or decimal number to another from 51-80, describing the first as less, same, or more than the second number. Present two number cards to the student and have the student select the correct symbol card from a field of three cards. Students may benefit from using a number line showing whole numbers.

Additional Resources:

- Online manipulatives
 - [Math Learning Center Number Line](#)
 - [Didax Number Line](#)
 - [Math Learning Center Number Frames](#)
 - [Didax Unifix Cubes](#)
 - [Math Learning Center Website](#)
 - [Didax Manipulatives Website](#)
- [3D Printed math manipulatives](#) for students with visual impairments
- Students should utilize the Assistive Technology listed in their IEP accommodations
- Additional AT that may be helpful to explore:
 - Software incorporating switch scanning
 - Computer Interfaces and switches, Eye gaze frame with choices
 - Alternative computer mice like joysticks
 - Pencil grips, Adapted paper, Slant boards
 - Clock communicator to make choices between numbers

Communication

- [36 Location Universal Core Board](#)
- Core Vocabulary and Math that can be modeled for AAC Users during lessons
 - More
 - Not more

- Same/ Different
- Big/little
- Put here/there