



Bridging for Math Strength Resources

Standards of Learning Curriculum Framework

Standard of Learning (SOL) 3.1c Compare and order whole numbers, each 9,999 or less



Student Strengths	Bridging Concepts	Standard of Learning
Students can compare and order whole numbers between 0 and 999.	Students understand place value through hundred thousands.	Students can compare and order whole numbers between 0 and 9,999.

Understanding the Learning Trajectory

Big Ideas:

- Comparing magnitudes of four-digit numbers uses the understanding that 1 thousand is greater than any amount of hundreds, tens, and ones represented by a three-digit number.
- Four-digit numbers are first compared by inspecting the thousands place, then the hundreds place and so on.
- Whole numbers can be compared by analyzing corresponding place values. (Charles, p. 14)
- Numbers can be compared by their relative values. (Charles, p. 14) For example, benchmark numbers are important numbers against which other numbers or quantities can be estimated and compared. Benchmark numbers are usually multiples of 10 or 100.

Formative Assessment:

- [Just in Time Mathematics Quick Check 3.1c PDF](#)
- [Just in Time Mathematics Quick Check 3.1c Desmos](#)

Important Assessment Look Fors:

- Student uses the $>$, $<$, $=$, and $\neq$ symbols correctly.
- Student uses the terms greatest and least correctly.
- Student composes a number that is less than, greater than, or equal to a given number using appropriate place value.
- Student uses place value understanding when comparing numbers.

Purposeful Questions:

- How did you know which number was larger/smaller?
- Why did you order the numbers in that way?
- Why is that number greater than/less than/equal to the given number?

Bridging Activity to Support Standard	Instructional Tips
Routine Mystery Number Riddles based on from <i>Daily Routines to Jump-Start Math Class</i> from Corwin and Van De Walle's teaching activities Target Number Practice Henrico County Public Schools	Mystery Numbers can be a quick routine done daily with any number. They are quick to come up with and you can verbally state them or put them in a PowerPoint or Google Slide presentation for students to see. The example will also reinforce rounding. Not all mystery numbers have to reinforce another skill. The Target Number Practice routine would be a great way to review all of 3.1 as well as practice with comparing and ordering numbers. The link in the routine is for Version 1. There are two more versions that can be found here and here.
Rich Tasks Ordering 4-Digit Numbers from Illustrative Math For more see Achieve the Core Who Could it Be? Henrico County Public Schools	A note from Illustrative Math: It is common for students to compare multi-digit numbers just by comparing the first digit, then the second digit, and so on. This task includes three-digit numbers with large hundreds digits and four-digit numbers with small thousands digits so that students must infer the presence of a 0 in the thousands place in order to compare. It also includes numbers with strategically placed zeros and an unusual request to order them from greatest to least in addition to the more traditional least to greatest.
Games Fill the Stairs mathforlove.com	This game's directions are for two digit numbers utilizing two dice. This game can easily be modified by adding more dice to the game. Give students 4 dice to roll and have them make 4-digit numbers and play the game.
Other Resources: ● Mystery Number Riddles ● VDOE Mathematics Instructional Plans (MIPS): ○ 3.1c Comparing and Ordering Numbers (Word) / (PDF) ○ 3.1c What's My Number? (Word) / (PDF) ○ 3.1c Comparing Numbers (Word) / (PDF) ● VDOE Word Wall Cards: Grade 3 (Word) and (PDF) ○ Less Than ○ Greater Than ○ Equal To ○ Place Value Positions	

Learning Trajectory Resources:

- Charles, R. (2005). Big ideas and understandings as the foundation for elementary and middle school mathematics. *Journal of Mathematics Education Leadership*, 7(3), NCSM.
- Clements, D. H., & Sarama, J. (2019). Learning and teaching with learning trajectories [LT]2. Marsico Institute, Morgridge College of Education, University of Denver. <https://www.learningtrajectories.org/>
- Common Core Standards Writing Team. (2019). [Progressions for the Common Core State Standards for Mathematics](#). Tucson, AZ: Institute for Mathematics and Education, University of Arizona.
- Richardson, K. (2012). How Children Learn Number Concepts: A Guide to Critical Learning Phases. Bellingham: Math Perspectives Teacher Development Center.
- San Giovanni, J.J. (2019). Daily Routines to Jump-Start Math Class, Elementary School. Corwin.
- Van De Walle, J., Karp, K. S., & Bay-Williams, J. M. (2018). *Elementary and Middle School Mathematics: Teaching Developmentally*. (10th edition) New York: Pearson (2019:9780134802084).
- VDOE Curriculum Framework for All Grades - [Standard of Learning Curriculum Framework](#).