



Bridging for Math Strength Resources

Standards of Learning Curriculum Framework

Standard of Learning (SOL) 2.2a Count forward by twos, fives, and tens to 120, starting at various multiples of 2, 5, or 10.



Student Strengths	Bridging Concepts	Standard of Learning
Students can create groups of objects of twos, fives, and tens while they skip count to 120.	Students can count forward by twos, fives, and tens, starting at 0.	Students can count forward by twos, fives, and tens to 120, starting at various multiples of 2, 5, or 10.

Understanding the Learning Progression

Big Ideas:

- Within the learning trajectory of counting forward and back, this level demonstrates students' ability to count "counting words" (single sequence or skips counts) in either direction starting at any number. Recognizes that decades sequences mirror single-digit sequences (Clements & Sarama, 2019).
- Students are able to skip counting by saying a sequence of numbers represents a grouping of objects. Organizing objects into groups while skip counting by that quantity is more efficient than skip counting by ones (Richardson, 2012).
- Skip counting can occur at various places in the sequence of numbers. Skip counting by tens forward leads to place value strategies for addition (Richardson, 2012).

Formative Assessment:

- [Just in Time Mathematics Quick Check 2.2a PDF](#)
- [Just in Time Mathematics Quick Check 2.2a Desmos](#)

Important Assessment Look Fors:

- Student counts by two or fives rather than by ones when objects are presented in groups of 2 or 5, respectively.
- Student skip counts by 10s to continue a counting sequence.
- Student recognizes that a zero in the ones place signals counting by tens.
- Student applies the pattern of 5s and 0s in the ones place when counting by fives beginning at a multiple of 5.

Purposeful Questions:

- How are the objects grouped in the pictures?
- How does the way objects are grouped determine the skip counting pattern?
- How do the numbers you say while skip counting help you determine the pattern?
- What are some patterns noticed in the specific numbers said when skip counting by a specific amount?

Bridging Activity to Support Standard	Instructional Tips
Routine Alike and Different Henrico County Public Schools	Try to find as many ways as the objects and/or numbers on the slides are similar and different. Make connections to place value and grouping/regrouping, hundreds charts, 120s charts, clocks, numbers.
Rich Task Skip Counting Task Region 1 Team, 2018	Anticipate which materials students may wish to use to support with skip counting. Some may not need any and will record numbers, some will draw pictures, and some will need groupable objects. Encourage students to show their thinking using multiple models/representations and connecting these representations to each other. Monitor who is using what models/representations and how they are connecting them to symbolic notation, if at all. Look for student's ability to explain their reasoning for their work. Discuss the concept of skip counting. • What does it mean to skip count by 2, 5 and/or 10? • Are there other numbers we can skip count by? • When do we use skip counting? • How can skip counting help us? • When skip counting to a specified number are there multiple ways to count? • Are there patterns that they observe when skip counting by a specific amount?
Game Race to 120-Skip counting by 5 and 10 Henrico County Public Schools	Place the counter on 0. Spin the spinner. If it lands on +5, skip count by 5 one time. If it lands on +10, skip count by 10 or 5 two times. The first player to 120 wins. Discuss what patterns students notice on a hundreds chart when skip count by 5s and 10s. Encourage the use of place value vocabulary such as there is a 0 in the ones place in multiple of tens, or there is a 0 or 5 in the ones place in multiple of 5s. Technically 2nd graders only skip count by 10 by multiples of tens so if they land on a number with a 5 in the ones and then spin +10 have them figure out the pattern or notice that +10 is +5 doubled.
Other Resources: • Grouping and Grazing (Students have to group cows to put in another pasture. Tally marks show up on the side and once grouped leftovers are identified. You can count with the speaker or alone.) • VDOE Mathematics Instructional Plans (MIPS) ◦ 2.2ab - Guess My Pattern (Word) / PDF Version • VDOE Word Wall Cards ◦ Grade 2 (Word) (PDF) • VDOE Instructional Videos for Teachers ◦ Developing Early Number Sense (grades K-2)	

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](#) (draft February 7, 2019). Tucson, AZ: Institute for Mathematics and Education, University of Arizona.

Curriculum Framework for Grade 2 [Standard of Learning Curriculum Framework\(SOL\)](#)

Richardson, K. (2012). How Children Learn Number Concepts: A Guide to Critical Learning Phases. Bellingham: Math Perspectives Teacher Development Center.

Van De Walle, J., Karp, K. S., & Bay-Williams, J. M. (2018). *Elementary and Middle School Mathematics: Teaching Developmentally*. (10th edition) New York: Pearson.