

## ► Kindergarten Unit 1: Numbers to Five & Ten

**Big Conceptual Idea:** [K-5 Progression on Counting and Cardinality and Operations and Algebraic Thinking](#) (pp. 1-11)

Read the *Introducing Bridges in Mathematics* section located in the beginning of the Unit 1 binder prior to unit instruction. This section provides an overview of the purposes and structure of the Bridges materials and includes Kindergarten-specific characteristics of the Mathematical Practices.

Read the *Bridges Unit Overview/Introduction for each Unit, the Module Overview for the week's sessions, and the Session Summary* along with details for the teaching of each session. These Introduction/Overview/Summary sections provide focus, clarity, vocabulary, definitions, and examples that support the critical "big mathematical ideas and understandings". This information supports professional decision-making within the Sessions and Modules as needed.

**Unit 1**  
**Numbers to 5 & 10**  
 20 sessions over 20 days  
 Screening Days: 5  
 NVACS Focus Domains: K.CC  
*Note:* Incorporate time to help children build routines for being a mathematician. Do this by engaging in mathematics through the mathematical practices. Establish mathematics routines.  
 Total Days: 25 (including screening week)

<p><b>Mathematical Background:</b>          Read Bridges Unit 1 Overview and Introduction (pp. i-vi)</p>	<p><b>Essential Question for teacher consideration:</b>          How do I set up routines to support student engagement within mathematics content and beginning understandings of the counting sequence and quantity?</p>
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[Kindergarten Curriculum Pacing Framework: Balanced Calendar](#)

### Instructional Note:

*"If you learn something deeply, the synaptic activity will create lasting connections in your brain, forming structural pathways, but if you visit an idea only once or in a superficial way, the synaptic connections can "wash away" like pathways made in the sand." (Boaler, 2016, p. 1)*

This Curriculum Guide supports a student-centered, problem solving, teacher-responsive model of teaching mathematics in which students are actively engaging in meaningful, authentic encounters, doing much of the real thinking, working, and talking within the mathematics content. From the very first day of Kindergarten, students are encouraged to engage in meaningful, intentional, playful mathematics interactions that build mathematics understanding!

Research supports the use of fingers to create perception and representation of numbers as it develops a specific region of our brain, the somatosensory finger area. "It is important to remove the stigma from counting on fingers and to see this activity as inherently important and valuable." (Boaler, n.d.)

Encourage continued finger use to develop this finger perception and develop a culture where this is viewed as a positive strategy for problem solving. "6 year old's finger representation was a better predictor of future mathematics success than their scores on tests of cognitive processing" (Boaler, n.d.). <https://bhi61nm2cr3mkdgg1dtaov18-wpengine.netdna-ssl.com/wp-content/uploads/2017/03/Visual-Math-Paper-vF.pdf>. The [Bridges web site](#) also provides information on this research.

K.CC.1 (counting by 1s to 20) is the focus standard developed throughout this Unit with introduction and exposure to number quantity within 5 and to 10. This Unit also introduces patterns.

### Establishing classroom management and routines:

Throughout Unit 1 and during *Number Corner Workouts (Problems & Investigations, Work Places, Calendar Grid, Calendar Collector, Computational Fluency, Days in School, and Number Line)*:

- Establish **routines and patterns of student engagement** for active learning using the materials and the mathematics in Bridges Units. These routines and behaviors become the critical structures for your classroom management and student interactions.
- **Teach routines to independence.** Carefully monitor during free exploration times for materials care, use, and routines. Establish the behaviors you need and want from the beginning. Stop and reteach if necessary!
- Engage students continually in the *Mathematical Practices* (NVACS, 2010, pp. 6-8) - persevering in making sense, thinking relationally and mathematically, explaining and justifying, applying what they know to other meaningful situations, using tools appropriately and efficiently, working and communicating precisely, using patterns, and working efficiently. [Bridges Math Practice Posters](#).
- Engage in **authentic conversations and problem solving** around the content of the *Sessions* and *Workouts*.
- Use **manipulatives, models, and representations** to help make the mathematics visual, engaging, and fun for students.
- Support students' development of **strategic behaviors/strategies** for problem solving. What are students thinking in their own heads and doing to "work" at solving the problem? What behaviors do they show independently at a point of error or confusion?
- Watch for development of strategic behaviors within the mathematics content by **child watching** and using the formative and formal Bridges **Assessments**.
- Expect **all students** to engage in problem solving and in explaining and justifying their thinking.

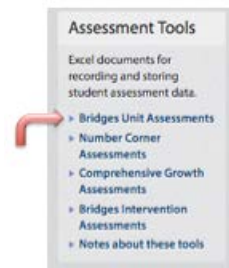
- Engage students in thinking about and understanding the **big ideas of the mathematics content** expected in kindergarten.
- “Rigor” using the Bridges instructional material is dependent upon **how the teacher engages students** in the activities and conversations of the Sessions. The depth and focus of the interactions, aligned with understanding of individual student need, provides for intensification of teaching which drives the development of each student.
- Math instruction is required a minimum of 73 minutes every day (WCSD, Instructional Minutes). Bridges recommends 90 minutes of math instruction for Bridges Unit and *Number Corner* interactions.
- Limit whole group instruction to 15-20 minutes a day during the first 4-6 weeks to allow time for student exploration and use of the manipulatives to build stamina for your desired classroom behaviors and routines.
- See *Teaching Tips* in the *Introduction* section of Unit 1, p. iv, for management ideas.

**On-going enrichment:**

Take note of the **Skills Across the Grade Level chart** in the *Introduction* section to each Unit. This chart shows the extent and expectation of the development of Standards within the Unit (see Unit 1, p. v), and within other Units and *Number Corner Workouts* across the year. This information for each Unit supports your professional decision-making regarding instruction, intensification, and intervention.

Consider use of the **A Year’s Worth of Assessments** chart (Assessment Binder, Assessment Overview tab pp.6-7) and the **Kindergarten Assessment Map** (Assessment Binder, Assessment Overview tab pp. 12-14) for assessment types and location throughout the year in Bridges Units and *Number Corner*. These assessments inform instruction and intensification needs, and can be recorded and monitored on the *Class Checklist/Scoring Guide* provided in the:

- Assessment Binder (under the appropriate assessment tab)
- Unit binder (under the Teacher Masters tab)
- *Number Corner* binder (under the month)
- Or, on the electronic spreadsheets available on the [Bridges Educator website](#) (Implementation tab, Assessment Tools box on the right sidebar of the page, Bridges Unit Assessments or *Number Corner* Assessment).

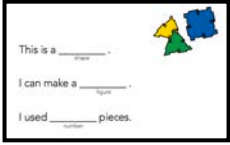


Consider using Catherine Fosnot’s **Landscape of Learning: Number Sense, Addition and Subtraction** to identify where students are on the landscape of big mathematical ideas, strategies, and use of models. Provide interactions for intensification and acceleration to move students up the landscape.

<b>Essential Academic Vocabulary</b> Use these words consistently during instruction.	
<p><b>New Academic Vocabulary:</b> (first time explicitly taught) *indicates Word Resource Cards are available in the Bridges materials</p>	<p><b>Review Academic Vocabulary:</b> Vocabulary from PreK Standards (for those students who attended in Washoe County) or explicitly taught in <i>Number Corner</i></p>
<p>one*, two, three, four, five six, seven, eight, nine, ten attribute* circle* triangle* greatest</p>	<p>most* number* less than* greater than* pattern*</p> <p><u>For some Children: (NV pre-K standards)</u> counting sequence (1-10) naming <i>triangle, circle</i> and/or <i>squares</i> “<i>more than</i>” support to connect to language of “<i>greater than</i>”</p>

**Additional terminology that students may need support with:** sort, create, graph, five-frame, ten-frame, numeral, extend, repeating pattern, same/different.

Standards listed in **bold** indicate a focus of the lesson.

<b>NVACS</b> (Content and Practices)	<b>Mathematical Development of the Big Idea</b>	<b>Instructional Clarifications &amp; Considerations</b>
<b>Module 1- Session 1: One Shoe</b>		
<p>K.CC.1 K.CC.4a K.CC.4b K.MD.3</p> <p><b>MP.1</b> <b>MP.3</b> MP.5 MP.6</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• What do I notice about shoes? What is the same? What is different?</li> <li>• When given a collection of objects, consider how students organize and separate the objects into various categories. This builds a foundation to data collection and graphical representations that reappear throughout the year.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• <b>counting</b> (number word sequence in correct order)</li> <li>• <b>using 1-to-1 correspondence</b> (counts each object once and only once)</li> <li>• <b>understanding cardinality</b> (the last number they say indicates “how many” in the whole collection)</li> <li>• <b>noticing, identifying, and comparing</b> (familiar attributes)</li> </ul>	<p><b>Guiding Questions:</b></p> <ul style="list-style-type: none"> <li>• How can we share our thinking with each other?</li> <li>• How can we sort objects? What are different ways we can sort shoes?</li> <li>• What is an attribute?</li> <li>• How can I work with others using math tools?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual model is shoes.</li> <li>• On the <a href="#">Bridges Educator website</a> under the <i>Implementation tab</i>, sort for “shoes” for helpful ideas for this lesson.</li> <li>• Helpful side notes for the vocabulary that drives the math content understanding are included for each <i>Session</i> (e.g. p. 3).</li> <li>• Consider scheduling Day 5 as a “spirit day” by wearing crazy shoes to school in order to have a variety of shoes to observe.</li> <li>• Rather than having students sit in a circle, suggest that students sit in an oval. A circle must have all points (students) equidistant from the center. This would require measurement such as pieces of string from the center. For ease, suggest an oval, a rounded, slightly elongated shape that is large enough for everyone and students can face into the middle.</li> <li>• Consider utilizing the <a href="#">Work Place Sentence Frames</a> found on the <i>Educator website</i> to support students’ communication.</li> </ul> <p><b>Literature Connections:</b></p> <ul style="list-style-type: none"> <li>• <i>Pete the Cat: I Love My White Shoes</i> by Eric Litwin</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• Promote math communication and representation by having children draw and label attributes of shoes (Velcro, laces, color, material, size, etc.) in a math journal or on paper.</li> <li>• See <i>Teacher Masters</i> (p. T4, T6, T8) of the <i>Work Place Guides</i> for <i>Differentiation</i> ideas.</li> </ul> <p><b>Child Watching and Assessment:</b></p> <ul style="list-style-type: none"> <li>• See the <i>Skills and Concepts</i> sections and the <i>Assessment and Differentiation</i> sections (e.g. p. T4) if you need support for formative assessment observations during <i>Work Places</i>.</li> <li>• See Assessment Binder, Bridges Unit Assessments tab (p. 1-10) for Assessment supports throughout Unit 1 including Observational Assessments ideas, Checkpoints, Skills and Concepts Assessed, Support and Intervention help, Additional Resources, <i>Work Place Differentiation</i> Chart, Checkpoint Scoring Sheets and Scoring Guides, and Reteaching Suggestions.</li> </ul> 
<b>Module 1- Session 2: Two Shoes</b>		
<p>K.CC.1 K.CC.4a K.CC.4b K.CC.6 K.MD.3 K.G.1</p> <p><b>MP.1</b> MP.5 <b>MP.6</b></p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• What are some ways to sort shoes? How do we know which objects “go together?”</li> <li>• Greater than, less than, or equal to are comparisons that are revisited in units 2-8 and a focus in Number Corner Dec- May.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• <b>noticing and identifying properties</b> (by comparing and sorting by same and different attributes)</li> <li>• <b>recognizing magnitude</b> with “more” and “less”</li> <li>• <b>using 1-to-1 correspondence</b></li> <li>• understanding cardinality</li> <li>• <b>subitizing</b> (instant recognition of quantity without counting)</li> </ul>	<p><b>Guiding Questions:</b></p> <ul style="list-style-type: none"> <li>• How can we know if things are the same or different? How do we know how many? How many more? How many less?</li> <li>• Is there more than one way to sort an object?</li> <li>• What are some ways you can sort shoes? How are shoes alike and different?</li> <li>• What is an attribute?</li> <li>• How can I record my information?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual model is shoes; encourages the development of subitizing.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• Have children draw and label one way to sort attributes of shoes (e.g. laces vs. no laces).</li> <li>• See <i>Teacher Masters</i> (p. T10) of the <i>Work Place Guides</i> for <i>Differentiation</i> ideas.</li> </ul>

Module 1- Session 3: Five Shoes								
<p>K.CC.1 K.CC.4a K.CC.4b K.CC.5 <b>K.CC.6</b> K.CC.7 K.MD.3</p> <p><b>MP.1</b> <b>MP.6</b> MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• Connect to “more” and “less” from yesterday.</li> <li>• Classifying objects into categories is a focus in Units 4, 5, &amp; 7 and <i>Number Corner</i> Oct., Dec., Mar.-May.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• <b>noticing and identifying properties</b> (by comparing and sorting by familiar attributes)</li> <li>• <b>recognizing magnitude</b></li> <li>• <b>classifying and counting</b> (using physical graphing to compare “greatest”)</li> <li>• <b>using 1-to-1 correspondence</b></li> <li>• <b>understanding cardinality</b></li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• How can we organize information?</li> <li>• What categories can I create using attributes? How can I record what I counted?</li> <li>• What is the different between more or less?</li> <li>• How do we know if a category has more or less than another?</li> <li>• How can we compare and figure out which group has the most/greatest?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual model is shoes.</li> <li>• Note ways the <i>Bridges P&amp;I</i> encourages multiple student responses, explanations of problem-solving, and risk taking (p.16-17 – T/S discussion ideas).</li> <li>• For <i>Work Place 1E, Pennies and Mats</i> – consider changing pennies to different manipulatives such as beans, buttons, cubes, plastic insects (or other science connections), etc. as student interest wanes.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• See <i>Teacher Masters</i> (p. T12) of the <i>Work Place Guides for Differentiation</i> ideas.</li> <li>• Note the CHALLENGE ideas (e.g. pp.18 and 19) provided in <i>Problems &amp; Investigations</i> and <i>Work Places</i>.</li> </ul>						
Session 4: Ten Shoes								
<p>K.CC.1 K.CC.4a K.CC.4b K.CC.5 <b>K.CC.6</b> K.CC.7 K.MD.3</p> <p><b>MP.1</b> <b>MP.6</b> MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• Connect to “greatest” and “most” conversations from yesterday.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• <b>noticing and identifying properties</b> (by comparing and sorting by familiar attributes)</li> <li>• <b>recognizing magnitude</b></li> <li>• <b>classifying and counting</b> (using physical graphing to compare “greatest”/“most”)</li> <li>• <b>using one-to-one correspondence</b></li> <li>• <b>understanding cardinality</b></li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• How can we compare and figure out which group has the most now?</li> <li>• What ways can I sort shoes? What can I observe about this set of 10 shoes?</li> <li>• How can I arrange these shoes by attributes?</li> <li>• How can we organize the groups to make comparisons?</li> <li>• How can I decide which collection has the most?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual model is shoes.</li> <li>• <i>Work Place Menu Cards</i> are introduced (see pp. 25-26) for choice and independence which support the development of self-regulation; to support students who are still learning to count to 6, provide a large number line (on sentence strip, or tag board) with numbers 1-6 so they can cover a number to join a <i>Work Place</i> until they are able to count.</li> </ul> <div style="border: 1px solid black; display: inline-block; padding: 2px; margin: 5px 0;"> <table border="1" style="border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">2</td> <td style="width: 20px; text-align: center;">3</td> <td style="width: 20px; text-align: center;">4</td> <td style="width: 20px; text-align: center;">5</td> <td style="width: 20px; text-align: center;">6</td> </tr> </table> </div> <p><b>Literature Connections:</b></p> <ul style="list-style-type: none"> <li>• <i>Pete the Cat: Rocking in my School Shoes</i> by Eric Litwin.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• Use the <i>Work Places Differentiation Chart</i> in <i>Assessment Binder</i> (Bridges Unit Assessments pp. 4-5) to make notes on which students need support or challenge.</li> </ul>	1	2	3	4	5	6
1	2	3	4	5	6			
Module 1- Session 5: All Shoes								
<p>K.CC.1 K.CC.4a K.CC.4b K.CC.4c K.CC.5 <b>K.CC.6</b> K.CC.7 K.MD.3</p> <p><b>MP.1</b> <b>MP.2</b> MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• Connect to “more”, “less”, “greatest”, and “most” from previous days.</li> <li>• Labeling each group with a numeral helps students recognize that a number represents a quantity. This is the first step toward reasoning abstractly and quantitatively.</li> <li>• Writing and reading numbers from 0-10 is revisited in Unit 2-4 and <i>Number Corner</i> Sept. –Dec.</li> </ul> <p style="text-align: center;"><i>-continues on next page-</i></p>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• What other ways can we sort?</li> <li>• How do we know how many?</li> <li>• How can I record what I counted?</li> <li>• Why do we count? (to keep track, describe amounts, fairness, have enough)</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual model is children.</li> <li>• In understandings of <b>magnitude, classifying, and counting</b> we are comparing today to “how many more?” This may be a complex understanding for some students. We will revisit this through many different interactions throughout the year.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• Note the CHALLENGE idea (p. 29) provided in <i>Problems &amp; Investigations</i>.</li> </ul> <p><b>Child Watching and Assessment:</b></p> <ul style="list-style-type: none"> <li>• Opportunity for informal assessment of counting strategies during <i>Pennies and Mats Work Place</i> (see pp.30-31); can be documented on the Unit 1 <i>Work Place Differentiation Chart</i> (Assessment Binder, Bridges Unit Assessments tab, pp.4-5).</li> </ul>						

	<p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• noticing and identifying properties (by comparing and sorting by familiar attributes)</li> <li>• recognizing magnitude</li> <li>• classifying and counting (using physical graphing to compare “how many more?”)</li> <li>• using one-to-one correspondence</li> <li>• understanding cardinality</li> </ul>	
<b>Module 2- Session 1: Shoes to Toes</b>		
<p>K.CC.4a K.CC.4b K.CC.5 K.OA.3</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• Count to 20 by 1s is revisited in Units 2-4 and <i>Number Corner</i> Sept. &amp; Oct.</li> <li>• This is the introduction of the five-frame. The five frame continues as a visual model throughout the unit. Five frames help students look for and make use of structure.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• using 1-to-1 correspondence</li> <li>• understanding cardinality</li> <li>• subitizing</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>• counting</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• How many dots and empty boxes do we see?</li> <li>• How can we make that many in different ways? What do you notice? What do you see?</li> <li>• How can I use different math tools to represent what I see?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual models are the five-frame, cubes, and fingers.</li> <li>• Use of the five-frame structure, fingers, and manipulatives, support mathematical development of counting, one-to-one correspondence, cardinality, and subitizing.</li> <li>• This engagement also supports the beginning development of the big mathematical ideas of <b>hierarchical inclusion</b> (numbers are nested within each other), <b>organizing and keeping track</b> within 5, and <b>part-part-whole relations</b> with combinations to 5.</li> </ul> <p><b>Literature Connection:</b></p> <ul style="list-style-type: none"> <li>• <i>Ten Black Dots</i> by Donald Crews</li> <li>• 5 Black Dots Class Book (each students create a page: ___ black dots are a ____).</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• Note the CHALLENGE idea (M2 S1 p. 4) provided in <i>Problems &amp; Investigations</i></li> </ul>
<b>Module 2- Session 2: Fabulous Fives</b>		
<p>K.CC.4a K.CC.4b K.CC.5 K.OA.3</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• Make connections between dots, fingers, and cubes all showing quantity. What do you remember about this tool from yesterday?</li> <li>• Introduction to subitizing and is revisited in Unit 2, 6, &amp; 7 and <i>Number Corner</i> all months except Dec.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• using 1-to-1 correspondence</li> <li>• understanding cardinality</li> <li>• subitizing</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>• counting</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• How many do we see? How can we make that many?</li> <li>• How can I build the quantity on my five frame?</li> <li>• What information do I need to figure out how many? (how many boxes are filled, how many are empty, how many to make 5).</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual models are the five-frame, cubes, and fingers.</li> <li>• Students are introduced to “flashing” with the five-frame cards to support the development of <b>subitizing</b>.</li> </ul> <p><b>Literature Connection:</b></p> <ul style="list-style-type: none"> <li>• <i>Five Little Monkeys</i> series by Eileen Christelow</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• Note the SUPPORT ideas (M2 S2 p. 8) provided in <i>Problems &amp; Investigations</i> for students who need additional support with <b>one-to-one correspondence</b> and <b>subitizing</b>.</li> <li>• The first <i>Home Connection</i> page is available (check note for modeling expectations for this new routine on M2 S2 p. 9). The <i>Home Connections</i> provide additional opportunities for many students to engage in the learning of the classroom one more time and in one more format. This is critical reinforcement of learning for some students.</li> </ul>
<b>Module 2- Session 3: Fives with Fingers</b>		
<p>K.CC.4a K.CC.4b K.CC.5 K.OA.3</p> <p>MP.1</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• Make connections between the dots, fingers, and cubes all showing quantity.</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• How many do we see? How else can we show that many?</li> <li>• How can my fingers be used a math tool? How can I use my fingers to show the number of dots?</li> <li>• How can I figure out how many there are in all?</li> </ul> <p style="text-align: right;"><i>-continues on next page-</i></p>

<p>MP.6 MP.7</p>	<p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• using 1-to-1 correspondence</li> <li>• understanding cardinality</li> <li>• subitizing</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>• counting</li> </ul>	<p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual models are the five-frame and fingers.</li> <li>• Students show quantities on their fingers. See the side note on M2 S3 p. 12 on <b>Finger Patterns</b> for support on developmental differences with this ability.</li> </ul> <p><b>Literature Connection:</b></p> <ul style="list-style-type: none"> <li>• <i>Five Green and Speckled Frogs</i> by Constanza Basaluzzo</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• Note the SUPPORT ideas (M2 S3 p. 13) provided in <i>Problems &amp; Investigations</i>. Some students may need extra support in using their finger to model.</li> </ul>
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**Module 2- Session 4: Numerals 1 to 5**

<p>K.CC.3 K.CC.4a K.CC.4b K.CC.5 K.OA.3 K.MD.3</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• What do they know about numeral writing?</li> <li>• Writing and reading numbers from 0-10 is revisited in Unit 2-4 and <i>Number Corner</i> Sept. –Dec.</li> <li>• Combinations to 5 is revisited in all units and <i>Number Corner</i> months.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• matching number names to written numerals</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>• counting</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• How do we write numbers? Why do we use numerals?</li> <li>• Why do we need to be able to count objects?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Auditory and Visual models are the rhymes and posters visuals of the rhymes. Posters are found in the <i>Number Corner</i> binder and could be laminated and placed on a ring for easy access.</li> <li>• The first structured <i>Work Place</i> is introduced. Introduce the <i>Work Places</i> as “games” so students engage in them as “play” within the classroom routines and expectations you are establishing.</li> <li>• Consider using the online digital display tool found on the <a href="#">Bridges web site</a> (note the second page), in addition to teacher/student modeling.</li> <li>• Optional <i>Work Place Folders</i> are also explained here (M2 S4, p. 16).</li> <li>• Additional <i>Work Place</i> could be writing numbers in sand or salt, or with paint bushes.</li> </ul> <p><b>Literature Connection:</b></p> <ul style="list-style-type: none"> <li>• <i>The Hungry Caterpillar</i> by Eric Carle, and <i>Rooster's Off to See the World</i> by Eric Carle (numerals/quantity used to keep track and describe important events in the story)</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• See <i>Game Variations A &amp; B</i> on the <i>Work Place Guide</i> (p. T2).</li> <li>• Create My Book of 5:</li> </ul> <div data-bbox="706 1073 927 1257" data-label="Image"> </div> <p>Students record the ways they made 5 in the game Beat You to 5. This task supports beginning concepts of counting all. It also helps students develop part-part whole thinking by having them count how many of each color. Students explore all the ways that five can be made. It is important for the crayons/markers to match the colors on the cubes.</p>
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**Module 2- Session 5: Filling Five-Frames**

<p>K.CC.3 K.CC.4a K.CC.4b K.CC.5 K.OA.3 K.MD.3</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>• Review various math tools that have been introduced (cubes, five frames, fingers, beans, etc.) and what makes them “useful.”</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>• using 1-to-1 correspondence</li> <li>• understanding cardinality</li> <li>• subitizing</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>• counting</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>• How many do we see? How can we make that many?</li> <li>• How can my fingers be used a math tool?</li> <li>• How can I use my fingers to show the number of dots?</li> <li>• How can I figure out how many there are in all?</li> <li>• How can you know an amount without counting each object?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>• Visual models are five-frames and fingers.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>• See <i>Teacher Masters</i> (M2 S5 p.T1) of the <i>Work Place Guides for Differentiation</i> ideas.</li> <li>• Reteaching suggestions aligned with the CHECKPOINT ASSESSMENT can be found in the Assessment binder, Bridges Unit Assessment <i>tab</i>, p.8.</li> <li>• A second <i>Home Connection</i> page is provided (M2 S5, p. 24 and <i>Home Connections tab</i>, p.4).</li> </ul> <p><b>Child Watching and Assessment:</b></p> <ul style="list-style-type: none"> <li>• <b>Elements of Early Number Sense CHECKPOINT</b> in small groups of about 4 students while other students engage in <i>Work Places</i> (see notes under Child Watching and Assessment below). From your observations of your students over the last couple of weeks for early one-to-one correspondence, cardinality, subitizing, and combinations of 5, consider who you might need this complete assessment information for to support your instructional decisions.</li> <li>• The <b>Checkpoint Assessment</b> is located in M2 S5, p.23 and T6. Also see scoring and reteaching suggestion in the Assessment Binder, Bridges Unit Assessments <i>tab</i> pp. 7-8</li> </ul>
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Module 3- Session 1: Terrific Tens		
<p>K.CC.4a K.CC.4b K.CC.4c K.CC.5 K.OA.4</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>How is the ten-frame like the five-frame? What do ten-frames and five-frames have in common?</li> <li>Introduction of ten frame as a tool to build fluency with combinations to 10. Combinations to 5 is revisited in all units and <i>Number Corner</i> months.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>understanding cardinality</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>counting (to 10)</li> <li>subitizing (to 2 or 3)</li> <li>using 1-to-1 correspondence (to 5)</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>Why do you think this tool called a ten-frame?</li> <li>How many do we see? How do you know? How do you know that you counted correctly?</li> <li>How can we make that many?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Visual models are ten-frames and fingers.</li> <li>Consider using this order when presenting the out-of-order ten-frame cards in the session (<i>M3 S1, p.5 #7</i>) to support the new learning from the known: 2, 3, 5, 7, 1, 8, 4, 10, 6, 9.</li> <li>This engagement also supports the beginning development of the big mathematical ideas of <b>hierarchical inclusion</b> (numbers are nested within each other), <b>organizing and keeping track</b> within 5, and <b>part-part-whole relations</b> with combinations to 5 and within 10.</li> </ul> <p><b>Literature Connection:</b> <i>Ten Black Dots</i> by Donald Crews</p> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>Note the SUPPORT and CHALLENGE ideas (<i>M3 S1 pp. 4-5</i>) provided in <i>Problems &amp; Investigations</i>.</li> </ul>
Module 3- Session 2: How Many Dots? Part 1		
<p>K.CC.3 K.CC.4a K.CC.4b K.CC.4c K.CC.5</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>What do they know already orally, visually, or quantitatively with 1-10? How do we use counting in our daily lives? What numbers do you use every day?</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>using 1-to-1 correspondence</li> <li>understanding cardinality</li> <li>matching number names and quantities to written numerals</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>counting</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>How many do we see?</li> <li>How can we put them in order?</li> <li>Does the order I say the numbers matter when counting things (e.g. 1, 2, 3, 4 or 3, 2, 1, 5)?</li> <li>What is a numeral? Why would I need to be able to read numerals?</li> <li>Can we match them to the written numeral that is the same?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Visual models are ten-frames, cubes, number cards and ten-frame dot cards.</li> <li><b>Resist the temptation for you to put the students in the correct order if they are struggling with the task at first.</b></li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>Questions to consider - "Is there an easier or a faster way you could count that?" or "Do you see something you know that could help you or make your work easier?"</li> </ul>
Module 3- Session 3: How Many Dots? Part 2		
<p>K.CC.3 K.CC.4a K.CC.4b K.CC.4c K.CC.5 K.CC.6</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>How do we use counting in our daily lives? What numbers do you use everyday?</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>understanding cardinality</li> <li>matching number names and quantities to written numerals</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>counting (to 10)</li> <li>using 1-to-1 correspondence (to 5)</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>Why are numbers important? How can we show numbers in different ways?</li> <li>How many do we see? How can we put them in order?</li> <li>Can we match them to the same written numeral? How else can we make that many?</li> <li>What stories do numbers tell?</li> </ul> <p><b>Instructional Note:</b></p> <ul style="list-style-type: none"> <li>Visual models are ten-frames, cubes, number cards and ten-frame dot cards.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li><i>Home Connection</i> opportunity on p. 13 and under the <i>Home Connection</i> tab.</li> </ul>

Module 3- Session 4: Beat You to Five		
<p>K.CC.4a K.CC.4b K.CC.4c K.CC.5 K.CC.6 K.OA.4</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>What games do you play at home? What do you already know about 5?</li> <li>Combinations to 5 are revisited in <b>all units</b> and <i>Number Corner</i> months.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>recognizing cardinality (to 5)</li> <li>understanding part/whole relationships (to 5)</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>counting (to 10)</li> <li>using 1-to-1 correspondence (to 5)</li> <li>subitizing (to 2 or 3)</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>Which is the best spot for your spinner to land?</li> <li>How do I determine how many more cubes I need to win?</li> <li>Is there more than one way to get 5 (win)?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Visual models are five-trains and cubes.</li> <li>The use of 2 different colors of cubes for each spin is critical for students to see how the parts are building to 5.</li> <li>This game also supports the beginning development of the big mathematical ideas of <b>hierarchical inclusion</b> (numbers are nested within each other) and <b>part-part-whole relations</b> with combinations to 5, and the <i>Mathematical Practice</i> of precision, K.MP.6 (see side comment on p. 17).</li> <li>Consider using the online digital display tool found on the <a href="#">Bridges web site</a> (note the second page), in addition to teacher/student modeling.</li> </ul>
Module 3- Session 5: Introducing Work Place 1G- Beat You to Five		
<p>K.CC.4a K.CC.4b K.CC.4c K.CC.5 K.CC.6 K.OA.4</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>What did you learn about playing this game yesterday?</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>recognizing cardinality (to 5)</li> <li>understanding part/whole relationships (to 5)</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>counting (to 10)</li> <li>using 1-to-1 correspondence (to 5)</li> <li>subitizing (to 2 or 3)</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>What does 0 mean?</li> <li>What happens if your spin is greater than the number of empty boxes?</li> <li>How many ways can you make five?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Visual models are five trains and cubes.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>Note the Assessment &amp; Differentiation suggestions for both mathematics and language on the <i>Work Place Guides</i> in the <i>Teacher Masters</i> sections p. T1.</li> <li>See <i>Work Place Instructions</i> (p. T2) for game variations.</li> </ul> <p><b>Child Watching and Assessment:</b></p> <ul style="list-style-type: none"> <li><b>Beat You to Five CHECKPOINT</b> – formative assessment during <i>Work Places</i> for counting, one-to-one correspondence, cardinality, more/less, and decomposing 5.</li> <li>Checkpoint is found on p. 21 and T3. Also see reteaching suggestion in the Assessment Binder, Bridges Unit Assessments tab pp. 44-45.</li> </ul>
Module 3- Session 6: Introducing Work Place 1H - Which Numeral Will Win?		
<p>K.CC.3 K.MD.3</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>What do they already know about numeral writing?</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>recognizing cardinality</li> </ul> <p><b>Developing:</b></p> <ul style="list-style-type: none"> <li>counting (to 10)</li> <li>using 1-to-1 correspondence (to 5)</li> <li>subitizing (to 2 or 3)</li> </ul>	<p><b>Guiding Questions</b></p> <p>Which numeral do you think will win? Why?</p> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Consider using the online digital display tool found on the <a href="#">Bridges web site</a> in addition to teacher/student modeling (p. 2).</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>Note the Assessment &amp; Differentiation suggestions for both mathematics and language on the <i>Work Place Guides</i> in the <i>Teacher Masters</i> sections p. T4.</li> <li>The <i>Home Connection</i> is found on p. 25 and the M3 <i>Home Connection</i> tab.</li> </ul>
Module 4- Session 1: Folktale Patterns		
<p>K.OA.</p> <p>MP.1 MP.6 MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>What is a pattern?</li> <li>Patterning supports operations and algebraic thinking. Patterns are introduced here and explore</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>How do we describe and identify patterns? What is a pattern?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Auditory and visual models are motions and sounds.</li> </ul>

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	<p>throughout all months of Number Corner.</p> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>creating and copying simple repetitive patterns with up to 3 elements</li> </ul>	<p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li><a href="https://www.gonoodle.com/">GoNoodle</a> has an interactive patterning activity called <a href="#">Banana, Banana, Meatball</a> which can be accessed here: <a href="https://www.gonoodle.com/">https://www.gonoodle.com/</a> (requires registration)</li> </ul>
<b>Module 4- Session 2: Clap, Tap &amp; Snap Patterns</b>		
<p>K.OA.</p> <p>MP.1</p> <p>MP.6</p> <p>MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>Connect to sound/motion patterns from yesterday.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>creating, describing and copying simple repetitive patterns with up to 3 elements</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>How do you know when something is a pattern?</li> <li>How do you know when something is not a pattern?</li> <li>How can we use my hands and feet to make a pattern?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Visual models are sounds and motions with body parts.</li> <li>Note, <i>Bridges</i> often will explore physically before moving to manipulatives, and explicitly make connections to previous work to support students' "relational understanding" (Van de Walle, Karp, Lovin, &amp; Bay-Williams, 2014, p. 5).</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>The <i>Home Connection</i> is found on p. 9 and the <i>M4 Home Connection</i> tab.</li> </ul>
<b>Module 4- Session 3: Unifix Cube Patterns, Day 1</b>		
<p>K.OA.</p> <p>MP.1</p> <p>MP.6</p> <p>MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>Connect to motion patterns from yesterday.</li> <li>Identifying, describing and extending patterns allows opportunities to look for and make use of structure. This introduction creates the habit of seeking out patterns and structures when exploring mathematical ideas and situations.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>creating, describing and copying simple repetitive patterns with up to 3 elements</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>What patterns do you notice in other places around the classroom? School? Clothing? Art?</li> <li>How else can we make a pattern we already see?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Visual models are cubes.</li> <li>Explicitly make connections to the pattern work yesterday.</li> <li>Pattern is by gender (boys, girls). Separating by gender may have negative impacts to students' identities, especially those who are gender fluid. Consider creating a repeating pattern by other attributes such as shirt color.</li> </ul>
<b>Module 4- Session 4: Unifix Cube Patterns, Day 2</b>		
<p>K.OA.</p> <p>MP.1</p> <p>MP.6</p> <p>MP.7</p>	<p><b>Access Prior Learning and Connections to Future Learning:</b></p> <ul style="list-style-type: none"> <li>Connect to cube patterns from yesterday.</li> </ul> <p><b>Beginning with the Big Idea and key Strategic Behaviors:</b></p> <ul style="list-style-type: none"> <li>extending, and creating simple repetitive patterns with up to 3 elements</li> </ul>	<p><b>Guiding Questions</b></p> <ul style="list-style-type: none"> <li>Besides color patterns, what kinds of patterns are there? (spatial, object, letters, numerals, words, sounds, etc.)?</li> <li>How can I show the same pattern in two ways (translate pattern from one medium to another)?</li> <li>How can we extend a pattern we already see?</li> </ul> <p><b>Instructional Notes:</b></p> <ul style="list-style-type: none"> <li>Visual models are cubes.</li> </ul> <p><b>Writing and Enrichment:</b></p> <ul style="list-style-type: none"> <li>Consider having students create their own pattern strips with construction paper squares glued to strips of paper; accurate pattern strips could be added to Work Place 11 - Unifix Cube Patterns.</li> <li>Note the SUPPORT and CHALLENGE suggestions on p. 15.</li> <li>Note the Assessment and Differentiation ideas on the <i>Work Place Guides</i> under the <i>Teacher Masters</i> tab p.T1.</li> <li>The <i>Home Connection</i> is found on p. 9 and the <i>M4 Home Connection</i> tab.</li> </ul>

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