

KINDERGARTEN

Unit 1 Introduction & Planner

Revised for 2020–2021

About Unit 1 Numbers to Five & Ten

Unit 1 is about building mathematical community in your classroom and teaching routines that will be part of your students' yearlong exploration with numbers. Unit 1 focuses on the counting sequence to 20 and addresses, in depth, working with quantities to 10. The focus question of "How Many?" helps students 1) master the number word sequence 2) develop 1:1 correspondence and 3) gain a grasp of cardinality. Routines are established for choral counting, use of math materials, think-pair-share, turn taking, and Work Places.

- In Module 1, students explore the attributes of shoes and compare, sort, and count various shoe groupings/sorts. They focus on the counting sequence, 1:1 correspondence, cardinality, and determining which group has more.
- In Module 2, students are introduced to the five-frame. They work on subitizing quantities 0–5 on the five-frame (filled and empty), matching finger patterns, and building quantities to match on their own five-frame counting mats.
- In Module 3, students expand their number work to the ten-frame. They count, order, and compare quantities as well as focus on composing and decomposing numbers to 10.
- In Module 4, students explore patterns through sound and motion before creating patterns with Unifix cubes.

Major goals of the unit include building a classroom community, establishing classroom routines and protocols, and developing skills to answer the question, "How Many?" Students are introduced to important math models such as their fingers, five-frames, and ten-frames. Given repeated exposure to and practice with these models, they are expected to become proficient with strategies that include subitizing, popping fingers, and counting on from numbers other than 1 to develop critical counting skills, including sequence of number names, 1:1 correspondence, and cardinality to 10.

Identifying Topics for Reengagement

Depending on their experience with the Bridges Pre-K units of instruction or other Pre-K or preschool programs during school closures, students might require opportunities to reengage with the following topics relevant to Unit 1:

- counting to 10 and beyond
- counting objects to 10
- recognizing numerals to 10

To assess students' current skills in these areas, we recommend that you conduct the Unit 1 Screener at the end of Module 2 or the start of Module 3. We have added a mini-module between Modules 2 and 3 to provide more practice with the five-frame. This would be a great time to conduct this screener.

Use the Unit 1 Screener Implementation Guide to help interpret the results. This short diagnostic tool will help to inform your instruction, interventions, and possible modifications to Unit 1. In addition, use selected items from the Number Corner assessments (as indicated in the Screener Implementation Guide), as well as observations and interactions with students during daily instruction and Work Places to guide your instructional decisions.

Note that the Unit 1 Screener duplicates some tasks from the Number Corner Baseline Assessment; choose one or the other to gather your information.

Above all, trust in the resilience and mathematical capabilities of your students and keep moving forward. Your repeated practice and focus on these early math concepts through Number Corner, Problems & Investigations, and Work Places will lay the necessary groundwork for their continued math growth in kindergarten.

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Recommended Modifications

- 1. Focusing on the social and emotional needs of your students while addressing academic content will be a priority this year more than ever before. Your math routines of Number Corner, Work Places, choral counting, think-pair-share, helping with classroom jobs, taking turns, contributing to class learning, and playing partner games will help students see themselves as a vital part of a community where cooperation, self-regulation, and empathy are valued and encouraged. Math Practice MP7 is particularly appropriate for young children returning to school with our changed circumstances as they "look for and make use of structure." Your routines will be critical in helping them feel safe and successful. Consider making the development of classroom community during the first six weeks of school a priority, whether you're working remotely, in person, or in staggered sessions of synchronous and asynchronous learning. As you prepare to start the school year you might want to visit the Responsive Classroom website, which offers some wonderful suggestions including the three R's: Reinforce, Remind, and Redirect.
- 2. We recognize that you'll most likely have some new protocols around social distancing and handling materials to put into place. Some materials will be easier to manage or provide in this format than others. As much as possible, children need to touch and manipulate the math materials. However, alternating time on one of the MLC math apps (geoboards,

frames, pattern blocks) might provide a helpful way to engage on some days. Some materials will lend themselves nicely to packaging in individual "toolkits," and some Work Place partner games can be played socially distanced with each child having their own gameboard. Use the first few weeks to teach the Work Place activities and reinforce your Work Place routines, including any modifications you need to make to meet local requirements around social distancing and hygiene.

- 3. Module 3 sessions ask students to begin work on the ten-frame. To support students who would benefit from additional time with the five-frame before moving to the ten-frame, we've added a mini-module between Modules 2 and 3. The sessions in mini-module 2B focus on activities from the Bridges Pre-K program that use the five-frame, address numeral recognition and 1:1 correspondence to 5, and provide opportunities to match sets and numerals.
- 4. The screener is designed as a brief, individual interview and includes three tasks: 1) counting to ten; 2) counting objects with 1:1 correspondence to 10; and 3) recognizing numerals to 10. Use the information from the screener to identify students who might need additional support in the form of small group work during Work Places. Note that other important skills, including numeral writing, subitizing, and cardinality are introduced and practiced throughout Unit 1 and will be assessed later.

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Work Places

During the 2020–2021 school year, students and teachers might be encouraged or required to take precautions related to social distancing and sharing of materials. With this in mind, specific recommendations for Unit 1 Work Places are provided. Teachers are encouraged to examine Work Places in Units 2 through 7 to make similar adjustments.

Work Place Recommendations				
WP 1A Unifix Cubes	Assign this Work Place to one (or two) groups of students to limit interaction across groups. Provide each student with their own container of cubes to use.			
	NOTE If you have made or purchased individual toolkits, each student will have their own supply of Unifix cubes.			
WP 1B Pattern Blocks	Assign this Work Place to one (or two) groups of students to limit interaction across groups. Provide each student with their own container of pattern blocks to use, or have them use the Pattern Shapes app.			
	NOTE If you have made or purchased individual toolkits, each student will have their own supply of pattern blocks.			
WP 1C Polydrons	Assign this Work Place to one (or two) groups of students to limit interaction across groups. Provide each student with their own container of polydrons to use. (Alternatively, this Work Place could be postponed until later in the year when sharing materials is allowed. Prior experience with polydrons is necessary before Work Place 6A.)			
WP 1D Geoboards	Assign this Work Place to one (or two) groups of students to limit interaction across groups. Provide each student with their own geoboard and rubber bands, or have them use the <u>Geoboard app</u> .			
WP 1E Pennies & Mats	Assign this Work Place to one (or two) groups of students to limit interaction across groups. Provide each student with their own mat and container of pennies or other interesting manipulatives to use (buttons, gems, plastic bugs, mini erasers). If you like, add dice, numeral cards, or ten-frame cards to more explicitly address counting skills such as 1:1 correspondence, cardinality, and numeral recognition. Alternatively, you can have students use the <u>Number Frames app</u> , where they can fill five- and ten-frames with sea stars, frogs, and other fun characters.			
WP 1F Spill Five Beans	Make this an individual activity instead of a partner game. Provide students with their own container of 5 beans and recording sheet. If needed, support students in learning to recognize numerals by using the <u>record sheet from Bridges Pre-K</u> which includes a dotted quantity next to each numeral. OR consider reducing the quantity of beans and cut off the recording sheet accordingly, e.g., 1–4 instead of 1–5.			
WP 1G Beat You to Five	Play as described except students each have their own game board and Unifix cubes and are socially distanced. Use the <u>Game Boards</u> <u>Component Masters</u> to print additional copies of the Beat You to Five Game Board.			
WP 1H Which Numeral Will Win?	This game is planned for pairs but introduce and model as an individual activity. Players may still discuss and talk about spins, numerals, and who is winning but from a social distance. Provide each student with their own spinner overlay.			
	NOTE If you have made or purchased individual toolkits, each student will have their own spinner overlay.			
WP 1I Unifix Cube Patterns	Individual activity. Use as written, and use the Display Cards Component Masters to print additional copies of the Unifix Cube Pattern cards. NOTE If you have made or purchased individual toolkits, each student will have their own supply of Unifix cubes.			

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Number Corner Notes

Remember that it might be more important than ever to implement Number Corner this year, as it provides ongoing opportunities to preview, review, and assess key skills.

- If time for Number Corner is limited, prioritize the workouts listed below. These recommendations are based on the major work of the grade level. You might make additional or alternate selections based on the needs of your students.
- If you will be working with only half your students on any given day, you might need to teach key activities from priority workouts twice. Examples include in September: Days in School Activity 2 and Number Line Activities 4 and 5. In October, these include Calendar Grid Activities 1, 2, and 3; Days in School Activity 1, and Number Line Activities 1 and 4. Students should participate in all the Computational Fluency activities in September and October.

September

- **Calendar Grid** Circle, Rectangle, Triangle, Square [Supports developing the understanding of our calendar, numeral recognition, basic shapes and colors, and developing your community around the calendar/schedule.]
- **Days in School** [This workout supports counting, subitizing, cardinality, 1:1 correspondence, counting on, number sense, grouping in 5s and 10s, and numeral recognition.]
- **Computational Fluency** Quantities to Five [Provides repeated practice with the five-frame, subitizing, finger patterns, and decomposing 5.]
- Number Line Up to Ten & Back Again [Provides practice with forward/ backward counting within 10, numeral recognition, counting, and numeral writing.]

Additional Notes

• Calendar Collector (Collecting Cubes) is fun and engaging. If you have time to include this workout, it will reinforce many of the skills being addressed in other workouts. However, if time is short, drop this workout until you can include it.

• Days in School and Number Line are workouts that build cumulatively across the year. These routines provide important continuity for children, but because they repeat frequently, it is less important that every student experience every activity each month. Even if students are present for only some of the days that these are areas of focus, it is not necessary to repeat these activities unless a major concept is being introduced (e.g., 10 and some more) as all students will gain sufficient exposure over the course of the month and the year.

October

- **Calendar Grid** Dancing Leaves [Supports directional language, counting skills, numeral recognition, basic colors, and developing your community around the calendar/schedule.)
- **Days in School** How Many More to Make Ten? [Supports counting, subitizing, cardinality, 1:1 correspondence, counting on, number sense, grouping in 5s and 10s, numeral recognition, and making ten.]
- **Computational Fluency** Fun with Finger Patterns [Supports work with combinations to 5 through finger patterns and five-frames as well as developing the understanding that each number is 1 more than the previous.]
- **Number Line** The Tricky Teens [Supports counting forward and backward 1–19, numeral recognition, and numeral writing 0-10.]

Additional Notes

- Calendar Collector (Collecting Cubes in Two Colors) is fun and engaging. If you have time to include this workout, it will reinforce many of the skills being addressed in other workouts. However, if time is short, drop this workout until you can include it.
- See September's note about Days in School and Number Line.

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Module	Session	Session Title	Session Notes	Activities for Reengagement
Module 1 Sorting Shoes	1	One Shoe Work Place 1A Unifix Cubes Work Place 1B Pattern Blocks Work Place 1C Polydrons	Teach the entire session. If it isn't feasible to use polydrons at a Work Place, consider adding WP 1D Geoboards today (possibly with the <u>Geoboard app</u>). Additional Work Places are added in later sessions, increasing the choices available. <i>Remember to take additional time and care to practice Work Place</i> <i>routines and build your classroom community. There are several helpful</i> <i>articles and webinars in the <u>PD Library</u> on the Bridges Educator Site to</i> <i>help guide you as you establish a productive Work Place routine. You can</i> <i>find these under "Management in the Bridges Classroom."</i>	Note During this first module, the main focus should be building your classroom community. Whether in school together or learning remotely, there are suggestions for how to make these critical connections with your students that will allow for sharing ideas respectfully, taking risks, and learning from each other. Remember the three R's: Reinforce, Remind, Redirect from the <u>Responsive Classroom website</u> . As you begin to introduce Work Places, remember to spend time teaching, modeling, and practicing the expectations. This <u>blog</u> <u>article</u> on the BES offers excellent suggestions.
	2	Two Shoes Work Place 1D Geoboards & Geobands	Teach entire session. Consider introducing your think-pair-share routine with these suggestions from the Bridges blog: <u>Think-Pair-Share</u> ; <u>Meet Mr. Think</u>	
	3	Five Shoes Work Place 1E Pennies and Mats	Teach entire session. Adding additional counting collections, e.g., gems, mini erasers, plastic bugs, to this Work Place will help with engagement. Add dice, numeral cards, or ten-frame cards to more explicitly address counting skills such as 1:1 correspondence, cardinality, and numeral recognition.	
	4	Ten Shoes	Teach entire session. Social distancing might necessitate using a system other than the menu chart introduced in this session. Continue to allow choice during Work Places when possible.	
	5	All Shoes	Teach the entire session.	
Module 2	1	Shoes to Toes	Teach the entire session.	 Focus Subitize to 5, 1:1 to 5, Numeral Recognition to 5, and Cardinality to 5 (CCSS K.CC. 3 and K.CC.4a–b) On-Grade Work Places Observations As students play WP1F Spill Five Beans, observe their counting strategies. Use the Differentiation suggestions on the Work Place Guide to support your students at their level and to encourage them to move toward more efficient strategies. Activities from Bridges Pre-K Pre-K Snow Day Counting Stories Pre-K Five Little Teddy Bears
Friendly Fives	2	Fabulous Fives	Teach the entire session.	
	3	Fives with Fingers	Teach the entire session.	
	4	Numerals One to Five Work Place 1F Spill Five Beans	Teach the entire session.	
	5	Filling Five-Frames	Teach the entire session. Do not complete the Early Number Sense Checkpoint at this time. Use the Unit 1 Screener included with this planner instead; complete it during the following modules as time permits.	

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Module	Session	Session Title	Session Notes	Activities for Reengagement
Module 2B Fun with Five NEW	1	Teddy Bear Race NEW	Begin with a warmup of flashing five-frames and showing fingers/saying number. Then introduce the Pre-K game <u>Teddy Bear Race</u> . Go to the <u>Bridges Pre-K Components</u> to access and print game boards. Students could play with partners but could also play alone racing two teddy bears. Conduct the Unit 1 Screener during this module or the next as time permits.	 Focus Subitize to 5, 1:1 to 5, Numeral Recognition to 5, and Cardinality to 5 (CCSS K.CC. 3 and K.CC.4a–b) On-Grade P&I Observations Observe whether students are subitizing, or instantly recognizing groups without counting one by one. Encourage them to look for and make use of the structure of the five-frame in this unit to recognize quantities on the five- frame.
	2	Shape & Number Pairs NEW	 Begin with the game Puppet's Counting Circle from Bridges Pre-K. Make your target number 10 and have children sit down whenever 10 is stated. (You can also play sitting down on 5 AND on 10.) Use your fingers to emphasize the 10 finger pattern. This game can be played socially distanced while students are at desks or spread out around the room or even outdoors. Then introduce Chirpy's Shape Match Problem (matching sets & numerals) from Pre-K. Go to the Pre-K Components to access and print the Number Path Cards and Shapes Set Cards. Once you've done the activity as written, mix up the cards and teach the game "Memory" or "Concentration." If you leave the cards in your pocket chart as you model this, it is easier for all to see. Play as a class. Students can come up one at a time to turn over two cards and see if they got a match. This game can be added to Work Places by making several card sets for students to use. It can easily be played alone. 	
	3	Five Little Apples NEW	 Read the story Five Little Apples from the Pre-K September Story Collection. Give each child an Apple Tree Storyboard and 5–10 Unifix cubes. Tell apple stories and have them put matching quantities of cubes on the storyboards as you go. Provide students with their own copy of Five Little Apples to color and take home or their own Apple Tree Storyboard to decorate with apples. 	

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Module	Session	Session Title	Session Notes	Activities for Reengagement
Module 3 Friendly Tens	1	Terrific Tens	Teach entire session. Consider using the sequence of cards 2, 3, 5, 7, 1, 8, 4, 10, 6, 9 so students can use familiar quantities to help identify less familiar quantities.	 Focus 1:1 to 10, subitize to 5, and numeral recognition to 10 (CCSS K.CC. 3 and K.CC.4a-b) Activities from Bridges Pre-K Numeral & Subitizing Practice Use any of the Number Path set cards with numerals to support subitizing and numeral recognition in different contexts. Counting Collections Provide containers of 5–10 items to count each morning as a warmup or as a Work Place activity. Students count the items onto a ten-frame and report or record the quantity.
	2	How Many Dots? Part 1	Teach entire session.	
	3	How Many Dots? Part 2	Teach entire session.	
	4	Beat You to Five	Teach entire session.	
	5	Introducing Work Place 1G Beat You to Five	Teach entire session. Use the Beat You to Five Checkpoint over the next week to gain valuable information on your students' skills.	
	6	Introducing Work Place 1H Which Numeral Will Win?	Teach entire session.	
Module 4 Using Structures & Patterns	1	Folktale Patterns	Teach the entire session.	Consider using patterns with motion or sound as a warm up several times a week to support students developing pattern understanding. Solidify ABAB patterns first before advancing to ABB or ABC patterns.
	2	Clap, Tap & Snap Patterns	Teach the entire session OR skip OR revisit at a later time of year.	
	3	Unifix Cube Patterns, Day 1	Teach the entire session. Modify and use objects (teddy bear counters) if social distancing prevents the children lining up for the pattern. This session could be combined with Session 4 if time is an issue.	
	4	Unifix Cube Patterns, Day 2	Teach the entire session, or combine it with Session 3.	

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