

*“Fluency in each grade involves a mixture of just knowing some answers, knowing some answers from patterns (e.g., “adding 0 yields the same number”), and knowing some answers from the use of strategies. It is important to push sensitively and encouragingly toward fluency of the designated numbers at each grade level, recognizing that fluency will be a mixture of these kinds of thinking which may differ across students”* ([CC/OA Progression, p. 18](#)).

## Resources for Developing Grade-Level Math Fluencies — Kindergarten

### How to Use These Resources

This document provides a set of short activities extracted from EngageNY and Illustrative Mathematics, two open educational resources, to supplement fluency practice. Teachers are encouraged to use the activities in their textbooks that align to grade-level standards and supplement with the resources in this document.

The activities are designed to support students’ progress toward grade-level fluencies. They are intentionally short, providing educators the flexibility to use them before or after a lesson or anytime during the school day.

## Kindergarten Fluency Activities

**Notes** — Fluency activities should take place throughout the year to provide students with the depth of practice that is required by the standards.

**Key** — “T” denotes “teacher” and “S” denotes “student”

**Activity:** CHORAL COUNTING

**Materials:** 100 chart or number line and a pointer.

**Standard:** K.CC.A.1

**Directions:**

As a whole group, have students chant the counting sequence starting with one to thirty, using the pointer to follow the number sequence. Over time, increase the range to one to fifty and then one to one hundred. Eventually have a student take over the job of pointing out the numbers in the sequence. Highlight the multiples of ten using a marker or a colored screen and have students chant the counting sequence by 10s. This should be done daily.

Counting the days in the month every day is another great place to practice the counting sequence; first count the number of days total, and then count from the current date to the end of the month to get practice starting at numbers other than one.

Daily transitions are another great opportunity to practice oral counting; for example, the teacher can say, “Clean up by the time I count to twenty, count with me,” or “Meet me in the meeting area before I count backward from 10.”

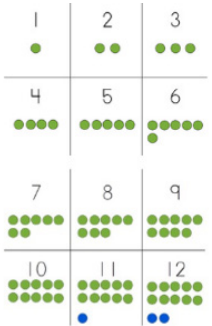
Individual student number lines can be made using two 0-99 charts copied on two different colors of paper. Cover the back of each paper with masking tape and leave a short piece hanging off the edge of the paper on the right side. Make sure the left side of the paper is cut flush with the edge of the chart. Cut each 0-99 chart into strips, (i.e., 0-9 into one strip, 10-19 into another and so on) then connect the 0-9 of one color and the 10-19 of the other color, alternating until you have a complete number line from 0-99 that alternates colors for each different number family. This will make two complete number lines. Students can be given individual number lines and practice counting on their own or in pairs. Multiples of ten can be highlighted with a marker and students can practice counting by 10s.

[Illustrative Mathematics, Choral Counting](#)

## Kindergarten Fluency Activities

<p>Activity: COUNTING CIRCLES  Materials: None  Standard: K.CC.A.1 and CC.B.4  <a href="#">Illustrative Mathematics, Counting Circles</a></p>	<p><b>Directions:</b>  Have students stand and form a circle facing in toward each other.</p> <p>Select a counting sequence to be practiced with no more than 8-10 numbers in the sequence.</p> <p>Have the students start counting around the circle one by one until the last number in the sequence is reached.</p> <p>When the last number is reached all students clap and that student is out and sits down on the floor in the middle of the circle.</p> <p>Start the counting sequence over again until another student reaches the number at the end of the sequence; everyone claps and that student sits in the center with the first student.</p>
<p>Activity: START AND STOP COUNTING  Materials: None  Standard: K.CC.A.1 and K.CC.A.2  <a href="#">Illustrative Mathematics, Start-Stop Counting</a></p>	<p><b>Directions:</b>  Have students form a circle and sit facing in toward each other. The teacher selects a range of the number sequence to practice. Start with the teacher walking around the outside of the circle while counting aloud starting at the beginning of the selected counting sequence.</p> <p>After a few moments, the teacher taps a student on the head and sits in the student's spot. The student then gets up from the circle and continues the counting at the point that the teacher left off while walking around the outside of the circle.</p> <p>At the teacher's signal, the student who is counting selects the nearest student to them by tapping them on the head to take over counting and sits in that student's spot. The next child then continues the counting sequence until the teacher indicates a change and so on until each child has had a turn.</p> <p>If the class reaches the end of the counting sequence before each child has participated, simply start the sequence over again.</p> <p>This is similar to Duck, Duck, Goose but without the chasing to get to a spot.</p>

## Kindergarten Fluency Activities

<p><b>Activity:</b> COUNT TO 100 BY ONES  <b>Materials:</b> Class Rekenrek to 100 or Rekenrek fluency template  <b>Standard:</b> K.CC.A.1 and CC.B.4  <a href="#">EngageNY, Module 6, Lesson 1</a></p>	<p><b>Directions:</b>  This routine calls attention to the structure of numbers to 100 with the use of the Rekenrek's rows of ten and the verbal cue as they cross out the decades. Students count to 100 (or as high as they are able to) by touching the beads on the Rekenrek or fluency template and saying "buzz" after each decade number. This activity is found in Module 6, Lesson 1 in the fluency practice section.</p>
<p><b>Activity:</b> PICK A NUMBER, COUNTING ON  <b>Materials:</b> Numerals within students' known sequence written on cards  <b>Standard:</b> CC.A.2  <a href="#">Illustrative Mathematics, Pick a Number, Counting On</a></p>	<p><b>Directions:</b>  The teacher puts multiple numbers in a hat or on sticks from the known counting sequence. She randomly picks one number and asks the class to count on ten numbers from that number. The class does this chorally.</p>
<p><b>Activity:</b> GOODY BAGS  <b>Materials:</b> Many small zip-lock bags of counting objects. Each bag should contain a number of objects in the counting sequence students are working on, between 1 and 20, as well as post-it notes and pencils.  <b>Standards:</b> K.CC.B.4 and K.CC.B.5  <a href="#">Illustrative Mathematics, Goody Bags</a></p>	<p><b>Directions:</b>  Students count the objects, record the number on the post-it note, and stick the post-it note onto the outside of the bag.</p>
<p><b>Activity:</b> COUNTING MAT  <b>Materials:</b> Counting mat and small objects  <b>Standards:</b> K.CC.B.4 and K.CC.B.5  <a href="#">Illustrative Mathematics, Counting Mat</a></p>	<p><b>Directions:</b>  The teacher gives students the counting mat (see below) and many small objects to count with. Some students will automatically read the numbers, assemble the correct number of objects, and then match them to the dots on the counting mat to verify they counted correctly. Other students who need more scaffolding will match each object to a dot. Students who do it this way should be guided to count the objects once they have assembled them on the dots. Once a student is done with each number, (s)he can move on to the next number.</p> 

## Kindergarten Fluency Activities

**Activity:** POP UP NUMBER

**Materials:** None

**Standards:** CC.A.1

[EngageNY, Module 1, Lesson 5](#)

**Directions:**

Students sit in a circle and pop up on a given number. This activity can be found in the fluency practice section. The directions use the number 3 as the pop up number, but any number can be used as the pop up number.

T: Come and sit in a circle on the rug. We're going to play Pop Up Number! The Pop Up Number is 3. What is the number?

S: 3.

T: We'll count around the circle to 5. If you say the Pop Up Number, you have to...

S: Pop up! (Stand up.)

T: Let's begin. 1.

S: 2.

S: 3. (Stands up.)

S: 4.

S: 5.

The next student begins again at 1. Continue until several or all students are standing. For variation, try counting down from 5. Any number can be used as the pop up number.

**Activity:** HOW MANY DOTS

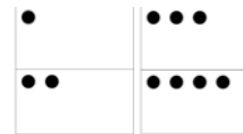
**Materials:** Fluency template dot cards in EngageNY Module 1 lesson 8

**Standards:** K.CC.B.4 and K.CC.B.5

[EngageNY, Module 1, Lesson 8](#)

**Directions:**

Teacher shows dot cards to the students and the students tell how many dots they see. The directions are in Module 1, Lesson 8 in the fluency practice section.



T: We're going to practice "listen, think, raise your hand, wait." I'm going to show you some dots. Raise your hand when you have counted the dots, then wait for the snap to say the number. Ready? (Show the 1-dot card. Wait until all hands are raised, and then give the signal.)

S: 1.

T: (Show the 2-dot card. Wait until all hands are raised, and then give the signal.)

S: 2.

As students begin to demonstrate mastery, deviate from a predictable pattern and challenge them to recognize the groups of dots more quickly.

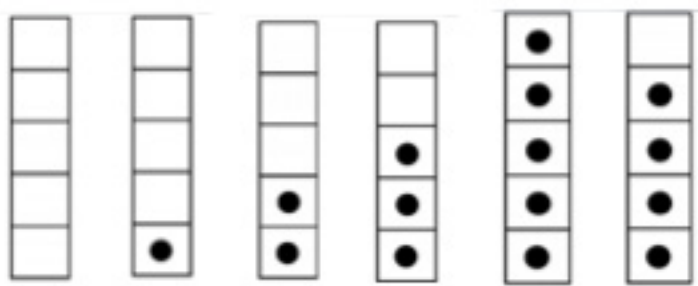
## Kindergarten Fluency Activities

<p><b>Activity:</b> 5-FRAME PEEK-A-BOO  <b>Materials:</b> Five group cards from Module 1 lesson 8 (above)  <b>Standards:</b> K.CC.B.4 and K.CC.B.5  <a href="#">EngageNY, Module 1, Lesson 9</a></p>	<p><b>Directions:</b>  Teacher uses the 5-frame dot cards and flashes them to work with students to begin to subitize the quantity without counting. The directions are in Module 1, Lesson 9 in the fluency practice section and the cards are in Module 1, lesson 8.  Template: <a href="#">EngageNY, Module 1, Lesson 8</a></p>
<p><b>Activity:</b> LINE UP, SPRINKLE, CIRCLE  <b>Materials:</b> Beans, one construction paper cup per student  <b>Standards:</b> K.CC.B.4 and K.CC.B.5  <a href="#">EngageNY, Module 1, Lesson 10</a></p>	<p><b>Directions:</b>  Students count beans from a cup and arrange them in various formations, while working to conserve the number of beans. The directions are in Module 1, Lesson 10 in the fluency practice section.</p> <p>T: Take three beans out of your bag, and put them in your cup. (Wait for students to do this.) Spill them onto your mat, and put them in a straight line. Touch and count.  S: 1, 2, 3.  T: Are there still 3?  S: Yes!  T: Put them back in your cup. Spill them onto your mat, and sprinkle them around. Touch and count.  S: 1, 2, 3.  T: Are there still 3?  S: Yes!</p> <p>Repeat with 4 and 5, including an additional last step to put the beans in a circular formation. Allow students to experiment with other formations.</p>
<p><b>Activity:</b> COUNTING IN VARIOUS FORMATIONS  <b>Materials:</b> Clear bag with 10 beans or counters, mat with a counting circle, one cup per student  <b>Standards:</b> K.CC.B.4 and K.CC.B.5  <a href="#">EngageNY, Module 1, Lesson 18</a></p>	<p><b>Directions:</b>  Students work to count objects in various formations including scattered and in a circle.</p> <p>Students concentrate on how to keep count of their starting and ending places. Work with conservation of a quantity is also stressed in the Conceptual Development portion of Module 1, Lesson 18. Continued practice can also be found in Module 1, Lessons 20 and 24.</p>

## Kindergarten Fluency Activities

<p><b>Activity:</b> BEEP NUMBER  <b>Standards:</b> K.CC.B.4 and K.CC.B.5  <a href="#">EngageNY, Module 4, Lesson 40</a></p>	<p><b>Directions:</b>  This activity works with students' ability with number order. The teacher begins counting from a number within the known sequence and then says "beep" after a couple of numbers. Students must identify the beep number. This activity is found in Module 4, Lesson 40 in the fluency practice section.</p> <p>T: Let's play Beep Number! Listen carefully while I count. Instead of saying a number, I'll say beep. When you know what the beep number is, raise your hand.  T: 16, 17, beep! (Wait until all hands are raised, and then give the signal.)  S: 18.  T: 21, 22, beep, 24. (Wait until all hands are raised, and then give the signal.)  S: 23.</p> <p>Continue in a thoughtful sequence, but return to a simpler sequence if students have difficulty. Numbers after will be easier to determine than numbers before, and crossing decades may prove difficult.</p>
<p><b>Activity:</b> DOT CARD SUBITIZING  <b>Materials:</b> Dot cards  <b>Standards:</b> K.CC.B.5</p>	<p><b>Directions:</b>  Students identify how many dots that they see on the various dot cards. This activity can be used for numbers 6-9. All templates are in Module 3.  Template for 6: <a href="#">EngageNY, Module 3, Lesson 13</a> or <a href="#">EngageNY, Module 4, Lesson 13</a>  Template for 7: <a href="#">EngageNY, Module 3 Lesson 15</a>  Template for 8: <a href="#">EngageNY, Module 3 Lesson 17</a>  Template for 9: <a href="#">EngageNY, Module 3 Lesson 19</a></p>
<p><b>Activity:</b> SHAKE AND SPILL  <b>Materials:</b> One cup per student and at least five 2-sided counters  <b>Standard:</b> K.OA.A.5  <a href="#">Illustrative Mathematics, Shake and Spill</a></p>	<p><b>Directions:</b>  The students put the counters in the cup, shake it, and spill them onto the table. Alternatively they can use their hands. The students determine how many of each color is showing and record the sum using drawings or equations. The students should "shake and spill" several times to show different pairs of numbers that sum to 5.</p>

# Kindergarten Fluency Activities

<p><b>Activity:</b> MY BOOK OF FIVE  <b>Materials:</b> Double-sided counters, Book of Five Template, markers  <b>Standard:</b> K.OA.A.5  <a href="#">Illustrative Mathematics, My Book of Five</a></p>	<p><b>Directions:</b>          Students will be given double-sided counters/dots. It is important for the markers to match the colors on the counters. Students take five counters in their cupped hands (or a cup), shake them around, and pour them onto the desk. Next, they count how many counters are yellow and how many are red. Students then record the numbers in their book.</p>
<p><b>Activity:</b> HOW MANY IS ONE MORE  <b>Materials:</b>(T) Large 5-frame cards (Lesson 1 Fluency Template 1) (S) 5-frame cards (Lesson 1 Fluency Template 2)  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 5, Lesson 2</a></p>	<p><b>Directions:</b>          Students work to identify the number of dots shown on a 5-frame card and then tell how many is one more. This activity is found in Module 5, Lesson 2 and the template is found in Module 5, Lesson 1.          Template: <a href="#">EngageNY, Module 5, Lesson 1</a></p>
<p><b>Activity:</b> HIDE 1  <b>Materials:</b> Lesson 1 Fluency Template 1 (see above)  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 5, Lesson 3</a></p>	<p><b>Directions:</b>          T: (Show five in a 5-frame card.) Use your imagination to hide one. How many are left?          S: 4.          T: (Show ten.) Use your imagination to hide one. How many are left?          S: 9.</p> <p>Continue with the following possible sequence: 1, 6, 2, 7, 3, 8, 4, 9. Have students repeat the activity in pairs if there is time.</p> <div style="text-align: center;">  </div> <p>Template: <a href="#">EngageNY, Module 5, Lesson 1</a></p>



## Kindergarten Fluency Activities

<p><b>Activity:</b> COUNTING DOTS AND SPACES  <b>Materials:</b> Large 5-frame cards (Fluency Template A)  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 1</a></p>	<p><b>Directions:</b>  Students use a 5-frame card to talk about the number of dots shown and how many dots are needed to fill the 5-frame. Activity works on all of the decompositions of five. This activity is found in Module 4, Lesson 1 in the fluency practice section.</p>
<p><b>Activity:</b> MAKING 3, 4, AND 5 FINGER COMBINATIONS  <b>Materials:</b> None  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 1</a></p>	<p><b>Directions:</b>  The teacher uses different finger flashes and students determine how many fingers are needed to make a target sum. This activity is found in Module 4, Lesson 1 in the fluency practice section.</p> <p>T: I'll show you some fingers. I want to make 3. Show me what is needed to make 3. (Show 2 fingers.)  S: (Show 1 finger.)  T: Raise your hand when you can say the number sentence. Start with my number.  S: 2 and 1 make 3.</p> <p>Continue with number pairs for 3, 4, and 5. Once students understand the game, let them play with a partner rapidly and energetically.</p>
<p><b>Activity:</b> APPLICATION PROBLEMS: SNAP  <b>Materials:</b> Snap cubes  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 6</a></p>	<p><b>Directions:</b>  Students do this activity with a partner. Each group has a snap cube tower of no more than five cubes. One partner snaps the tower into two pieces and shows one of the parts. The other partner determines the hidden part to make the total. This activity is found in Module 4, Lesson 6 in the application problem section.</p>

## Kindergarten Fluency Activities

<p><b>Activity:</b> BUILDING 1 MORE AND 1 LESS TOWERS  <b>Materials:</b> 10 linking cubes per student.  <b>Note:</b> This activity helps to transition student from counting to addition and subtraction. Students are guided through the process of building towers that are one more or one less.  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 19</a></p>	<p><b>Directions:</b>  Guide students through the process of building a tower while stating the pattern as 1 more. Maintain consistency in the language: 1. 1 more is 2. 2. 1 more is 3. 3. 1 more is 4. (Continue to 10.)</p> <p>Disassemble the tower while stating the pattern as 1 less. Again, the language is crucial to students' conceptual understanding: 10. 1 less is 9. 9. 1 less is 8. 8. 1 less is 7. (Continue to 0.)</p> <p>If students are ready for the challenge, begin constructing the towers again, but stop the 1 more sequence at 5. Change directions, using the 1 less sequence. Continue moving up and down according to teacher directions.</p> <p>This activity is found in Module 4, Lesson 19 in the fluency practice section.</p>
<p><b>Activity:</b> ROLL AND SHOW ONE LESS  <b>Materials:</b> Dice with the 6-dot side covered to represent a count of zero.  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 21</a></p>	<p><b>Directions:</b>  Student rolls a dice and subtracts one from the total shown on the dice. Students build from their understanding of counting up and down to a place of fluency with adding. This activity is found in Module 4, Lesson 21 in the fluency practice section.</p> <ol style="list-style-type: none"> <li>1. Partner A rolls the die (or dice).</li> <li>2. Both partners count the dots.</li> <li>3. Partner B takes away 1 and shows that many fingers, the Math Way, and says, "4 take away 1 is 3."</li> <li>4. Partner A verifies that the number is 1 less.</li> <li>5. Switch roles and play again.</li> </ol> <p>Remind students that if they should roll a 1, they can show 1 less by indicating 0 as a closed fist. As students get more comfortable with subtraction sentences, they can try to tell about their fingers.</p>
<p><b>Activity:</b> READY, SET, ADD  <b>Materials:</b> None  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 31</a></p>	<p><b>Directions:</b>  In an activity similar to "rock-paper-scissors," students work with a partner and each flashes a set of fingers and races to add the total number of fingers. Students practice the commutative property by stating the equation in both of its forms. This activity is found in Module 4, Lesson 31 in the fluency practice section.</p>

## Kindergarten Fluency Activities

<p><b>Practice:</b> IMAGINE MORE TO ADD TO FIVE  <b>Materials:</b> Fluency Practice Set A  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 37</a></p>	<p><b>Directions:</b>  This activity bridges the pictorial to abstract as students make progress on their grade-level fluency. Instead of drawing on addition circles to make a total of five, students to visualize how many more are needed in their set in order to make the target number of five (can be used for other totals within 5). This activity is found in Module 4, Lesson 37 in the fluency practice section.</p>
<p><b>Practice:</b> CROSS OUT TWO TO SUBTRACT FROM FIVE  <b>Materials:</b> Fluency Practice Set B  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4, Lesson 37</a></p>	<p><b>Directions:</b>  Students will work to develop flexibility with addition and subtraction with this fluency set. Students have pictures of objects and are directed to cross out two to complete the equations. This activity could be used to help students develop flexibility with other strategies (cross out one). This activity is found in Module 4, Lesson 37 in the fluency practice section.</p>
<p><b>Practice:</b> DIFFERENTIATED FLUENCY PRACTICE SETS  <b>Materials:</b> Core Fluency Practice Sets  <b>Standard:</b> K.OA.A.5  <a href="#">EngageNY, Module 4 Lesson 29</a></p>	<p><b>Directions:</b>  These sets provide an opportunity to review and master the sums and differences through five using practice sets and sprints. Five options are provided with each of the lessons below with sheet A of each set being the easiest. Students are directed to complete as many as they can in 96 seconds with 100% accuracy before moving onto the next leveled sheet. Students can also be interviewed on their practice strategies. These fluency sets can be found in Module 4, Lesson 29.</p>
<p><b>Activity:</b> COUNTING BY TENS  <b>Materials:</b> None  <b>Standard:</b> K.CC.A.1  <a href="#">Illustrative Mathematics, Counting by Tens</a></p>	<p><b>Directions:</b>  This activity can be done several times a day as it is quick and requires no materials. The objective of this lesson is to gain automaticity counting to 100 and to establish the importance of multiples of ten. The final goal of this lesson is for students to be able to count by tens and articulate the term for this.</p> <p>For the first week of this activity, have students count to 100 chorally. On each number, students clap with their hands in front of them (a normal clap) and whisper the number. For each multiple of ten (10, 20, 30, etc.), have students clap above their heads and say the number loudly.</p> <p>After students are very comfortable with this routine and can effortlessly count to 100, ask students what would happen if you only counted the numbers where they clap above their heads. Students can try this out. Ask the students what we might call this (you will get answers such as “ten counting”) and guide students by asking appropriate/ leading questions until they come up with the term “counting by tens” on their own. Once students have graduated to counting by tens, practice this skill often and quickly.</p>

## Kindergarten Fluency Activities

**Activity:** COUNTING WITH TEN FRAMES

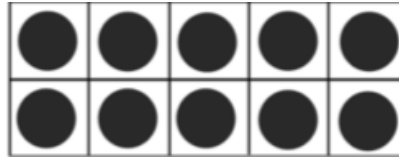
**Materials:** Small 10-frame cards

**Standard:** K.CC.A.1

[EngageNY, Module 5, Lesson 16](#)

**Directions:**

This activity provides a visual representation that each ten is composed of ten ones. Students make the connection between pictorial and abstract numbers as they count. This activity can be found in Module 5, Lesson 16 in the fluency practice section.



T: Place a ten-frame card in front of you.

S: (Students place a 10-frame card in front of them.)

T: Say the number.

S: Ten.

T: Place another ten-frame card in front of you.

S: (Students place a second 10-frame card in front of them.)

T: Say the number the Say Ten Way.

S: 2 tens.

Continue with this possible sequence: 3 tens, 4 tens, 5 tens, 6 tens, 7 tens, 8 tens, 9 tens, and 10 tens.

**Activity:** COUNT WITH HANDS

**Materials:** Ten traced sets of hands

**Standard:** K.CC.A.1

[EngageNY, Module 5, Lesson 16](#)

**Directions:**

Activity connects the visual representation of their hands and tens to count to one hundred by tens. This activity is found in Module 5, Lesson 16 in the application problem section.

The students in Pre-Kindergarten are making handprints. Seven students are putting their handprints on a poster board. How many fingers will show on the poster? Use the handprint cards to help find out.

