"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 — Grade 1

How to Use These Resources

This document provides a set of short activities extracted from EngageNY, an open educational resource, 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. Since they build on work that students did in previous grades, they can be used starting very early in the school year. The resources are organized by standard.

Key — "T" denotes "teacher" and "S" denotes "student"

Activity: SHAKE THOSE DISKS: 6 (7 minutes) Materials: (S) Per set of partners: six disks (e.g., counters, two- color beans, or pennies), one Shake Those Disks 6 board (Fluency Template 1) Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 5	Directions: Break students into partners. Give each set of partners six disks. Instruct them to take turns as the Shaker and the Recorder. The Shaker shakes the disks and tosses them on the table. The Recorder then records the roll on the Shake Those Disks board. (For example, if the Shaker rolls four red and two white, the Recorder puts an X on the graph above the 4 and 2 number bond.) This activity can be repeated for numbers 6-10. All templates can be found on EngageNY website in Module 1.
Activity: NUMBER BOND DASH: 6 (5 minutes) Materials: (S) Seven counters and one die per partner Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 5	 Directions: Distribute the Dash to students, face down. Instruct students to flip their papers when you say, "Go!" and complete as many number bonds as they can in 90 seconds. Assure them it is okay if they run out of time before they finish. Tell them if they finish, they can practice counting to 20 on the back of their papers, starting with the number 5. T: (Set the timer for 90 seconds.) On your mark, get set, GO! (Press start.) T: (When the timer goes off, tell students to put down their pencils and grab a marker to correct their work.) T: When you get an answer correct, put a check mark on the problem number. If you need to change your answer, just change it with your marker. T: (Read the number bonds aloud, starting with Problem 1.) When you are finished checking all the problems, write the number you got correct in the star-like shape on top. Change the counting sequence to meet the needs of students in later lessons. As you choose a counting forward, it is beneficial to change the starting number.

Activity: TARGET PRACTICE: 6 and 7 (8 minutes) Materials: (T) Stopwatch or timer, (S) number bond dash 6, (Fluency Template 2), marker to correct work Notes: This activity can be used for numbers 6-10. All templates can be found on EngageNY website in Module 1. Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 6	Directions: Break students into partners. Give each set of partners six counters. Instruct them to take turns as the Roller and the Target Finder. The Roller rolls the dice. The Target Finder determines the partner to six. Students may use counters as needed. First, play with six as the target number, and then distribute another counter to each set of partners and practice determining the partner to seven. You can extend up to ten.
Activity: 5-GROUP FLASH: PARTNERS TO 10 (5 minutes) Materials: (T/S) 5-group cards (Lesson 5 Template 1) Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 9	Directions: Flash 5-group cards for 2-3 seconds, and then instruct students to say the number at the snap. On the second snap, ask students to identify the partner to 10. Remind students they can use their fingers to help. Flash higher numbers first to facilitate finding the partner to 10 so that all students can feel successful. Next, assign students partners, and instruct them to take turns flashing their 5-group cards with each other.
Activity: X-RAY VISION: PARTNERS TO 10 (5 minutes) Materials: (T) Ten counters, container Standard:1.OA.C.6 EngageNY, Module 1, Lesson 9	Directions: Tell students there is a rumor that some of the children in the class are superheroes, and some of them may have x-ray vision. Place 10 counters on the floor next to a container. Tell students to close their eyes. Put one of the items into the container. Tell students to open their eyes and identify how many counters were put inside it. When a student figures it out, deem her a superhero with x-ray vision! Continue the game, eliciting all partners to 10.

Activity: SLAM: PARTNERS TO 6 (10 minutes) Materials: (T/S) 5-group cards (Lesson 5 Template 1) Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 12	Directions: Tell students to order cards 0-6 on their desks, beginning with 0. Flash a 5-group card, and instruct students to "slam" the card with the partner to 6 (students carefully slap the card on the table). Tell students to say the partners they found when they hear a snap, beginning with the card they just slammed (5 and 1 make 6). Then, tell them to say it again, beginning with the card that was flashed (1 and 5 make 6). Continue playing until students have found all possible partners to 6. Then, give them time to play the game with partners.
Activity: TEN AND TUCK (5 minutes) Materials: None Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 13	Directions: Tell students to show 10 fingers. Instruct them to tuck three (students put down the pinky, ring finger, and middle finger on their right hands). Ask them how many fingers are up (7) and how many are tucked (3). Then, ask them to say the number sentence aloud, beginning with the larger part (7 + 3 = 10), beginning with the smaller part (3 + 7 = 10), and beginning with the whole (10 = 3 + 7 or 10 = 7 + 3).
Activity: MEMORY: PARTNERS TO 10 (10 minutes) Materials: (S) Per group: one set of single-sided 5-group cards, one set of single-sided numeral cards (Lesson 5 Template 1, single- sided) Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 13	Directions: Give Partner A a set of single-sided 5-group cards and Partner B a set of single- sided numeral cards. Tell students to sit facing each other and line up their cards in front of them, face down. Instruct students to take turns flipping over one of their cards and one of their partner's cards to try to make a ten. When they make a ten, they place the cards in a separate pile and keep them until the end of the game. The player with the most cards at the end of the game wins.

Activity: COUNT ON CHEERS: 2 MORE (3 minutes) Materials: None Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 14	Directions: The teacher says a number aloud. Students repeat the number, touching their heads and counting on as they put their fists in the air, one at a time. Alternately, students can count on with boxing punches. Extend the game by counting back 2. i i i i i i i i
Activity: MISSING PART: MAKE 10 (6 minutes) Materials: (S) 5-group cards (Lesson 5 Template 1) Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 14	Directions: Students work with a partner, using 5-group cards. Each student puts a card on his or her forehead. The partner tells how many more to make 10. Students must guess the cards on their foreheads. Partners can play simultaneously, each putting a card on his or her forehead. If appropriate, remind students that they may use their fingers to help.
Activity: MATH HANDS FLASH: PARTNERS OF 10 (5 minutes) Materials: None Notes: This activity provides an opportunity for students to maintain their fluency with partners of 10 and strengthen their visualization of 5-groups by using their hands to see the math. The activity also continues to support students in seeing the connection between addition and subtraction. Guide students to relate addition and subtraction problems while building fluency with partners of 10. Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 30	 Directions: T: (Hold up nine fingers.) Show me how many fingers I need to make 10. S: (Hold up one finger.) T: 9 plus what number equals 10? S: 1. T: Good! 9 + 1 = 10, so 10 - 9 = ? Look at your hands. S: 1. Continue playing, eliciting all partners of 10. If students are highly successful, switch to other totals within10, such as 9, 8, or 7.
Activity: 5-GROUP MATCH: PARTNERS TO 10 (10 minutes) Materials: (S) 5-group cards (0-10) with one extra 5 card per pair Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 32	Directions: Assign students partners. Partner 1 closes his eyes. Partner 2 quickly lays out the 5-group cards, numeral side up. Partner 1 opens his eyes and tries to match all partners to ten as quickly as possible. Each player tries twice in a row to see if they can increase their speed.

Activity: LINKING CUBE PARTNERS: 10 (10 minutes) Materials: (S) 10 linking cubes (five cubes one color, five cubes another color) per pair, personal white board Notes: This activity provides practice with the commutative property. Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 20	Directions: Show students 10 linking cubes in a stick with a color change at the 5, and then remove it from sight. Break off a part and show the part to students. Students make a number bond and two number sentences to match the part shown and the part hidden (commutative property).
Activity: NUMBER PATH HOP (3 minutes) Materials: (S) 5-group cards (Lesson 5 Template 1), one counter Notes: This activity connects fluency work of addition and subtraction within 10 with the number path as a tool for modeling addition and subtraction. Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 26	Directions: Students make a number path by ordering their 5-group cards from 0 to 10. Instruct the students to place their counters on 0, and give a series of directions. "Hop forward two. Where are you?" "Hop back one space. What number are you on?" "Hop from 1 to 5. How many hops did you make?" "What number do you add to 5 to make 9?"
Activity: NUMBER BOND ROLL (5 minutes) Materials: (S) Die (with 6 replaced by 0), personal white board Notes: Reviewing number bonds allows students to build and maintain fluency with addition and subtraction facts within 10. Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 27	Directions: Match partners of equal ability. Each student rolls one die. Students use the numbers on their own die and their partner's die as the parts of a number bond. They each write a number bond, addition sentence, and subtraction sentence on their personal white boards. Once both partners have made their number bonds and number sentences, they check each other's work. For example, if Partner A rolls a 2 and Partner B rolls a 3, they each write the number bond showing 2 and 3 making 5 and write number sentences such as $2 + 3 = 5$ and $5 - 3 = 2$.
Activity: SUBTRACTION WITH CARDS (7 minutes) Materials: (S) One set of numeral-side-only 5-group cards (Lesson 5, Template 1) per pair, counters (if needed) Notes: This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 29	Directions: Students place cards face down between them. Each partner flips over two cards and subtracts the smaller number from the larger number. The partner with the smallest difference keeps the cards played by both players that round. The player with the most cards at the end of the game wins.

Activity: PENNY DROP: 7 (5 minutes) Materials: (T) Seven pennies, one can Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 17	Directions: Show students 7 pennies. Have students close their eyes and listen. Drop some of the pennies in a can, one at a time. Ask students to open their eyes and guess how many pennies are still in the teacher's hand. Then, have students say how many pennies they heard drop and count on to 7, using the remaining pennies. Can extend to 10.
Activity: COLD CALL: 2 MORE AND 2 LESS (3 minutes) Materials: None Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 24	Directions: Say a number aloud and instruct students to think about the number that is 2 more. Let them know that the teacher will cold call students to say the number as quickly as possible. Alternate between calling on individual students, the whole class, and groups of students (e.g., only girls, only boys, etc.). Play again, cold calling students to say the number that is 2 less.
Activity: NUMBER BONDS OF 10 (8 minutes) Materials: (S) Numeral cards 1–10 (single-sided numerals from 5-group cards Lesson 5, Template 1), 10 two-sided beans or counters, a personal board with ten-frame (Fluency Template) Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 36	Directions: Assign students partners of equal ability. Students put numeral cards face down in front of them. One partner flips a card and adds counters to the ten-frame (e.g., a partner flips 9 and adds nine red counters to the ten-frame). The other partner fills up the empty cells, using the other side of the counters (e.g., one white counter). The partners then work together to fill in a number bond and write two number sentences to match.
Activity: 5-GROUP FLASH (2 minutes) Materials: (T) 5-group cards (Lesson 5 Template 1) Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 37	Directions: Flash a 5-group card for 2-3 seconds and instruct students to identify the number at a signal (or snap). Ask for a number sentence to solve 10 minus the number flashed.

Activity: REKENREK (2 minutes)	Directions:
Materials: (T) Rekenrek (cover the unused beads)	T: (Move the top four beads on the Rekenrek into view). How many beads do you
Standard: 1.OA.C.6 EngageNY, Module 1, Lesson 38	 see? S: 4. T: How many more do we need to make 10? S: 6. T: (Move six more beads into view.) 4 + 6 = ? S: 10. T: (Move three beads from the bottom row into view.) How many beads are on the bottom row? S: 3. T: Let's say it the "Say Ten" way. S: 10, 3. T: Now, say it the regular way. S: 13. Continue with other examples: 7 and 3 leading to 10 and 4, 8 and 2 leading to 10 and 5, etc.
Activity: EQUAL NUMBER PAIRS FOR TEN (5 minutes)	Directions:
Materials: (S) 5-group cards 0 through 10 with two 5 cards, one	Assign students partners of equal ability. Students arrange 5-group cards from
"=" card, and two "+" cards per set of partners (Fluency Template)	0 to 10, including the extra 5, and place the "=" card between them. Write four
Notes: This activity builds fluency with partners to ten and	numbers on the board (e.g., 5, 9, 1, and 5). Partners take the 5-group cards that
promotes an understanding of equality.	match the numbers written to make two equivalent expressions (e.g., 9 + 1 = 5 +
Standard: 1.OA.C.6	5). Suggested sequence: 5, 9, 1, 5/ 0, 1, 9, 10/ 2, 5, 5, 8/ 2, 3, 7, 8/ 4, 1, 9, 6/ 3,
EngageNY, Module 2, Lesson 1	4, 6, 7.

Activity: TAKE OUT 1 (2 minutes) Materials: None Notes: This activity supports fluency with decomposing numbers within 10. This skill is critical for using the upcoming Level 3 addition strategy of "make ten." Students need to fluently get 1 out of the second addend when adding to 9. Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 1 Activity: BREAK APART 10 (5 minutes) Materials: (T) 5-group cards (Lesson 1 Fluency Template) (S) Personal white board. Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 3	Directions: T: Take out 1 on my signal. For example, if I say "5," you say "1 and 4." T: 3. S: 1 and 2. T: 10. S: 1 and 9. Continue with all numbers within 10. Directions: Students write the numeral 10 on their personal white boards. Flash a 5-group card. Students show how to break apart 10 using the number flashed as a part. For example:
SPRINT: ADD THREE NUMBERS (10 minutes) Materials: (S) Add Three Numbers Sprint. EngageNY, Module 2, Lesson 4 Activity: ADD PARTNERS OF TEN FIRST (4 minutes) Materials: None Notes: This activity reviews adding three numbers and prepares students for the make ten addition strategy when one addend is 9. Build toward three addends. Begin with 9 + 1. Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 3	Directions: For directions on how to use sprints, see Appendix. Directions: T: 9 + 1. S: 10. T: 10 + 5. S: 15. T: 9 + 1 (pause) + 5 is? S: 15. Continue with the following suggested sequence: $9 + 1 + 6/9 + 1 + 4/9 + 1 + 3/9 + 1 + 7/8 + 2 + 7$.

Activity: TAKE OUT 2 - NUMBER BONDS (4 minutes) Materials: (S) Personal white board Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 6	 Directions: Say a number within 10. Students quickly write a number bond for the number said, using 2 as a part, and hold up their boards when finished. T: Take out 2 on my signal. Make a number bond to show it. For example if I say 5, you draw a number bond that shows 3 and 2 make 5. Repeat with other numbers within 10.
Activity: DECOMPOSE ADDITION SENTENCES INTO THREE PARTS (4 minutes) Materials: None Notes: This fluency activity reviews adding three numbers and making ten when one addend is 9. Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 6	 Directions: T: (Write 9 + 3.) Say 3 as an addition sentence starting with 1. S: 1 + 2. T: (Write 1 + 2 below 3.) Say 9 + 3 as a three-part addition sentence. S: 9 + 1 + 2 = 12. Write out the equation for students to see if necessary. Repeat the process for other problems.
Activity: MAKE IT EQUAL (5 minutes) Materials: (S) 5-group cards, one "=" card, and two "+" cards (Lesson 1 Fluency Template) per set of partners Notes: This activity reinforces the make ten addition strategy as students relate 10 + n addition sentences to an equivalent sentence with an addend of 8 or 9. Students ready to use the numeral side of the 5-group cards should be encouraged to do so. Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 9	Directions: Assign students partners of equal ability. Students arrange 5-group cards from 0 to 10, including the extra 5, and place the "=" card between them. Write four numbers on the board (e.g., 10, 9, 1, and 2). Partners take the 5-group cards that match the numbers written to make two equivalent expressions (e.g., 10 + 1 = 9 + 2). Suggested sequence: 10, 9, 1, 2/10, 3, 9, 2/10, 4, 5, 9/10, 8, 1, 3/10, 8, 4, 2.

Activity: DECOMPOSING ADDITION SENTENCES (5 minutes) Materials: None Notes: This activity reviews how to decompose numbers to make ten, creating equivalent but easier number sentences. Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 10	Directions: T: (Write $9 + 5 = _$ on the board.) What does 9 need to make ten? S: 1. T: (Write $9 + 1$ below $9 + 5 = _$.) T: (Point to the 5.) If we take 1 from 5 to make ten, what part is left? S: 4. T: (Add + 4 after $9 + 1$.) Say the number sentence with the answer. S: $9 + 1 + 4 = 14$. T: (Write 14 to complete $9 + 1 + 4 = _$.) $9 + 1 + 4 = 14$. $9 + 5$ is? S: 14. T: (Write 14 to complete $9 + 5 = _$.) Continue with other $9 + n$ and $8 + n$ addition sentences. If students are ready, have them use their boards to independently decompose addition sentences into three parts.
Activity: 5-GROUP FLASH: TAKE FROM TEN (5 minutes) Materials: (T) 5-group row cards (Lesson 12 Fluency Template 1) (S) Personal white board with 5-group row insert (Lesson 12 Fluency Template 2) Notes: This maintenance fluency activity with partners to ten facilitates the take from ten subtraction strategy that students are learning. Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 13	Directions: Flash a card (e.g., 9) for one to three seconds. Students cross off the number flashed from the 5-group row insert and write the corresponding subtraction sentence. 000000000000000000000000000000000000
SPRINT: SUBTRACTION WITHIN 10 (10 minutes) Materials: (S) Subtraction Within 10 Sprint EngageNY, Module 2, Lesson 14	Directions: For directions on how to use sprints, see Appendix.

SPRINT: NUMBER PATH (6 minutes) Materials: Personal white board, number path 1–20 (Fluency Template 2), counter Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 18	 Directions: T: Put your counter on 8. S: (Place the counter on 8.) T: How many spaces do you need to move to land on 10? (Pause to provide thinking time.) S: 2. T: Let's check. Move your counter to 10. S (Move the counter to 10.) T: Were you right? S: Yes! T: Write an equation to show what you did. S: (Write 8 + 2 = 10.) Continue moving to and from 10 within 10. Next, start at 10, and move the counters to and from teen numbers. Ask questions about how students determined the number of spaces they moved. Did they count each space, or did they "just know"?
SPRINT: MISSING ADDEND WITHIN 10 (10 minutes) Materials: (S) Missing Addend Within 10 Sprint Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 22	Directions: For directions on how to use sprints, see Appendix.
SPRINT: MISSING SUBTRAHENDS WITHIN 10 (10 minutes) Standard: 1.OA.C.6 EngageNY, Module 2, Lesson 24	Directions: This review activity is intended to strengthen students' ability to fluently add and subtract within 10 while preparing students for the problem types that are presented in today's lesson.

ACHIEVE THE CORE

Appendix

Directions: One Sprint has two parts with closely related problems on each. The problems on each part move from simple to complex, creating a challenge for every learner. Before the lesson, cut the Sprint sheet in half to create Sprint A and Sprint B. Students complete the two parts of the Sprint in quick succession with the goal of improving on the second part, even if only by one more. With practice, the following routine takes about 8 minutes.

SPRINT A

(Put Sprint A face down on desks with instructions to not look at problems until the signal is given.)

T: You will have 60 seconds to do as many problems as you can.

T: I do not expect you to finish all of them. Just do as many as you can, your personal best.

T: Take your mark! Get set! THINK! (When you say THINK, students turn papers over and work furiously to finish as many problems as they can in 60 seconds. Time precisely.)

(After 60 seconds:)

T: Stop! Circle the last problem you did. I will read just the answers. If you got it right, call out "Yes!" If you made a mistake, circle it. Ready?

(Repeat to the end of Sprint A or until no one has any more correct.)

T: Now write your correct number at the top of the page. This is your personal goal for B.

T: How many of you got 1 right? (All hands should go up.)

T: Keep your hand up until I say a number that is 1 more than the number you got right. So, if you got 14 right, when I say 15 your hand goes down. Ready?

T: (Quickly.) How many got 2 right? And 3, 4, 5, etc. (Continue until all hands are down. Optional routine, depending on whether or not the class needs more practice with Sprint A.)

T: Take one minute to do more problems on this half of the Sprint.

(As students work, you might have the person who scored highest on Sprint A pass out Sprint B.)

T: Stop! I will read just answers. If you got it right, call out "Yes!" If you made a mistake, circle it.

Ready? (Read the answers to the first half again.)

Note: To keep the energy and fun going, do a stretch or a movement game in between Sprints.

SPRINT B

(Put Sprint B face down on desks with instructions to not look at the problems until the signal is given. Repeat the procedure for Sprint A up through the show of hands for how many right.)

T: Stand up if you got more correct on the second Sprint than on the first.

S: (Stand.)

T: Keep standing until I say the number that tells how many more you got right on Sprint B. If you got 3 more right on Sprint B than on Sprint A, when I say 3 you sit down. Ready?

T: (Call out numbers starting with 1. Students sit as the number by which they improved is called. An alternate method is to choose three students to tell how many they got correct on Sprint A and Sprint B.)

For each set of scores, on your signal, the class chorally says the difference. This provides frequent practice with counting on and other mental strategies, and it reinforces the relationship between addition and subtraction.

T: Miguel, how many did you get correct on Sprint A and Sprint B?

S: On Sprint A, I got 12, and on Sprint B I got 17.

T: How many more did Miguel do on Sprint B than on Sprint A? (Pause.)

S: 5!