# Grade 1:

# **Resources for Developing Grade-Level Fluencies**

"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).

#### **RELEVANT STANDARD:**

1.OA.C.6: Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

## HOW TO USE THESE RESOURCES:

This document provides a set of short activities extracted from Engage NY, an Open Education Resource, to supplement the fluency practice in *GO Math*! Although many *GO Math*! lessons include "Fluency Builders," they don't always align to grade-level expectations. Teachers are encouraged to use the activities that do align to the above standards and supplement with the resources in this document.

The activities are designed to support students' progress toward the grade-level fluency articulated in standard 1.OA.C.6. 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 Kindergarten, they can be used starting very early in the school year. The 35 activities are intended to be used throughout the year, more frequently in conjunction with some of the earlier *GO Math!* chapters, and then less frequently as more students move toward proficiency with fluently adding and subtracting within 10. They are organized by chapter so that teachers can distribute them across each *GO Math!* chapter as part of their normal lesson planning process.

## **GRADE-SPECIFIC NOTES:**

Since Grade 1 has only a single required fluency (addition and subtraction within 10), the resources are organized by chapter to support distributed practice across the year. Some resources are strategically placed to support the work of a particular chapter. The variety of strategies highlighted in the activities is designed to support all students with reaching fluency with facts within 10. However, not all student needs to master every strategy in order to reach the fluency goal.

# ACTIVITIES TO USE WITH CHAPTER 1

#### **1. SHAKE THOSE DISKS: 6** (7 minutes)

**Materials:** (S) Per set of partners: 6 disks (e.g., counters, two-color beans, or pennies), 1 shake those disks 6 board (Fluency Template 1)

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **Directions:** Break students into partners. Give each set of partners 6 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 4 red and 2 white, the Recorder puts an X on the graph above the 4 and 2 number bond.)

#### EngageNY, Module 1, Lesson 5

This activity can be repeated for numbers 6-10. All templates can be found on EngageNY website in Module 1.

#### 2. NUMBER BOND DASH: 6 (5 minutes)

#### Materials:

(T) Stopwatch or timer

(S) Number bond dash 6 (Fluency Template 2), marker to correct work

**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. Change the counting sequence to meet the needs of students, in later lessons. As you choose a counting sequence, consider counting forward or back by different numbers. When counting forward, it is beneficial to change the starting number.

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.

Template for 6: <u>EngageNY, Module 1, Lesson 5</u>

This activity can be used for numbers 6-10. All templates can be found on EngageNY website in Module 1.

#### 3. TARGET PRACTICE: 6 and 7 (8 minutes)

Materials: (S) 7 counters and a die per partner

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **Directions:** Break students into partners. Give each set of partners 6 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 6. Students may use counters as needed. First, play with 6 as the target number, and then distribute another counter to each set of partners and practice determining the partner to 7. Can extend up to 10. EngageNY. Module 1. Lesson 6

#### 4. SKIP-COUNTING SQUATS (2 minutes)

**Note:** This activity supports the connection of counting on by 2 to adding 2 and counting back by 2 to subtracting 2.

**Directions:** Have students count up from 0 to 20 and back two times, squatting down and touching the floor on odd numbers and standing up for even numbers.

- For the first count, instruct students to whisper when they squat and talk normally when they stand.
- On the second count, encourage students to try thinking of the numbers in their heads when they squat and whisper when they stand.

EngageNY, Module 1, Lesson 8

#### 5. 5-GROUP FLASH: PARTNERS TO 10 (5 minutes)

Materials: (T/S) 5-group cards (Lesson 5 Template 1)

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **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.

EngageNY, Module 1, Lesson 9

# **ACTIVITIES TO USE WITH CHAPTER 2**

#### 1. X-RAY VISION: PARTNERS TO 10 (5 minutes)

**Materials:** (T) 10 counters, container **Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **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 1 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.

EngageNY, Module 1, Lesson 9

#### 2. SLAM: PARTNERS TO 6 (10 minutes)

**Materials:** (T/S) 5-group cards (Lesson 5 Template 1)

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. In this engaging context, be sure to help students focus on the mathematics of this activity. **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.

EngageNY, Module 1, Lesson 12

#### 3. TEN AND TUCK (5 minutes)

Note: This activity addresses the core fluency objective for Grade 1.

**Directions:** Tell students to show 10 fingers. Instruct them to tuck 3 (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). EngageNY. Module 1, Lesson 13

#### 4. MEMORY: PARTNERS TO 10 (10 minutes)

**Materials:** (S) Per group: 1 set of single-sided 5-group cards, 1 set single-sided numeral cards (Lesson 5 Template 1, single-sided)

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **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. EngageNY, Module 1, Lesson 13

#### 5. COUNT ON CHEERS: 2 MORE (3 minutes)

#### Materials: None

**Note:** This activity supports the connection of counting on by 2 and adding 2 with counting back by 2 and subtracting 2.

**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.

EngageNY, Module 1, Lesson 14

# ACTIVITIES TO USE WITH CHAPTER 3

#### 1. MISSING PART: MAKE 10 (6 minutes)

Materials: (S) 5-group cards (Lesson 5 Template 1)

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **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.

EngageNY, Module 1, Lesson 14

#### 2. MATH HANDS FLASH: PARTNERS OF 10 (5 minutes)

**Note:** 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.

#### Directions:

T: (Hold up 9 fingers.) Show me how many fingers I need to make 10.

S: (Hold up 1 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 within 10, such as 9, 8, or 7.

EngageNY, Module 1, Lesson 30

#### 3. 5-GROUP MATCH: PARTNERS TO 10 (10 minutes)

**Materials:** (S) 5-group cards (0–10) with 1 extra 5 card per pair (Lesson 5 Template 1) **Note:** Strong fluency with partners to 10 will be critical in Module 2 so that students can avoid using up too many of their attention resources on lower-level skills when they are addressing higher-level problems.

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.

EngageNY, Module 1, Lesson 32

#### 4. LINKING CUBE PARTNERS: 10 (10 minutes)

**Materials:** (S) 10 linking cubes (5 cubes one color, 5 cubes another color) per pair, personal white board. **Note:** This activity provides continued practice with the commutative property and prepares students for today's objective. It also addresses the core fluency objective for Grade 1 of adding and subtracting within 10.

**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). EngageNY, Module 1, Lesson 20

#### 5. NUMBER PATH HOP (3 minutes)

Materials: (S) 5-group cards (Lesson 5 Template 1), 1 counter

**Note:** This activity connects fluency work of addition and subtraction within 10 with the number path as a tool for modeling addition and subtraction.

**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 2. Where are you?" "Hop back 1 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?" (with a little sidewalk chalk, students could draw number paths outside for them to hop on making this a great kinesthetic activity) EngageNY, Module 1, Lesson 26

# **ACTIVITIES TO USE WITH CHAPTER 4**

#### 1. NUMBER BOND ROLL (5 minutes)

Materials: (S) Die (with 6 replaced by 0), personal white board

**Note:** Reviewing number bonds allows students to build and maintain fluency with addition and subtraction facts within 10.

**Directions:** Match partners of equal ability. Each student rolls 1 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.

EngageNY, Module 1, Lesson 27

#### 2. SUBTRACTION WITH CARDS (7 minutes)

**Materials:** (S) 1 set numeral side only 5-group cards (Lesson 5, Template 1) per pair, counters (if needed) **Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **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. <u>EngageNY, Module 1, Lesson 29</u>

**3. PENNY DROP: 7** (5 minutes) **Materials:** (T) 7 pennies, 1 can **Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **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. *(great for auditory learners)* EngageNY, Module 1, Lesson 17

#### 4. COLD CALL: 2 MORE AND 2 LESS (3 minutes)

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10. **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. <u>EngageNY, Module 1, Lesson 24</u>

## ACTIVITIES TO USE WITH CHAPTER 5

#### 1. 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)
Note: This activity addresses the core fluency objective for Grade 1 of adding and subtracting within 10.
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 9 red counters to the ten-frame). The other partner fills up the empty cells, using the other side of the counters (e.g., 1 white counter). The partners then work together to fill in a number bond and write two number sentences to match.

EngageNY, Module 1, Lesson 36

#### 2. 5-GROUP FLASH (2 minutes)

Materials: (T) 5-group cards (Lesson 5 Template 1)

**Note:** This activity addresses the core fluency objective for Grade 1 of adding and subtracting with 10, using visual models to support stronger foundational development.

**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. EngageNY, Module 1, Lesson 37

#### 3. REKENREK (2 minutes)

Materials: (T) Rekenrek (cover the unused beads)

**Note:** Reviewing K.NBT.1 prepares students for the Make Ten strategy of Module 2. **Directions:** 

T: (Move the top 4 beads on the Rekenrek into view). How many beads do you see?

#### S: 4.

T: How many more do we need to make 10?

S: 6.

- T: (Move 6 more beads into view.) 4 + 6 = ?
- S: 10.
- T: (Move 3 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: Ten 3.

T: Now, say it the regular way.

S: Thirteen. Continue with other examples: 7 and 3 leading to 10 and 4, 8 and 2 leading to 10 and 5, etc. EngageNY, Module 1, Lesson 38

#### 4. EQUAL NUMBER PAIRS FOR TEN (5 minutes)

**Materials:** (S) 5-group cards 0 through 10 with two 5 cards, one "=" card, and two "+" cards per set of partners (Fluency Template)

**Note:** This activity builds fluency with partners to ten and promotes an understanding of equality. **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 4 numbers on the board (e.g., 5, 9, 1, and 5). Partners take the 5-group cards that match the numbers written to make two equivalent expressions (e.g., 9 + 1 = 5 + 5). Suggested sequence: 5, 9, 1, 5; 0, 1, 9, 10; 2, 5, 5, 8; 2, 3, 7, 8; 4, 1, 9, 6; 3, 4, 6, 7.

EngageNY, Module 2, Lesson 1

# ACTIVITIES TO USE WITH CHAPTER 6

#### 1. TAKE OUT 1 (2 minutes)

**Note:** 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.

#### 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. EngageNY, Module 2, Lesson 1

#### 2. BREAK APART 10 (5 minutes)

#### Materials:

(T) 5-group cards (Lesson 1 Fluency Template)
 (S) Personal white board Students write the numeral 10 on their personal white boards.
 Directions: Flash a 5-group card. Students break apart 10 using the number flashed as a part, without making bubbles or boxes around the numerals.
 EngageNY, Module 2, Lesson 3

#### 3. SPRINT: ADD THREE NUMBERS (10 minutes)

Note: This Sprint provides practice with adding three numbers by making ten first. For directions on how to use sprints, see Appendix. Materials: (S) Add Three Numbers Sprint. EngageNY, Module 2, Lesson 4

# ACTIVITIES TO USE WITH CHAPTER 7

#### 1. ADD PARTNERS OF TEN FIRST (4 minutes)

**Note:** 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. **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. EngageNY, Module 2, Lesson 3

#### 2. TAKE OUT 2: NUMBER BONDS (4 minutes)

Materials: (S) Personal white board Note: This is an anticipatory fluency activity for the make ten addition strategy when one addend is 8. 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. EngageNY, Module 2, Lesson 6

# **ACTIVITIES TO USE WITH CHAPTER 8**

#### 1. DECOMPOSE ADDITION SENTENCES INTO THREE PARTS (4 minutes)

**Note:** This fluency activity reviews adding three numbers and making ten when one addend is 9. Decompose addition sentences into three steps. **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. EngageNY, Module 2, Lesson 6

#### 2. MAKE IT EQUAL (5 minutes)

**Materials:** (S) 5-group cards, one "=" card, and two "+" cards (Lesson 1 Fluency Template) per set of partners

**Note:** 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.

**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.

EngageNY, Module 2, Lesson 9

# ACTIVITIES TO USE WITH CHAPTER 9

#### 1. DECOMPOSING ADDITION SENTENCES (5 minutes)

**Note:** This activity reviews how to decompose numbers to make ten, creating equivalent but easier number sentences. Write number sentences on the board to model how to decompose number sentences into three addends.

#### 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.

EngageNY, Module 2, Lesson 10

#### 2. 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)

**Note:** This maintenance fluency activity with partners to ten facilitates the take from ten subtraction strategy that students are learning.

**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.

EngageNY, Module 2, Lesson 13

# ACTIVITIES TO USE WITH CHAPTER 10

#### 1. SPRINT: SUBTRACTION WITHIN 10 (10 minutes)

Materials: (S) Subtraction Within 10 Sprint

**Note:** This Sprint reviews subtracting from ten, along with other subtraction facts within the Grade 1 core fluency objective of adding and subtracting within 10. For directions on how to use sprints, see Appendix. EngageNY, Module 2, Lesson 14

#### 2. NUMBER PATH (6 minutes)

**Materials**: (T/S) Personal white board, number path 1–20 (Fluency Template 2), counter **Note:** Using a number path to get to and from 10 prepares students to relate counting on and taking from ten in Lesson 19.

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"?

EngageNY, Module 2, Lesson 18

# ACTIVITIES TO USE WITH CHAPTERS 11 & 12

#### 1. SPRINT: MISSING ADDEND WITHIN 10 (10 minutes)

Materials: (S) Missing Addend Within 10 Sprint

**Note:** 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. For directions on how to use sprints, see Appendix.

EngageNY, Module 2, Lesson 22

#### 2. SPRINT: MISSING SUBTRAHENDS WITHIN 10 (10 minutes)

**Materials:** (S) Missing Subtrahends Within 10 Sprint **Note:** 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. <u>EngageNY. Module 2. Lesson 24</u>

# **APPENDIX**

#### Directions for Administration of Sprints

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!