Topic A
Embedded Numbers and Decompositions

1.OA.6

Focus Standard: 1.OA.6
Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., 8 + 6 = 8 + 2 + 4 = 10 + 4 = 14); decomposing a number leading to a ten (e.g., 13 − 4 = 13 − 3 − 1 = 10 − 1 = 9); using the relationship between addition and subtraction (e.g., knowing that 8 + 4 = 12, one knows 12 − 8 = 4); and creating equivalent but easier or known sums (e.g., adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13).

Instructional Days: 3
Coherence -Links from: GK–M4 Number Pairs, Addition and Subtraction of Numbers to 10
-Links to: G2–M4 Addition and Subtraction of Numbers Within 200 with Two-Step Word Problems to 100

In this first module of Grade 1, students make significant progress towards fluency with addition and subtraction of numbers to 10 (1.OA.6). They are presented with opportunities intended to advance them from counting all to counting on, which leads to decomposing and composing addends and total amounts. In Kindergarten, students have achieved fluency with addition and subtraction facts to 5. This means they can decompose 5 into 4 and 1, 3 and 2, and 5 and 0. They can do this without counting all. They perceive the 3 and 2 embedded within the 5.

In Grade 1’s Topic A, we continue the work of developing this ability with all the numbers within 10 in put together situations, with a special focus on the numbers 6, 7, 8, and 9 in 5-group configurations, since recognizing how much a number needs to make 10 is part of the Kindergarten standards (K.OA.4) and easier for most children. Students decompose numbers into 2 visual sets, or conceptually subitize, and record their decompositions as number bonds. In Lesson 1, we use the 5-group configuration, as this organization allows students to quickly “see,” or perceptually subitize, the subset of 5. Once they have identified that first subset of 5, they can perceptually subitize the other part:

T: How many dots do you see?
S: 8!
T: What two parts do you see?
S: I see 5 and 3.
T: Did you need to count all the dots?
S: No! I could see the top row was a full 5 so I just saw the other part, which was 3.

Then the teacher guides students to count on from the 5 to determine the total. This process of conceptual subitizing, or breaking apart the total into two easily identifiable subsets, continues into Lesson 2, as students are presented with dots in varied configurations. As students discuss the different parts they each see within the total, and the different ways they’re able to break the total apart, they begin to understand that a given quantity can be decomposed in a variety of ways. In Lesson 3, students see and describe 1 more as + 1, they use the structure of the first addend rather than its cardinality: the number is a unit to which they can add one, or count on by one, without recounting. Students now stand on this first embedded number, which lays the foundation for the Level 2 strategy of counting on. Students engage in math discussions throughout the lessons as they share their ways of seeing the embedded numbers and thinking of 1 more and 1 less (1.OA.5).

### A Teaching Sequence Towards Mastery of Embedded Numbers and Decompositions

**Objective 1:** Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.  
(Lesson 1)

**Objective 2:** Reason about embedded numbers in varied configurations using number bonds.  
(Lesson 2)

**Objective 3:** See and describe numbers of objects using 1 more within 5-groups configurations.  
(Lesson 3)
Lesson 1

Objective: Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.

Suggested Lesson Structure

- Fluency Practice (16 minutes)
- Application Problem (7 minutes)
- Concept Development (30 minutes)
- Student Debrief (7 minutes)
- Total Time (60 minutes)

Fluency Practice (16 minutes)

- Math Fingers Flash K.CC2, K.CC.4 (3 minutes)
- Count Dots K.CC.2, K.CC.5 (13 minutes)

Math Fingers Flash (3 minutes)

Note: Visually recognizing (perceptually subitizing) sets of objects, particularly fingers, allows students to move toward seeing two sets of objects together (conceptually subitizing), thus preparing them for the fluency objective of Grade 1.

Teacher flashes fingers the Math Way for numbers 0–10 (see pictures above: teacher’s raised fingers should begin with the right pinky and end with the left pinky so students see fingers from left to right).

T: I’m going to hold up some fingers the Math Way and then hide them. Look carefully and say the number you saw when I snap.

T: (Flash 3 fingers for 2–3 seconds and then hides them). Ready, (snap).

S: 3!

Repeat process for numbers within 5.

T: (Flash 7 fingers). Ready, (snap).
Lesson 1:

Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.

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S: 7!
T: (Hold up the five fingers on right hand.) How many fingers are on this hand?
S: 5.
T: Five (hold up the five hand then hold up the other fingers, one at a time) six, seven.

Repeat the process for numbers 6–10, inviting students to count on from 5 with you.

**Sprint: Count Dots** (13 minutes)

Materials: (S) 5-group dots Sprint

Note: Visually recognizing two sets of objects together (conceptually subitizing) provides students with a foundation for counting on as they solve addition problems.
Note: See the “How to Implement" section for background on giving Sprints.

**Application Problem** (7 minutes)

Dora found 5 leaves that blew in through the window. Then she found 2 more leaves that blew in. Draw a picture and use numbers to show how many leaves Dora found in all.

Note: Rather than specify to write a number sentence or number bond, since it is the first day of school, we have left it more open-ended so that students can demonstrate their thinking and representational skills. This problem serves as a lead-up to the concept development of seeing the quantity of 5, and another number.

**Concept Development** (30 minutes)

Materials: (T) 1 egg carton cut to 10 slots (S) 1 egg carton cut to 10 slots for each student, bag with 9 beads (or other fun classroom objects), personal white boards with number bond template, personal white boards marker and eraser

T: Pull out your egg carton. Count to find out how many slots there are. Wait for the signal to tell me.
S: (Pause. When all are ready, give the signal.) 10!
T: Someone already cut 2 off.
T: How many slots are in the top row?
Lesson 1

Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.

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S: 5!
T: How many slots are in the bottom row?
S: 5!
T: Take out the objects in your bag. First count 5 into the top row from left to right. (Pause.) How many beads do you have in your top row?
S: 5!
T: Now we are going to be number detectives. Let’s see what numbers are hiding inside of 5!
T: I see 2 hiding inside. Look. (Show the 2 objects you found.) What other numbers do you see hiding inside 5? Talk to your partner.
T: (Circulate and listen. Encourage those who are touching and counting rather than seeing the embedded numbers within 5 to recognize quantities of at least 2 or 3.)
T: (Write the 5 in the total box of a number bond.) That’s our total. Do you remember these number bonds from Kindergarten?
S: Yes!
T: You said there was a 2 hiding inside of 5. That’s a part. (Write the 2 in the number bond.)
T: Let’s cover those 2 beads. What is the other part?
S: 3!
T: Let’s write that in the other part of the number bond. (Write 3.)
T: What 2 parts did we find make 5, detectives?
S: 2 and 3!
T: Let’s see if we can find different numbers inside of 5. (Write 5 in the total box inside a new number bond.)
T: (Continue to find the other numbers inside of 5 and generate the corresponding number bonds using the same process.)
T: Let’s take out 2 more beads and put them in the bottom row of the egg carton.
T: How many beads are there now?
S: 7.
T: Turn and talk to your partner about what numbers you see inside 7.
S: (Students share their observations as you circulate.)

NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:
Discourage the touch and count behavior which many students mistake for being good at school. Grade 1 students can subitize twos and threes without counting. They should be encouraged to recognize this since seeing embedded numbers (or subitizing) is the beginning of counting on.

NOTES ON MULTIPLE MEANS OF REPRESENTATION:
Have students write the two parts on their number bond template. You might have them draw the beads at first to give further support for counting on and then later in the lesson represent the five groups numerically.
Lesson 1

Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.

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Lesson 1:

T: I heard a student say that they saw 5 beads. Are there 5 beads?
S: Yes!
T: Let’s draw 5 dots as a part in our number bond instead of the number 5.
T: Where did you see the 5?
S: In the top row.
T: Let’s cover the 5. What is the other part to make 7?
S: 2!
T: Let’s draw in 2 dots as the other part in the number bond.
T: Let’s count on from 5 to find our total. Count with me. Let’s start with 5. (Point to the fifth dot.)
T/S: Fiiiiiiive, 6, 7. (Point to each of the dots as you count them. Draw in 7 dots in the total box the 5-group way.)
T: Let’s now represent this number bond with numbers instead of dots. (Lead the students to make the number bond numerically on their personal white boards.)

Continue to find five and its partner within 6, 7, 8, and 9. Other combinations will be explored in Lesson 2. Release the students to work independently as you determine is best.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. Some problems do not specify a method for solving. This is an intentional reduction of scaffolding that invokes MP.5, Use Appropriate Tools Strategically. Students should solve these problems using the RDW approach used for Application Problems.

For some classes, it may be appropriate to modify the assignment by specifying which problems students should work on first. With this option, let the careful sequencing of the problem set guide your selections so that problems continue to be scaffolded. Balance word problems with other problem types to ensure a range of practice. Assign incomplete problems for homework or at another time during the day.
Lesson 1:
Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. Have them work in pairs to check over their work and discuss how they saw the 5 and the other part to make their number bonds and find the totals. Then go over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson. You may choose to use any combination of the questions below to lead the discussion.

- Are there 5 butterflies? Strawberries? (We want students to see that there are 5 soccer balls, etc., embedded within the larger numbers. There are 6 butterflies in all. Have them identify the other part once they have seen the five within the number.)
- Look at the soccer balls and the pencils. What is the same about them? What is different about them? (Guide students to see that both 8 and 9 have 5 embedded in them. If they notice the other embedded numbers such as 1 to 8, that is great!)
- Can you show me five fingers? Show me five with two hands (i.e., 4 and 1, or 3 and 2). Now show me five with one hand.
- Can you show me 6 the Math Way with your fingers? (5 fingers on the left hand and thumb on the right hand.) Can you show me the 5 inside 6? Continue with 7, 8, 9, and 10.
- (Show examples of student work from the application problem.) What were the 2 parts in our story problem? What does that have in common with today’s lesson?

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students’ understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.
*Write the number of dots. Find 1 or 2 groups that make finding the total number of dots easier!

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 | ⬠ |   | 16 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 | ⬠ |   | 17 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 3 | ⬠ |   | 18 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 4 | ⬠ |   | 19 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 5 | ⬠ |   | 20 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 6 | ⬠ |   | 21 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 7 | ⬠ |   | 22 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 8 | ⬠ |   | 23 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 9 | ⬠ |   | 24 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 10 | ⬠ |   | 25 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 11 | ⬠ |   | 26 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 12 | ⬠ |   | 27 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 13 | ⬠ |   | 28 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 14 | ⬠ |   | 29 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 15 | ⬠ |   | 30 | ⬠ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

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Lesson 1: Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.
Date: 5/9/13

1.A.8
Name ______________________ Date ____________

*Write the number of dots. Find 1 or 2 groups that make finding the total number of dots easier!

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<table>
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Name ____________________________ Date ____________

Circle 5 and make a number bond.

1.

2.

3.

4.

Put nail polish on the number of fingernails shown from left to right. Then fill in the parts. Make the number of fingernails on one hand a part.

5.
6. Make a number bond that shows 5 as one part.

7. 

8. 

9. 

10. 

11. 

12.
Lesson 1 Exit Ticket

Name_________________________________  Date________________

Make a number bond for the pictures that shows 5 as one part.

1. \[ \]

2. \[ \]

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Circle 5 and make a number bond.

1.

2.

3.

4.

Make a number bond that shows 5 as one part.

5.

6.

7.

8.
Make a number bond for the dominoes.

9.  

10.  

11.  

12.  

Circle 5 and count. Then make a number bond.

13.  

14.  

15.  

16.
Lesson 1: Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.

Date: 5/9/13
Lesson 2

Objective: Reason about embedded numbers in varied configurations using number bonds.

Suggested Lesson Structure

<table>
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<tr>
<th>Activity</th>
<th>Time</th>
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<td>Fluency Practice</td>
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<tr>
<td>Application Problem</td>
<td>8 min</td>
</tr>
<tr>
<td>Concept Development</td>
<td>30 min</td>
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<tr>
<td>Student Debrief</td>
<td>10 min</td>
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<tr>
<td><strong>Total Time</strong></td>
<td><strong>60 min</strong></td>
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</tbody>
</table>

Fluency Practice (12 minutes)

- Finger Counting from Left to Right  *K.CC.2, K.OA.5* (2 minutes)
- Show Me Your Math Fingers: Partners to 5 and 5 More  *K.CC.2, K.OA.3* (5 minutes)
- Sprint: Number Bond Dash: 5  *1.OA.6* (5 minutes)

Finger Counting from Left to Right (2 minutes)

Note: Counting from left to right with their fingers allows students an organized way to use their most readily-available tool: their fingers! This type of counting also mimics the number path, used in later lessons.

Instruct students to count with their Piano Fingers. Count by ones within 10 on the fingers from left to right, from pinky on the left hand as 1 to pinky on the right hand as 10.

Hover the fingers as if playing the piano. Drop the finger as it is counted and leave it down. Start and end at different numbers (i.e., count from 5 to 7). (The five fingers of the left hand have played. The student says, “6, 7” while playing the thumb and pointer finger of the right hand.)

Show Me Your Math Fingers: Partners to 5 and 5 More (5 minutes)

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

Teacher calls out numbers within 5 and students hold up their fingers the Math Way. Each time students hold up their fingers, ask how many more fingers are needed to make 5. As students say the partner to 5, affirm their answers aloud (“Yes. 3 and 2 make 5.”).

Move on to numbers 6–10. For each number, use the script below to reinforce the embedded 5 within each number.
T: Show me 6 the Math Way.
S: (Students hold up all fingers on their left hand and their right thumb).
T: Now hold your 5 up high. How many fingers are on your other hand?
S: 1!
T: Yes. 5 and 1 make 6.

**Sprint: Number Bond Dash: 5 (5 minutes)**

Materials: (T) Stopwatch or timer (S) Sprint: Number Bond Dash: 5 (Save a master for use in later lessons), marker to correct work

Note: The Number Bond Dash is a new routine, used throughout the year. By using the same system, students focus on the mathematics, rather than figuring out the sprint.

Distribute sprint to students, face down. Instruct students to flip over their papers when you say, “Go!” and complete as many number bonds as they can in 90 seconds. Assure them that it is okay if they run out of time before they finish. Tell them if anyone finishes before time, they can practice counting to 20 on the back of their papers, starting with the number 5. Change counting sequence to meet the needs of your students in later lessons.

T: (Set the timer for 90 seconds.) On your marks, 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 checkmark on the problem number. If you make a mix-up, fix it up with your marker.
T: (Read the number bonds aloud, starting with Problem 1. When you are finished checking all the problems, tell students to write how many they got correct in the star-like shape on top. Encourage them to remember their scores because they are going to try to do even better tomorrow.)

Tell students to remember how many problems they get correct so they can try to improve their scores tomorrow.
Lesson 2

Lesson 2: Reason about embedded numbers in varied configurations using number bonds.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Provide challenging extensions for some students. While holding a dot card, cover some of the dots. Tell them the whole and see if the student can figure out the two parts without seeing what you are hiding.
Lesson 2

T: (Continue modeling, decomposing 6, 8 or 9 and filling in the 2-part number bond by counting on to find the total.)

T: Let’s play, Parts and Bonds.

Directions:

1) Show a dot card inside your personal board to your partner.
2) He circles 2 parts.
3) You write a number bond to match his parts.
4) Switch roles using the same dot card (change cards after 2 turns).

As students work, circulate and encourage active counting on.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students solve these problems using the RDW approach used for Application Problems.

Note: Once students have circled the parts, encourage them to count on from one quantity to determine the total (at this point it doesn’t matter if it’s the larger or smaller quantity). If a student is reluctant, hide one part with a paper or your hand. Ask, “How many are under my hand?” Let the student recount if necessary and hide the part again. Then have them count on from the hidden part once they are confident.

Student Debrief (10 minutes)

Lesson Objective: Reason about embedded numbers in varied configurations using number bonds.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner, discussing how they found embedded numbers and counted on to determine the total, before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the worksheet and process the lesson. You may choose to use any combination of the questions below to lead the discussion.
Lesson 2: Reason about embedded numbers in varied configurations using number bonds.

1.A.20

Date: 5/9/13

- Pick one question where you and your partner came up with a different way to make the total. How is the total the same when you came up with different parts?
- Is there always more than one way to make the total?
- Look at Problem 9. How were your solutions different or similar to your partner’s solutions?
- (Show examples of student work from the application problem.) What were the 2 parts in our story problem? What does that have in common with today’s lesson? Can you see another way to arrange these pencils?
- Turn to your partner and share what you learned in today’s lesson. What did you get better at doing today?

Exit Ticket (3 minutes)

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students’ understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.
Number Bond Dash!

Directions: Do as many as you can in 60 seconds. Write the amount you finished here:

1. 5 2. 5 3. 5 4. 5 5. 5
   4 5 4 3 4
6. 5 7. 5 8. 5 9. 5 10. 5
   3 2 4 1 2
11. 5 12. 5 13. 5 14. 5 15. 5
    0 1 2 3 4
16. 5 17. 5 18. 5 19. 5 20. 5
    5 4 3 2 1
21. 5 22. 5 23. 5 24. 5 25. 5
    5 0 1 3 2
Circle 2 parts you see. Make a number bond to match.

1.  

2.  

3.  

4.  

5.  

6.
9. How many pieces of fruit do you see? Write at least 2 different number bonds to show different ways to break apart the total.
Circle 2 parts you see. Make a number bond to match.

1.

2.

3.

4.
Circle 2 parts you see. Make a number bond to match.

1. 

2. 

3. 

4. 

5. 

6. 

7. 

8.
How many animals do you see? Write at least 2 different number bonds to show different ways to break apart the total.

9.

10.
Lesson 2: Reason about embedded numbers in varied configurations using number bonds.

1.A.27
Lesson 2: Reason about embedded numbers in varied configurations using number bonds.

Date: 5/9/13
Lesson 2: Reason about embedded numbers in varied configurations using number bonds.

Date: 5/9/13

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Lesson 3

Objective: See and describe numbers of objects using 1 more within 5-group configurations.

Suggested Lesson Structure

- **Fluency Practice** (10 minutes)
- **Application Problem** (7 minutes)
- **Concept Development** (37 minutes)
- **Student Debrief** (6 minutes)

Total Time (60 minutes)

**Fluency Practice (10 minutes)**

- Happy Counting: Counting by Ones Within 10 **K.CC.1, K.CC.2** (2 minutes)
- 5-Group Flash **K.OA.4, 1.OA.5** (3 minutes)
- Sprint: Number Bond Dash: 5 **1.OA.6** (5 minutes)

**Happy Counting: Counting by Ones Within 10 (2 minutes)**

Tell students to look at your thumb and count forward and backward by ones. When your thumb points and motions up, students count up. When your thumb is to the side, students stop. When your thumb points and motions down, students count down (see example below).

```
T:  thumbs up
1 2 3     thumbs down
   2 1     (pause)
   2 3 4   (pause)
```

Note: This game may be challenging for students at first. Once they become more familiar with it, it can be used to practice counting forward and backward with higher numbers or to skip-counting. Counting forward and backward by ones affords students review with this strategy, as it relates to addition and subtraction. It also directly relates to the current lesson objective.
Lesson 3

See and describe numbers of objects using 1 more within 5-group configurations.

Date: 5/9/13

5-Group Flash (3 minutes)

Materials: (T) 5-group cards (the dot cards from the 1 More game in this lesson maybe used, as long as they have been enlarged on the copier)

Note: This activity relates to the core fluency objective of Grade 1 of adding and subtracting within 10.

Teacher flashes 5-group cards for 2–3 seconds and instructs students to say the number when teacher snaps. After flashing all the numbers from 0–10 (in a random order), flash the cards again and count on from the number flashed, up to 10.

Sprint: Number Bond Dash: 5 (Day 2) (5 Minutes)

Materials: (T) Stopwatch or timer (S) Sprint: Number Bond Dash: 5 (master provided in Lesson 2 from G1–M1), marker to correct work

Note: Reviewing number bonds allows students to build and maintain fluency with addition and subtraction facts within 10 and gets them ready for the upcoming lesson.

Use the sprint you saved from Lesson 2 of G1–M1. Distribute sprint to students face down. Instruct students to flip over their papers when you say, “Go!” and complete as many number bonds as they can in 90 seconds. Assure them that it is okay if they run out of time before they finish. Tell them that if anyone finishes before time, they can practice counting backwards from 20 on the back of their papers.

T: Take a second to remember the score you got on yesterday’s Number Bond Dash so you can try to do even better today.

T: (Sets the timer for 90 seconds.) On your marks, get set, GO! (Press start.)

T: (When the timer goes off, tells students to put down their pencils and grab a marker to correct their work.)

T: When you get an answer correct, put a checkmark on the problem number. If you make a mix-up, fix it up with your marker.

Read the number bonds aloud, starting with Problem 1. When you are finished checking all the problems, tell students to write how many they got correct in the star-like shape on the top and show you a big smile if they improved their score from yesterday.
**Application Problem (7 minutes)**

Alex had 9 marbles in his hand. He hid his hands behind his back and put some in one hand and some in the other. How many marbles might be in each hand? Use pictures or numbers to draw a number bond to show your idea.

Note: This problem is designed as a bridge to the previous lesson, which focused on reasoning about embedded numbers and finding various decompositions.

**Concept Development (37 minutes)**

Materials: (T) Sentence frames 1 more than ____ is ____. and ____ is 1 more than ____. (S) 5-group mat, a bag with 9 linker cubes of same color and 1 linker cube of another color, personal white board, white board marker and eraser, a set of 1 More game cards for each pair of students

T: Show me your five fingers on one hand the Math Way.
S: (Students hold up their left hand, showing 5 fingers.)
T: Show me four fingers inside your five.
T: Show me your five.
T: Show me your four.
T: How much does 4 need to make 5?
S: 1!
T: Show me 7 fingers the Math Way.
T: Show me 6.
T: Show me 7.
T: Show me 6.
T: How much does 6 need to make 7?
S: 1.
T: Put 5 cubes that are the same color into your 5-group mat. How many cubes do you have?
S: 5.
T: Use a different color cube and put 1 more on your mat. Now how many do you have?
S: 6.
T: How did you know that so quickly?
S: (Student responses may vary: I counted on from 5. → It was just 1 more. → I saw 5 and 1. → I just knew it.) I counted on from 5, it was just 1 more.

**NOTES ON MULTIPLE MEANS OF ENGAGEMENT:**

Cultivate excitement by connecting on-level math with higher-math. For example:
You know 1 more than 6 is 7. What is 1 more than 16?
If 1 more than 18 is 19, then what is 1 more than 28?
See how far you can extend presenting numbers to 100.

**NOTES ON MULTIPLE MEANS OF EXPRESSION:**

For students who may need additional support with the language of 1 more than ___ is ____ and ____ is 1 more than ____, insert a sentence frame into her personal white board, and allow the student to write the numbers into the blanks. Pointing to each word and reading the number can provide a bridge between the concrete and the abstract.
T: What is 1 more than 5?
S: 6.
T: Let’s say that in a full sentence. (Point to the sentence frame as students speak 1 more than ____ is ____.)
T/S: 1 more than 5 is 6.
T: Let’s try saying this in a different way. What was the first part we saw?
S: 5.
T: How many more did 5 need to make 6?
S: 1.
T: So, we can say 6 is 1 more than ____... (Invite student responses.)
S: 5.
T: Say it as a whole sentence. (Point to the sentence frame as students speak ____ is 1 more than ____.)
S: 6 is 1 more than 5.
T: Help me write our parts and total in number sentence. (As you ask each question, write the components of the number sentence.) What did we start with?
S: 5.
T: How many cubes did we add?
S: 1.
T: How many cubes do we have altogether?
S: 6.
T: Let’s read our number sentence together.
T/S: 5 + 1 = 6
Have students clear their mats, and continue this process with 7, 8, and 9. Have students say both “8 is 1 more than 7”, and “1 more than 7 is 8”. When writing the number sentence, be sure to have the equal sign on either side of the equation (i.e., 7 + 1 = 8 and 8 = 7 + 1).
T: Now you’ll get to work with a partner to play the 1 More game! The goal is to match a dot card with the card that has 1 more. Here are the directions:
1. Put all of your cards face-down, with dot cards on one side and sentence cards on the other.
2. Flip over a dot card.
3. Flip over a sentence card.
4. Keep the pair if the sentence card is one more than the dot card.
5. Turn both cards over if they do not match.
6. When you and your partner have made all the pairs, write a number sentence for each pair.
Model how to play this with students. Practice the language of 1 more than ____ is ____ and ____ is 1 more.
than _____.

**Problem Set (10 minutes)**

Students should do their personal best to complete the problem set within the allotted 10 minutes. For some classes, it may be appropriate to modify the assignment by specifying which problems they work on first. Some problems do not specify a method for solving. Students solve these problems using the RDW approach used for Application Problems.

**Student Debrief (6 minutes)**

**Lesson Objective:** See and describe numbers of objects using 1 more within 5-group configurations.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner before going over answers as a class. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson. You may choose to use any combination of the questions below to lead the discussion.

- What is the same and different about Problem 4 and Problem 8?
- Look at Problems 8, 7, 6, and 5. What do you notice about how these are changing?
- If we had to find 2 more, how would today’s lesson help us?
- What did you notice about the number sentences in Problems 5 and 6?
- Using what you learned about today, what is 1 more than 13? How do you know?
- Turn and talk to your partner about what we did today. What were we learning about, understanding, and getting good at?
Exit Ticket

After the Student Debrief, instruct students to complete the Exit Ticket. A review of their work will help you assess the students’ understanding of the concepts that were presented in the lesson today and plan more effectively for future lessons. You may read the questions aloud to the students.
Lesson 3: See and describe numbers of objects using 1 more within 5-group configurations.

Draw one more in the 5-group. In the box, write the numbers to describe the new picture.

1. ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺
   1 more than 7 is_____.
   7 + 1 = ____

2. ❤ ❤ ❤ ❤ ❤ ❤ ❤ ❤ ❤
   1 more than 9 is_____.
   9 + 1 = ____

3. △ △ △ △ △ △
   1 more than 6 is_____.
   6 + 1 = ____

4. ○ ○ ○ ○ ○ ○ ○ ○ ○
   1 more than 5 is_____.
   5 + 1 = ____
Lesson 3: See and describe numbers of objects using 1 more within 5-group configurations.

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1. A.

5. 

![Image of 10 circles arranged in a group]

1 more than 8 is ____.

8 + 1 = _____

6. 

![Image of 6 circles arranged in a group]

_____ is 1 more than 7

_____ = 7 + 1

7. 

![Image of 6 circles arranged in a group]

_____ is 1 more than 6

_____ = 6 + 1

8. 

![Image of 6 stars arranged in a group]

_____ is 1 more than 5.

_____ = 5 + 1

9. Imagine adding 1 more backpack to the picture. Then write the numbers to match how many backpacks there will be.

![Image of 7 backpacks arranged in a group]

1 more than 7 is ____.

_____ + 1 = _____
How many objects do you see? Draw one more. How many objects are there now?

1. \[ \begin{array}{c}
\diamond \quad \diamond \quad \diamond \quad \diamond \quad \diamond \\
\diamond \quad \diamond \quad \diamond \quad \diamond \quad \diamond \\
\end{array} \]

\[ \quad \text{is 1 more than 9.} \]

\[ 9 + 1 = \quad \]

2. \[ \begin{array}{c}
\blitz \quad \blitz \quad \blitz \\
\blitz \quad \blitz \quad \blitz \\
\end{array} \]

\[ 1 \text{ more than 6 is } \quad \]

\[ \quad \text{+ 1 = } \quad \]
Lesson 3: See and describe numbers of objects using 1 more within 5-group configurations.
5. Imagine adding 1 more pencil to the picture. Then write the numbers to match how many pencils there will be.

1 more than 5 is _____.
5 + 1 = _____

6. Imagine adding 1 more flower to the picture. Then write the numbers to match how many flowers there will be.

____ is 1 more than 8.
____ + 1 = _____
Lesson 3: See and describe numbers of objects using 1 more within 5-group configurations.

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Lesson 3: See and describe numbers of objects using 1 more within 5-group configurations.

Date: 5/9/13
<table>
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<th>3 is 1 more than 2.</th>
<th>4 is 1 more than 3.</th>
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<td></td>
<td>1 more than 4 is 5.</td>
<td>1 more than 5 is 6.</td>
<td>1 more than 6 is 7.</td>
</tr>
<tr>
<td></td>
<td>8 is 1 more than 7.</td>
<td>1 more than 8 is 9.</td>
<td>1 more than 9 is 10.</td>
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