# **Module 4**

### **Number Pairs, Addition and Subtraction to 10**

#### **OPPORTUNITIES BY LESSON**

The examples below represent possibilities for observing students working with the key concepts for Module 4. For this module, you may use both sides of the checklist or cards throughout the module. The list is not exhaustive; additional opportunities for assessment exist and may be used. Select one opportunity for observational assessment in each lesson. With practice, it may be possible to record observations at more than one point in the lesson.

**Lesson 1**

Fluency: Making 3, 4, and 5 Finger Combinations—Can students accurately use fingers and words to show composition of 3, 4, and/or 5?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(I)]**

Concept Development—Listen to student stories. Do the stories match the number bond?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(I)]**
 **☑ Solves word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

Problem Set—Check work to see whether students accurately compose (page 1) and decompose (page 2) the animals. Be sure that adults circulating during independent work mark papers as the adults provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

**Lesson 3**

Application Problem—Observe students as they make a picture and number bond to represent the story. Do student number bonds accurately represent the story?

 **☑ Model the action of joining to represent addition and the action of separating to represent subtraction y [K.3(A)]**

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

**Lesson 4**

Application Problem—Listen as students share ways they decomposed 5 bananas. Do their number bonds match?

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

**Lesson 5**

Concept Development—Review partner work suggested in last teacher statement. Do student number bonds accurately represent the shapes they drew? Are students using numbers to represent the number of shapes?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

Student Debrief—Listen to student responses to the third bullet of the debrief questions. Can students tell how they knew where to put each number in the number bond?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

**Lesson 8**

Fluency: Snap—Observe partners playing the game. Can students solve to find the missing part?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

**Lesson 11**

Application Problem—Review student drawings and number bonds. Do the representations include an accurate total? This is an additional problem even though the solution does not include an equation.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solves word problems using objects and drawings to find sums and differences within 10 [K.3(B)]**

Problem Set—Check work to see whether students accurately represent decomposition with number bonds and statements. Be sure that adults circulating during independent work mark papers when they provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solves word problems using objects and drawings to find sums and differences within 10 [K.3(B)]**

**Lesson 13**

Fluency: Draw More to Make 6—Review student drawings. Can they compose 6 by drawing the right number of dots?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Models the action of joining/separating to represent addition or subtraction [K.3(A)]**

Fluency: Dot Cards of 6—Watch as students decompose 6 by using different cards. Can they identify the parts and tell how many dots are in each part?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Models the action of joining/separating to represent addition or subtraction [K.3(A)]**

**Lesson 14**

Concept Development—Observe student number sentences as students play Snap with the train cars. Do they accurately place the total and the parts in the number sentence? Can they identify the referents for each number in the number sentence (e.g., show that the 3 in 7 = 3 + 4 tells about the 3 cubes)?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solves word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**
 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

 **☑ Models the action of joining/separating to represent addition or subtraction [K.3(A)]**

**Lesson 15**

Student Debrief—Listen to students discuss the first two bullets in the list of debrief questions. Do students recognize that there is more than one correct answer? Can they describe the similarities and differences between their pictures and number sentences?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solves word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**
 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 16**

Application Problem—Observe students as they represent the story by using linking cubes. Do students accurately model the story? Can students say a matching number sentence?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solves word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Models the action of joining/separating to represent addition or subtraction [K.3(A)]**

**Lesson 17**

Problem Set—Review to see whether students accurately represent the stories with number sentences. Be sure that adults circulating during independent work mark papers when they provide scaffolding support.
 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solves word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Models the action of joining/separating to represent addition or subtraction [K.3(A)]**

**Lesson 20**

Concept Development—Listen as students share their take away stories. Can students accurately tell a story and write a number sentence to match?

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**
 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

Problem Set—Consider cutting up Problem Set page 1 to create cards. Invite partners to match the picture cards with the number sentence cards and observe. Can they accurately match the two? Can they describe how they know a picture and number sentence match?

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 21**

Application Problem—Listen as students discuss their picture and number sentence. Do their pictures accurately represent the story? Can they say or write a number sentence to match?

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 22**

Problem Set—Review to see whether students are able to represent subtraction by crossing off and using number bonds. Be sure that adults circulating during independent work mark papers when they provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 23**

Application Problem—Review student drawings. Do students accurately represent the story with their picture and number sentence?

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 24**

Student Debrief—Listen to student responses to the third bullet of the Student Debrief questions. Can they identify the referents for each number in the number sentence (e.g., show that the 8 in 8 – 3 = 5 tells about 8 dots)?

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

**Lesson 25**

Concept Development—Listen to partners as they hide some bear counters. Can they identify the bears that are hiding to make 9?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 26**

Application Problem—Observe student pictures and number bonds. Can students accurately decompose 9 into two parts?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 27**

Application Problem—Review students’ number bonds. Do they accurately show partners of 10?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

Problem Set—Review to see whether students can decompose 10 in more than one way. Do students’ pictures accurately represent the parts of the number bond? Be sure that adults circulating during independent work mark papers when they provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 28**

Fluency: Race to 0 Subtraction Game—Observe students as they play. Can students subtract the number rolled from 5 without using fingers or objects to count?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

**Lesson 29**

Fluency: Core Fluency Practice Sets—Record student progress with the grade level fluency of sums and differences to 5.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

Problem Set—Review student work. Do students accurately represent the story with their drawings and number sentences? Be sure that adults circulating during independent work mark papers when they provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 31**

Problem Set—Review student work. Do students accurately represent the story in their number bond and number sentence? Be sure that adults circulating during independent work mark papers when they provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

Fluency: Ready, Set, Add!—Observe students play the game. Can students add within 5 without counting their fingers? Make note of students who use fingers to count all or count on and those who have committed the fact to memory.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

Application Problem—Listen as students discuss their pictures. Can students accurately explain how they found the unknown total?

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

**Lesson 32**

Problem Set—Review to see whether students accurately represent the stories with number sentences. Can they accurately complete the number sentence when starting with the whole? Be sure that adults circulating during independent work mark papers when they provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**
 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 33**

Concept Development—Listen as students act out train stories. Do students accurately represent the equation?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 34**

Concept Development—Listen to students’ take away stories. Do students’ number bonds accurately represent their equations?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 35**

Problem Set—Review to see whether students accurately represent decomposition with number bonds and 5-group drawings. Review (page 2) where students complete the subtraction problems. Can students solve without counting fingers or objects? Be sure that adults circulating during independent work mark papers when they provide scaffolding support.

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 37**

Problem Set—Review (page 2) where students complete the addition and subtraction problems. Can students solve without counting fingers or objects?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 39**

Fluency: Growing Apples to 10—Listen as students make 10. Are students accurately stating how many more they need to make 10?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

Concept Development—Observe as students play the game with 5-group cards. Can students make 10 and draw a matching number bond?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**

**Lesson 40**

Problem Set—Review to see whether students accurately draw more dots to make 10. Can they create equations to match?

 **☑ Composes/decomposes numbers up to 10 with objects and pictures [K.2(l)]**

 **☑ Explains the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(A)]**

 **☑ Solve word problems using objects and drawings to find sums up to 10 and differences within 10 [K.3(B)]**

 **☑ Explain the strategies used to solve problems involving adding and subtracting within 10 using spoken words, concrete and pictorial models, and number sentences [K.3(C)]**