# SCUSD Common Core Mathematics Lesson Planning Guide

| **Lesson:** Building and Taking Apart Numbers | **Approx. time:** 1 day | **CCSS-M Standards:** K.NBT.1; K.CC.2; K.CC.3; K.CC.4; K.CC.5 |
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| A. **Focus and Coherence** | B. **Evidence** of Math Practices |
|---|---|
| ***Students will know…***<br>• Numbers can be composed and decomposed in multiple ways<br>• Numbers can be made from tens and ones<br>• Numbers can be represented with objects, drawings, or with equations<br><br>***Students will be able to…***<br>• Record composition and decompositions of numbers into equations and drawings<br>• Compose and decompose numbers from 11 - 19<br><br>***Student prior knowledge:***<br>• Single cubes represent ones<br>• A rod represents a ten<br>• Knowing 5 from using a 5-frame<br>• Knowing 10 from using a 10-frame<br><br>***Which math concepts will this lesson lead to?***<br>• Adding and subtraction double digits with single digits and double digits with double digits<br>• Automaticity with addition facts | ***What will students produce when they are making sense, persevering, attending to precision and/or modeling, in relation to the focus of the lesson?***<br>• "This shows 14 because the rod is 10 and there are 4 cubes. "<br>• "This 14 because there are 2 rows of 5's and 5 and 5 make ten. Then there are 4 more, so 10 and 4 make 14."<br>• "The answer is 14 because you said there is 1 ten and 4 ones. 10 and 4 is 14."<br>• "I know it's 14 because I counted ten, eleven, twelve, thirteen, fourteen." |

**Essential Question(s)**
- How can composing and decomposing numbers help students?
- Why should students be able to compose and decompose numbers with automaticity?

**Formative Assessments**
- Ask individual students how many cubes are being shown and how they know.

**Anticipated Student Preconceptions/Misconceptions**
- If the rod is broken up into singles, the quantity changes.
- If the singles were rearranged or covered after the initial count, the quantity changes.
- Students count eleven as one-teen or ten-one; twelve as two-teen or ten-two; etc….

**Materials/Resources**
- linking cubes (19 cubes per student or pair)
- 10-frame for teacher demo/warm-up

C. **Rigor**: Conceptual Understanding, Procedural Skills and Fluency, and Application

*What are the learning experiences that provide for rigor? What are the learning experiences that provide for evidence of the Math Practices? (Detailed Lesson Plan)*

**Warm Up**

- Show 8 on a 10-frame one at a time in three different configuration (#1: 5 on top and 3 on bottom center; #2: 4 on the right and 4 on the left; #3: 5 on top and 3 on bottom left justified)

  **EXAMPLES:**

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| | O | O | O | |

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| O | O | O | O | O |
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- Flash visual for 3 seconds (to prevent students from counting). Ask students, "How many did you see?" Allow for a few students to answer, but do not confirm their answers. Then flash the same image again so students have a chance to revise their answer. Ask students, "How many did you see?" Allow for students to tell you how many they saw. Next, ask them, "How did you see 8?" Show students the visual so students can explain their answers.
- Rearrange the items into the 2nd example. Repeat steps from previous.
- Do the same for example 3.

**Lesson**

- Explain to the class: "Today we are going to think about numbers 11 through 19."
- Show linking cubes: demonstrate 1-cube, and 10-stick
- Show the 10-stick and ask, "How many is this?" Break-up the ten cubes and ask again, "How many is this? How do you know this is still 10?" Regroup the 10-stick and repeat as needed.
- Show a 10-stick and one cube (11), ask, "How many do I have now?" Repeat with 12 if needed.
- Give students 19 linking cubes each or in pairs.
- Model how to show 14 with your cubes as students do the same with their cubes. If needed, students can count from 1-14, but the ten should remain in a stick while the ones are separated. Repeat with 16 if needed.
- Have students model with their linking cubes:
  - 1 ten 8 ones; 18
  - 1 ten 5 ones; 15
  - 1 ten 3 ones; 13 continue as needed
- Show students a model of 19 and have them decide what the number is. Students can create their own model if needed. After students decide the answer is 19 ask them to explain how they know/saw it.
  - Repeat with 14, 17, … as needed.

**Questions to ask students if they answer incorrectly or without an explanation:**

- Why?
- How do you know?
- Can you tell me more? Can you show me or tell me how you figured out the answer?
- What happens when I break up the 10-stick into individual cubes?
- If you know the 10-stick is ten, what can you do with/ know about the other cubes?

**Closure**

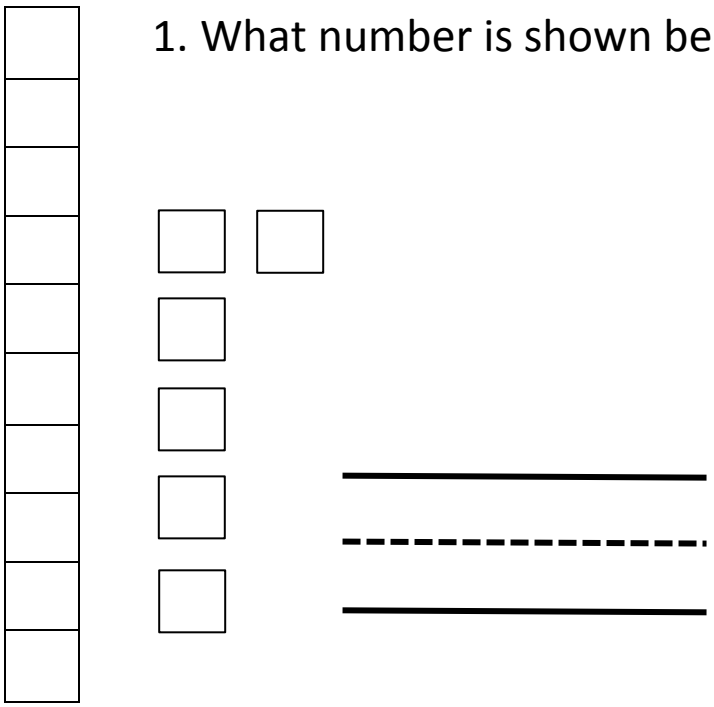
Teacher asks students, "If I have one 10-stick, and 6 cubes how many do I have?"
Give student a chance to figure out the answer with their cubes.
As students answer, ask them, "How do you know it is 16? What if the 10-stick was broken up, how many do I have now? How do you know?"

**Suggested Homework/Independent Practice**

Practice sheet: identifying and showing numbers with ten and some ones.

*Homework* _____

Name _____



1. What number is shown below?

2. Draw a picture that shows 14 in the box below.

Grade