Video Links: 1st Grade Math Lesson on Counting by Tens
Lesson Objective: Count and add within 100
Compass Component and Rating: Questioning and Using Discussion Techniques (3b), *Effective Emerging* Engaging Students in Learning (3c), *Effective Proficient*

Common Core State Standard(s)
CCSS.Math.Content.1.NBT.A.1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Compass Component 3b: Questioning and Using Discussion Techniques (Rating: *Effective Emerging*)		
Indicators	**Evidence**	**Common Core Connection**
Teacher frames some questions to promote student thinking, but only a few students are involved.	• Teacher asks the question, *"Did you notice a pattern?"* (2:13), but only one student explains a pattern he sees in the numbers.	CCSS.Math.Content.1.NBT.A.1 During this lesson, students count by tens starting from seven, and predict the next number in the sequence. Students are asked to justify their responses and explain how they arrived at their answers. CCSS.Math.Practice.MP3 As students share out what number they think will come next in the series, the teacher asks them to justify their answers and thinking.
The teacher invites students to respond directly to one another's ideas, but few students respond.	• During a group presentation a student is asked to respond to his partner, but the teacher interjects without allowing students to respond and ask each other questions. The student says, *"I did not use a hundred chart",* and the teacher asks, *"You did not use a hundred chart? How did you figure out 25?"* The student responds, *"I did circles",* and the teacher explains, *"Can you show the class your circles? So did you draw 25 circles because you knew you already had 75? And then you drew circles, how many more you*	

	needed? Did you see how he did that?" (4:56)	
The teacher builds on uses student responses to questions effectively. (*Effective Proficient* indicator)	• When the teacher asks what number comes next in the series, students respond with several different answers. The teacher then asks the students to explain their answers, *"Someone who said 27, can you defend your answer? Why do think it was 27?"* (1:19) it is important for students to explain their answers and through the verbalization of their thoughts realize that they have made an error and revise it. This creates a deeper level of comprehension and mastery than the teacher explaining to the student why he/she is wrong.	

Compass Component 3c: Engaging Students in Learning (Rating: *Effective Proficient*)		
Indicators	**Evidence**	**Common Core Connection**
Learning tasks are a mix of those requiring thinking and recall. (*Effective Emerging* indicator)	• Students are asked to choral count by tens (1:51), then explain their answers (2:49), which requires a combination of critical thinking and recall.	CCSS.Math.Practice.MP1 When students are presented with their collections of materials they must make sense of the question, "How many more objects are needed to get to 100?" and then determine how to find an answer using their own methods. CCSS.Math.Practice.MP5 Students are allowed to choose the tools they will use to count their collections and determine how many more objects are needed.
Most students are intellectually engaged in the lesson.	• The use of hand signals to show that students have developed an answer (0:44) keeps them intellectually engaged, even when they are not called on to share.	
Lesson tasks have multiple correct responses or approaches and/or demand higher-order thinking.	• When the teacher gives students collections of objects, they must determine independently how to group and count the objects, then calculate how many more objects are needed to reach 100. (3:21) Students can use several different approaches and must engage higher-order thinking to find the final solution.	

Students have some choice in how they complete learning tasks.	• Students can choose how they group their objects in order to count them, as well as the tools they use to count. (3:09) This choice is important because it allows students to manipulate the objects and numbers in a way that makes sense to them, giving them ownership over their learning.	
Materials and resources support the learning goals and require intellectual engagement, as appropriate.	• Teacher provides students with collections of manipulatives (3:15), as well as counting aids such as hundred boards (3:42). These support the learning goals because students are asked to sort and group them, versus just count them.	

WHAT COULD THIS TEACHER DO TO IMPROVE?

What did the teacher do in this lesson?	*Effective Proficient* Indicators	What could the teacher do to move to *Effective Proficient*? (example actions)
One group presents their work to the class, then the teacher explains the different strategies that were used.	Discussions enable students to talk to one another, without ongoing mediation by the teacher. (Questioning – 3b)	Combining groups would allow students to compare their strategies and solutions. Ask each group to identify and explain any similarities or differences in the methods used. Then ask each group to present the work of a different group. This allows students to talk to one another with less mediation from the teacher, gain exposure to more problems, and deepen their comprehension and mastery of the content by explaining others' work. This also more fully demonstrates Math Practice Standard 3 by having students understand and explain other students' reasoning or ask clarifying questions if needed.

Very few students participate in the whole group share out at the end of class.	Many students actively engage in the discussion. (Questioning 3b)	Increase the number of students who participate in the discussion by enacting the action strategy above. Alternately, allow students to share with a single partner from a different group. Then ask pairs to present together and discuss how they solved the problem.
What did the teacher do in this lesson?	***Highly Effective* Indicators**	**What could the teacher do to move to *Highly Effective*? (example actions)**
Students present their grouping strategies and solutions at the end of the lesson, with one student comparing his own solution to the group in front.	Students have an opportunity for reflection and closure on the lesson to consolidate their understanding. (Engaging – 3c)	Provide time for each student to reflect individually on the lesson. Ask students specifically to think about the strategy they used and if there could be a more efficient or more accurate way to complete the problem. Asking students to assess themselves provides the teacher with a measure of the students' mastery of the content and increases the students' ability to evaluate their own learning.