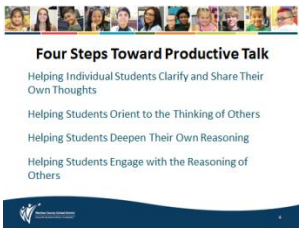
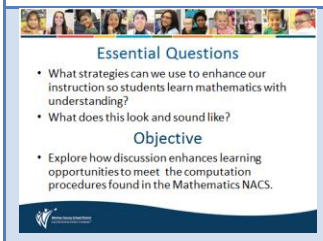
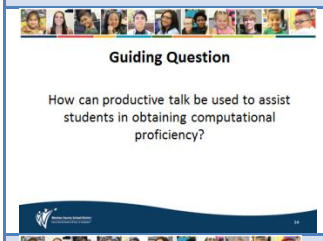
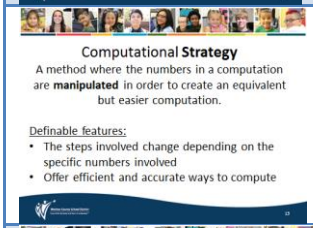
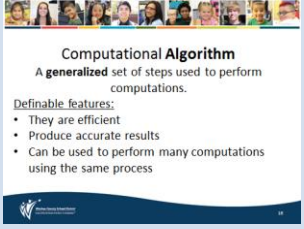
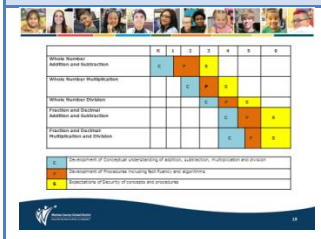
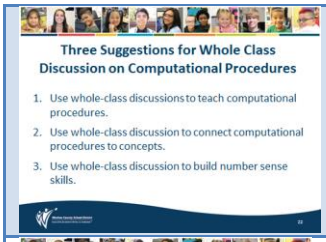
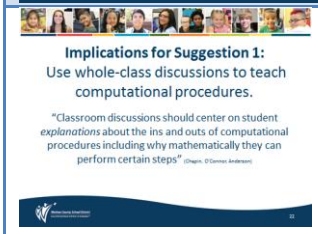
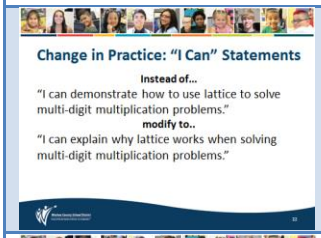
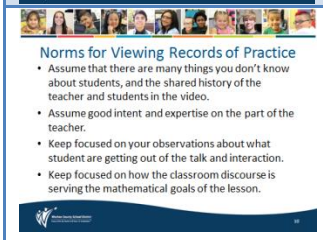
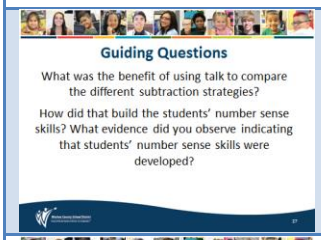
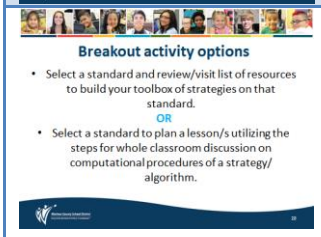
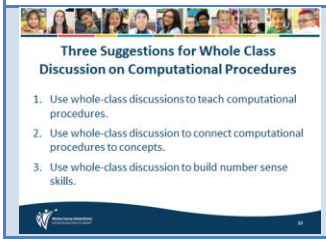
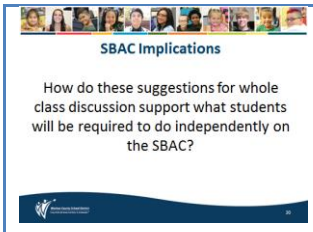
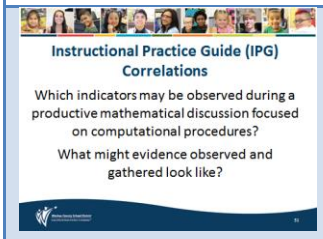
Implementing the Nevada Academic Content Standards

Talking About Computational Procedures (Option 2)

Slides	Slide Notes	Additional Notes
	**Background for Facilitator:** Option 1 and 2 p. 120 "About This Chapter" **Presentation:** Distribute "Stop and Jot" note taker document to teachers. Say, "Stop and Jot what your thoughts are regarding these statements in the middle column." After individuals have written their own thoughts, share out with a partner. This will be revisited at end of the presentation, as an exit ticket.	
	**Background:** The purpose of this slide is to connect to prior learning from the Fall/Winter mathematics "pink" Wednesdays. **Presentation:** Connection to the work that was engaged in the Fall 2013. The four steps provide a structure for analyzing and planning for components of productive classroom discussion. Consider having participants think about the 'talk moves' they have been using to support the productive classroom discussion and moving student thinking and reasoning between these four steps.	
	**Background for Facilitator:** Specific to Option 2	
	**Background for Facilitator:** Specific to Option 2 **Presentation:** Here's our guiding question for today's work**.**	
	**Background for Facilitator:** p.121 in *Classroom Discussions in Math* **Presentation:** If you already presented Option 1 do a quick review of slides 7-13 as they already had that content.	
	**Background for Facilitator: Option 1 and 2** p.121 in *Classroom Discussions in Math*	
	**Background for Facilitator:** Option 1 and 2 In the event that the questions get asked regarding what is "the standard algorithm," Jason Zimba, a leading author of the CCSS-M (NACS), was quoted as saying,"The standard algorithm is the algorithm that works for the student." (NNMC Mini-Conference 3/8/14) **Presentation:** Strategies develop into algorithms for efficiency and generalization. "When do we push for moving from strategies to	

	algorithms?": Our standards dictate when we move our instruction from strategy focus to algorithm.	
	**Background for Facilitator:** Option 1 and 2 Notes: For time purposes you can choose whether or not to show teachers the search tool on their app to speed up this portion of the training. **Extension:** If you need it to take longer, (depending on how familiar teachers are with standards) have teachers include the boundaries: (ie: 1st grade addition strategies are "within 100, using concrete models or drawings and strategies based on place value; relate this strategy to written method and explain the reasoning used".) **Presentation:** Ask teachers to look at the standards for their grade. After, review the grades below and above to complete this chart. KINDER differentiation- After they've looked at 1st grade standards, ask kinder teachers to identify standards that support the work in first grade. Limit time to 5 minutes	
	**Background for Facilitator:** Option 1 and 2 Familiarize yourself with the standards and whether you're relating the strategy to written form, concrete models, drawing or if strategies are to be based on place value. Kinder only has "strategies" for comparing numbers by using matching and counting strategies. **Notes:** For time purposes you can choose whether or not to show teachers the search tool on their app to speed up this portion of the training. **Extension**: If you need it to take longer, (depending on how familiar teachers are with standards) have teachers include the boundaries: (ie: 1st grade addition strategies are "within 100, using concrete models or drawings and strategies based on place value; relate this strategy to written method and explain the reasoning used".) **KINDER differentiation:** Consider asking Kinder teachers to share out the standards they found that support the work of first grade. **Presentation:** Teachers should also be familiar with standards and whether they should relate the strategy to written form, concrete models, drawing or if strategies are to be based on place value. Ask: "What are you noticing or What do you notice?", "In what grade level do you see a strategy for rational numbers and an algorithm for whole numbers?"	
	**Background for Facilitator: Option 1 and 2** -Hide this slide if you are doing this option after already presenting Option 2. -If unfamiliar with Partial Product login into www.everydaymathonline.com -Click on "Algorithms" tab on far right side of page -Open "Algorithms Library of Animations" -Open "Multiplication" -Choose any of the "Partial Products" videos **Presentation:** Explain that the information in this visual refers to the computational expectations found in the CCSS-M (NACS) for grades K-6. Say, "You still need to look closely at your standards as under a heading you may have some standards that are working on conceptual understanding, while others are procedural." This visual shows Whole Number Multiplication in grade 4 and Whole Number Division in grade 5 as a Standard Algorithm because of the phrase "relate to a written method" in the standards. However, this can be the writing out of the strategy, i.e. partial products.	

	**Background For Facilitator:** Read pages 121-122, 132-133 and 142-143 in *Classroom Discussions in Math* for more details on each of the three suggestions.	
	**Background for Facilitator:** There is a slide for "I Can" statements, objectives and guiding questions. Only show the slide that the site you are presenting to requires and hide the other two. **Presentation:** Say, "This leads to a change in practice of how we word our objectives, "I Can" statements, or guiding questions depending upon what your site requires."	
	**Background for Facilitator:** Therefore we have this change in practice… **Note:** If your site requires "I can" Statements, use this slide, if not hide this slide and show only the slide for what your site uses. **Presentation:**	
	**Background of Facilitator:** Just a reminder of norms for viewing records of practice. **Presentation:** A record of practice is a way for us to have a discussion around a common source of information. They are not examples or non-examples, yet just a clip from practice for us to use to discuss the guiding questions.	
	**Background for Facilitator:** Video 4C **Presentation:** Read questions before viewing video. Return to questions and discuss after viewing video.	
	**Background for Facilitator:** **Activity Option A:** In this activity participants will select a standard to either build their toolbox of strategies around selected standard **or** engage in planning through the steps for a whole classroom discussion on computational procedures of an algorithm. (Hide slide 23-24 if you choose this option). **Presentation:** *Distribute Lesson planning template for those wanting to work on the second bullet. They may also use their school's planning template. Inform staff how much time they will have to work on this before returning to whole group.	
	**Background For Facilitator:** Read pages 121-122, 132-133 and 142-143 in *Classroom Discussions in Math* for more details on each of the three suggestions. **Presentation:** Display this slide while teachers are working on the activity.	

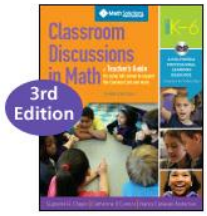
	**Background for Facilitator:** **Activity Option B:** Participants will identify how classroom discussion about computational procedures support the work students will have to do independently on the SBAC and what indicators on the IPG are being achieved. **Presentation:** (Hide slide 22 if you choose this option.) Distribute the SBAC sample questions document and ask participants to review the items and discuss the above question with group.	
	**Background for Facilitator: Option 2** **Activity Option B:** Participants will identify how classroom discussion about computational procedures support the work students will have to do independently on the SBAC and what indicators on the IPG are being achieved. **Presentation:** Distribute the IPG document and ask participants to review the items and discuss the above question with group.	
	**Background for Facilitator: Final slide for Options 1 and 2** **Presentation:** "Stop and Jot any changes in thinking or evidence that strengthened your prior thinking in the final column." You may want to consider collecting this document to assess for future coaching needs. **Consider**: Invite participants to leave a comment on the bottom of document indicating whether they want additional support in computational procedures, classroom discussion, etc.	

Additional Notes:

School Level Essential Question:
What strategies can we use to enhance our instruction so students learn mathematics with understanding? What does this look and sound like?

<u>Talk Moves & Strategies</u>
Turn & Talk
Think, Pair, Share & Revoice
Who can add on?
Revoice/Restate
Stop & Jot (then revise)

Additional Notes & Support: Chapter 4: Talking About Computational Procedures



Videos to support:
4A Adding Three Numbers (3:19)
4B Subtracting on the Number Line (4:37)
4C Comparing Subtraction Strategies (4:44)
4D Fraction Number Line (6:59)