Math Common Core Overview: Module 1 – FOCUS- Grade 1

Slide	Topic	FACILITATOR NOTES	MATERIALS	GROUPINGS
Slide 1	Intro	• Welcome to Common Core State Standards Instructional Shifts: Focus for First Grade teachers presentation. Today we will be delving deeper to gain an understanding of what is expected with Common Core State Standards in First grade.	• KWL Graphic organizer on slide 3 • First Grade Progressions in mathematics (for reference) • Copies of the First Grade Common Core Standards in Math (for reference) • Copies of Mathematical Practices (for reference)	• Whole Group
Slide 2	Transition slide	CCSS- Mathematics Overview	• N/A	• Whole Group
Slide 3	Focus KWL	• Ask teachers to jot down 2 to 3 sentences for the first two sections of the graphic organizer on a piece of paper. • The final section will be completed at the end of presentation	• Focus KWL	• Independent Work • Group Share Out
Slide 4	Overview of CCSS Video	• Before we begin, here is a brief video clip on the Importance of Common Core State Standards in Mathematics. • http://engageny.org/resource/common-core-in-mathematics-overview • 13 minutes 25 seconds	• Access to internet	• Whole Group
Slide 5	Why Common Core?	• In the next few slides, we will have a brief overview of the Common Core State Standards Instructional Shifts.	• N/A	• Whole Group
Slide 6	Prepared for College Math	• College Math Professors feel High School Students today are not prepared for College Math. Ask teachers to discuss why they believe professors feel this way? Do they know of other groups who also feel this way? (many businesses)	• N/A	• Whole Group

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Slide 7	What This Disconnect Means for Students?	• Read through slide • Nationwide, many students in both 2 and 4 year colleges need remediation in math. • Students who take remedial classes have lower odds of finishing their degree or program.	• N/A	• Whole Group
Slide 8	Transition Slide	• Common Core State Standards for Mathematics: Three Key Shifts	• N/A	• Whole Group
Slide 9	CCSS Shifts Background	• Allow teachers to read slide and share what they notice about the shifts or what they have learned about the shifts from previous presentations, PLCs, or readings.	• N/A	• Whole Group Discussion
Slide 10	The Why: Shift One Focus	• Allow teachers to read the slide and briefly discuss how CCSS-M changes instruction from the way teachers have been expected to have taught math in the past.	• N/A	• Whole Group Discussion
Slide 11	The Why: Shift Two Coherence	• Allow teachers to read the slide and briefly discuss how CCSS-M changes instruction from the way teachers have been expected to have taught math in the past.	• N/A	• Whole Group Discussion
Slide 12	The Why: Shift One Rigor	• Allow teachers to read the slide and briefly discuss how CCSS-M changes instruction from the way teachers have been expected to have taught math in the past.	• N/A	• Whole Group Discussion
Slide 13	Transition slide	• A Closer Look at: Focus	• N/A	• Whole Group
Slide 14	CCSS: Focus	• View the video with teachers and have a brief discussion about their understanding of Focus in Mathematics. • http://engageny.org/resource/common-core-in-	• Access to internet	• Whole Group • Whole Group Discussion

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		mathematics-shift-1-focus • 15 minutes 16 seconds		
Slide 15	Focus	• Teachers considerably narrow and expand the scope of how time and energy is spent in the math classroom. • They focus more intensely on only the concepts that are prioritized in the standards. • This enables students to create a strong foundational knowledge and conceptual understanding. • They are then able to transfer mathematical skills and understanding across concepts and grades. • After reading through the slide, have teachers discuss why this change from "mile wide, inch deep" and "teach less, learn more" will help students form a more solid foundation for understanding mathematics.	• N/A	• Whole Group
Slide 16	The shape of math in A+ countries	• Visually look at the overall shape of math topics in A+ countries and those typical in the US (pre-Common Core) • Each row is a math topic, like *fractions*, or *congruence*. • In 2/3rds of the high-performing countries, the foundations are laid and then further knowledge is built on them. The design principle is focus and coherent progressions. • In the U.S., the design principle is to teach *everything* every year that can possibly be taught… as well as many things that cannot.	• N/A	• Whole Group
Slide 17	Traditional U.S.	• This represents how mathematics has been taught in	• N/A	• Whole Group

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	Approach	the US for many years. • Ask teachers to have a brief discussion on why this has not "worked" educationally for the majority of students in the United States.		• Whole Group Discussion
Slide 18	Math Common Core Standards Progressions K-12	• In grades K-5, students develop a solid foundation in whole numbers, addition, subtraction, multiplication, division, fractions, and decimals. • With a strong foundation of content knowledge from grades K-5, middle school students are prepared for robust learning in geometry and statistics and probability. • Likewise, this chart illustrates the domains included at each grade level in grades six through eight. Not all domains are included at each grade level.	• Progressions Documents	• Whole Group
Slide 19	The Hunt Institute Video	• YOUTUBE VIDEO: If you do not have access to YouTube, you will need to download this video onto your laptop for sharing during your PD. • http://www.youtube.com/watch?v=2rje1NOgHWs&list=UUF0pa3nE3aZAfBMT8pqM5PA&index=18&feature=plcp • 2 minutes 42 seconds	• Access to internet	• Whole Group • Whole Group Discussion
Slide 20	Focus in Math	• Read through the slide, call to attention: fluency and problem solving expectations as critical shifts in the Common Core State Standards.	• N/A	• Whole Group
Slide 21	Prioritize Standards	• This chart shows the major clusters, supporting clusters and additional clusters found in First Grade. Notice that all OA and NBT are major clusters, while MD has all three types of clusters and G only has an	• N/A	• Whole Group • Small Group Discussion • Whole Group

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		additional cluster. • Ask teachers to discuss why they believe the writers of the Common Core focused more heavily on OA and NBT in first grade.		Share Out
Slide 22	Key Areas of Focus in Mathematics	• Note the focus areas in first grade are on addition, subtraction, place value, and problem solving. Other areas are included in the standards but these are the primary ones upon which to focus.	• N/A	• Whole Group
Slide 23	Required Fluencies in K-6	• *Fluent* in the particular Standards cited here means "fast and accurate." It might also help to think of fluency as meaning the same thing as when we say that somebody is fluent in a foreign language: when you're fluent, you flow. Fluent isn't halting, stumbling, or reversing oneself. • The word *fluency* was used judiciously in the Standards to mark the endpoints of progressions of learning that begin with solid underpinnings and then pass upward through stages of growing maturity. • Some of these fluency expectations are meant to be mental and others with pencil and paper. But for each of them, there should be no hesitation in getting the answer with accuracy.	• N/A	• Whole Group
Slide 24	Transition Slide	• Focus in First Grade	• N/A	• Whole Group
Slide 25	Domains	• There are 4 domains in First Grade. ○ Numbers and Operation in Base Ten ○ Operations and Algebraic Thinking ○ Measurement and Data ○ Geometry	• CCSS at First Grade Level	• Whole Group/ Small Group Discussion • Whole Group Share Out

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		• If standards are available have teachers look through these areas and briefly discuss what they notice. • (More focus on NBT, OA and fewer on MD & G)		
Slide 26	NBT-Example	• This is an example of a Numbers and Operation in Base Ten standard. Discuss with teachers what they notice about this standard in the "unpacked" column on the right. ○ Number lines ○ Models ○ Numbers within 100	• CCSS at First Grade Level • "Unpacked" CCSS at First Grade Level	• Whole Group/ Small Group Discussion • Whole Group Share Out
Slide 27	OA- Example	• This is an example of an Operations and Algebraic Thinking standard. Discuss with teachers what they notice about this standard in the "unpacked" column on the right. ○ Number lines ○ Models ○ Addition with 3 numbers	• CCSS at First Grade Level • "Unpacked" CCSS at First Grade Level	• Whole Group/ Small Group Discussion • Whole Group Share Out
Slide 28	MD- Example	• This is an example of a Measurement and Data standard. Discuss with teachers what they notice about this standard in the "unpacked" column on the right. ○ Student explanations ○ Comparing 3 objects ○ Ordering of objects	• CCSS at First Grade Level • "Unpacked" CCSS at First Grade Level	• Whole Group/ Small Group Discussion • Whole Group Share Out
Slide 29	G- Example	• This is an example of a Geometry standard. Discuss with teachers what they notice about this standard in the "unpacked" column on the right. ○ Must be able to name, identify, build, and	• CCSS at First Grade Level • "Unpacked" CCSS at First Grade Level	• Whole Group/ Small Group Discussion • Whole Group

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		draw shapes ○ Identify characteristics of shapes		Share Out
Slide 30	Fluency	• First Grade student's fluency focuses on adding and subtracting within 10. This does not mean that they should only be held accountable for computation facts within 10 but rather that they have automaticity for these basis facts.	• N/A	• Whole Group
Slide 31	Transition Slide	• Group Discussion	• N/A	• Whole Group
Slide 32	Shift One: Question One	• Have teachers discuss why limiting the amount of concepts/skills is beneficial to student achievement throughout school. • **Question One***:* • *"Why focus? There's so much math that students could be learning, why limit them to just a few things?"* • They focus more intensely on only the concepts that are prioritized in the standards. • This enables students to create a strong foundational knowledge and conceptual understanding. • They are then able to transfer mathematical skills and understanding across concepts and grades.	• N/A	• Small Group Discussion • Whole Group Share Out
Slide 33	Shift One: Question Two	• Have teachers identify the four domains in First Grade: ○ Numbers and Operation in Base Ten ○ Operations and Algebraic Thinking ○ Measurement and Data ○ Geometry • **Question Two***:* • *"What are the four domains that are the focus in first grade? Kindergarten has one additional focus. What is*	• N/A	• Small Group Discussion • Whole Group Share Out

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		that domain? • Kindergarten has an additional domain: Counting and Cardinality		
Slide 34	Shift One: Question Three	• Have teachers discuss why some clusters are focused upon more heavily than others in First Grade in particular. • **Question Three***:* • *"Why are some clusters focused upon more heavily than others, in particular in First Grade? How does this impact your planning of lessons for the school year with your students?* • The time spent on OA and NBT standards provides students with the necessary foundation to support future instruction. These areas are crucial as building blocks for students since they are the concepts upon everything else are ultimately based upon. • Have teachers discuss how this will impact their planning and instruction. • More time spend on certain concepts, more time to ensure students have reached mastery through real world experiences and activities.	• N/A	• Small Group Discussion • Whole Group Share Out
Slide 35	Shift One: Question Four	• Have teachers answer the question, *"How does looking at the examples of CCSS-M Unpacked at the First Grade level help to clarify your understanding of the focus of the Common Core State Standards?* • **Question Four***:* • *"How does looking at the examples of CCSS-M Unpacked at the First Grade level help to clarify your*	• N/A	• Small Group Discussion • Whole Group Share Out

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		understanding of the focus of the Common Core State Standards? • Answers will vary.		
Slide 36	Focus KWL	• Ask teachers to jot down 2 to 3 sentences for the remaining section of the graphic organizer on a piece of paper.	• Focus KWL	• Independent Work • Group Share Out
Slide 37	Resources	• www.corestandards.org • http://ime.math.arizona.edu/progressions/ • www.insidemathematics.org • www.teachingchannel.org • www.achievethecore.org • www.illustrativemathematics.org • commoncoretools.me	• Internet access	• Whole Group
Slide 38	Next Steps?	• Group Discussion on the next steps at the district level, school level, and classroom level.	• N/A	• Small Group Discussion • Whole Group Share Out