

CCR Grade 6-8 Mathematics Protocol 4a

Structure of Common Core State Standards

Slide Number	Narrative / Facilitator Notes
	<ul style="list-style-type: none"> Please distribute copies of the handout to each participant. CCR.Sec.Protocol.4a-Grade 6-8.Understanding Common Core State Standards Structure.HO1
Slide 1	<ul style="list-style-type: none"> Welcome to the College and Career Ready Secondary Protocol for Grades 6 - 8 Mathematics - Understanding the structure of the Common Core State Standards.
Slide 2	<ul style="list-style-type: none"> This protocol is the second of five protocols for the Secondary Series. The protocol will focus on the structure of the structure and organization of the Common Core State Standards for grades 6 to 8 mathematics
Slide 3	<ul style="list-style-type: none"> By understanding the structure of the Common Core State Standards, we directly align to the formative instructional practice of understanding and making our targets clear. As we understand the Common Core State Standards, we, as teachers, understand the targets and expectations and can make them clear for our students.
Slide 4	<ul style="list-style-type: none"> For this protocol, our desired outcomes are to: <ul style="list-style-type: none"> ➤ Understand the structure and design of the CCSS in grades 6 to 8 mathematics ➤ Discuss the implications of our understanding to make the connection for instruction Participants will develop a common understanding of the structure of the standards and essential ideas needed to make informed decisions about instruction and assessment. That includes addressing the different parts and notations included throughout the standards which provide information to clarify the expectations and components. Within this protocol we will utilize structured tools to promote conversations and collaboration as well as to guide decision making about teaching, learning, and assessment.
Slide 5	<ul style="list-style-type: none"> The Common Core State Standards articulate a set of rigorous expectations for ALL students to be college and career ready. This includes our English Language Learners and Special Education students. These students will likely require additional instructional support.

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Slide 6	<ul style="list-style-type: none"> • Let's review the Key Design Considerations found in the Mathematics standards. • The Common Core State Math Standards are made up of two corresponding and connected sets of standards: (click) • Standards for Mathematical Practices - describe the habits of mind used by a mathematically expert student. They represent the process standards and proficiencies that are important in math education. There are eight standards for mathematical practice which are components for all students from Kindergarten to grade 12. (click) • The Standards for mathematical content represent the content which defines what students should understand and be able to do through their study of mathematics. They stress a balance between procedure and conceptual understanding of the key ideas. (click) • Although separate in organization, these two sets of standards must be carefully intertwined to build students mathematical understanding.
Slide 7	<ul style="list-style-type: none"> • We begin our review of structure with the Standards for Mathematical Practice. • The Standards for Mathematical Practice are eight critical habits of mind. These practices describe the expertise that teachers seek to develop in their students. It is important to note that the practices describe what students are expected to do. These standards are based on the NCTM process standards and the National Research Council's report <i>Adding It Up</i>. • As you read the Standards for Mathematical Practices, it is important to look at each of the components. The eight practice standards are organized with two parts: the standard title and the narrative description. The Standard Title summarizes the expected practice; however, it is meaningless without the narrative description. This description explains the attitudes and proficiencies expected for students. • Facilitators Notes: Key for identifying the elements: It is important to have the Key visible for the participants. You may consider printing it out on large chart paper or providing each participant with their own copy within their materials packet.

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Slide 8	<ul style="list-style-type: none"> • Let's look at the structure - turn to page 6 in the math document. • Underline the standard title <u>Make sense of problems and persevere in solving them.</u> • Next, read the paragraph below the title. Consider what is expected for students as they make sense of problems and persevere in solving them. Bracket this narrative description.
Slide 9	<ul style="list-style-type: none"> • After you mark your copy of the Standards for Mathematical Practice, Page 6 should look like this. You will have underlined the Standard Title. The Narrative Description will be surrounded by a bracket. • Facilitator's Note: Ensure that each participant follows along in their packet.
Slide 10	<ul style="list-style-type: none"> • Take the next few minutes to review the remaining seven Standards for Mathematical Practice which will be found on pages 6 to 8 in your packet. Be sure to underline the Standard Title and Bracket the narrative description. • Please note: We will address the Standards for Mathematical Practice in more depth in a later protocol. In the meantime, consider what questions might you have about building students mathematical habits of mind and proficiencies? • Facilitator notes: Allow a few minutes to complete task. Be sure to answer all questions. Remind participants that the Standards for Mathematical practice are completely intertwined with the Standards for Math Content. Each set of mathematical standards cannot stand alone. Also remind participants that the Standards for Mathematical Practice are competencies that we expect to see in students.

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Slide 11	<ul style="list-style-type: none"> • Moving to the Common Core State Standards for Mathematical Content, it is important to understand the overall format of these standards. • We begin by considering the structure of the Hawaii Content and Performance Standards III (HCPS III) math standards. These standards were built around 5 strands and 14 standards with grade level benchmarks. This format was used for standards for grades K to 12. • Common Core formatting is different. The HCPS III strands and standards covered benchmarks for all grade levels. The Common Core State Standards is organized into grade level domains and clusters. In CCSS, topics continue as long as they are appropriate. Compare the grade level domains for the K-5 and 6-8 grade bands. For example, counting and cardinality is addressed in the early grades, however, those foundational skills and concepts are phased out in upper grades. • While standards for grades K-8 are arranged in domains, high school standards are organized into six conceptual categories. For more information about the specific organization of high school documents, refer to the College and Career Ready Secondary Math Protocol 4a for High School.
Slide 12	<ul style="list-style-type: none"> • The domains and clusters found in the CCSS are similar to the Hawaii Content and Performance Standards III strands and standards. • Domains are groups of related standards. Each domain is organized into clusters of supporting mathematical ideas called Cluster Heading. The clusters are further refined into specific standards which define what students should understand and be able to do within that cluster. Common Core State Standards are at the same level as benchmarks under the HCPS III system. • As we move to CCSS we need to familiarize ourselves with the new naming format • The Common Core State Standards for Mathematics include the following organizational structure: Introduction, Domains, Cluster Headings, and Standards.

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Slide 13	<ul style="list-style-type: none"> • The following format represents the organization for the Math Content Standards. • Each grade level begins with an Introduction page which documents the 3-4 critical areas of focus for the grade level. These outline the emphasis for the grade level. (CLICK) • Look at page 9 for the kindergarten introduction page. You will note that at this grade level, there are only two critical areas of focus. Each grade level includes a similar introduction page. The table of contents provides the page numbers for other grade levels. Please find your grade level and follow along. (click) • The next page, page 10 for kindergarten, provides the grade level overview. On this page you will find the domain headings with supporting clusters. Standards will be outlined on the following pages. (click) • On the right side of each grade level are the Titles of the eight Standards for Mathematical Practice. This serves as a visual reminder that the content standards are integrally embedded with the practice standards. While the standards for mathematical practice narratives are not included in this part of the document, please remember that the practice titles are incomplete without the narrative. (click)
Slide 14	<ul style="list-style-type: none"> • Let's take a look at the format of the next page in the grade level math content standards document. • This page includes all levels of the content standards. (CLICK) • It begins with the domain • Under each grade level domain you will find the cluster headings. (CLICK) • Below the cluster headings are the standards within that cluster. (CLICK) • In some instances, you will find footnotes. These include important information to provide additional clarification for the expectations of the standard. • The footnote may direct you to the glossary - which serves to clarify the meaning of a particular strategy or terminology. • The document also includes examples of possible sample problems. The samples included are not meant to be limiting.

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Slide 15	<ul style="list-style-type: none"> • Now we will examine how the Common Core State Standards for Mathematics are coded. For example, what does 7.EE.4b mean? What about 8.F.5? These are both examples of coding found in the CCSS. • 7.EE.4b is a seventh grade standard in the Expressions and Equations cluster standard 4b There are two distinct but related targets for this standard. How might you adjust learning experiences as you consider the learning target for 7.EE.4a vs the learning experiences for 7.EE.4b. • 8.F.3 is the third standard found in the eighth grade Functions cluster. • Turn and talk with your neighbors: How might knowing the codes and how they are written help teachers? • Facilitator Note: Allow 1-2 minutes to discuss. Lead whole group sharing / debrief. . . Ask: What are some reasons that you came up with?
Slide 16	<ul style="list-style-type: none"> • The K - 8 grade mathematics content standards are coded in a similar way. We start with the grade level. (CLICK) • The next represents the domain coding (CLICK) • This is followed by the standard number within the cluster (CLICK).
Slide 17	<ul style="list-style-type: none"> • Key for identifying the elements. We will identify each component and discuss its importance. • Facilitator Note: It is important to have the Key visible for the participants. You may consider printing it out on large chart paper or providing each participant with their own copy within their materials packet.
Slide 18	<ul style="list-style-type: none"> • The following slides show markings for grade 3. Follow along on your own grade level. (CLICK) (CLICK) • Please note the bracket around the description
Slide 19	<ul style="list-style-type: none"> • On the overview page, circle the domains (CLICK) • And underline the cluster headings (CLICK)
Slide 20	<ul style="list-style-type: none"> • On the standards page document the structure of the content standards • Circle the domains (CLICK) • Note the code - be sure to circle this code. • Underline the cluster headings (click) • Next identify and check the standards (click) • Look for footnotes - they can be found at all levels of the standards document.

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Slide 21	<ul style="list-style-type: none">• We will look at some special cases. (CLICK)• Some standards have subparts that must be taken in conjunction with one another. (CLICK)• Footnotes can appear at any level. Look at page 24 - grade 3, Numbers in Base Ten. In this instance, the footnote is at the cluster headings level. This indicates that the footnote information applies to all of the standards within that cluster. (CLICK)
	<ul style="list-style-type: none">• As a department begin reviewing the CCSS standards and consider avenues to begin implementing them into your curriculum.
Slide 23	<ul style="list-style-type: none">• Here are additional resources to help support you in understanding the Common Core State Standards.• For additional information, you can contact the State Mathematics Specialist, Dewey Gottlieb
Slide 24	<ul style="list-style-type: none">• Please take this survey on PDE3 to ensure you receive your non-PD hours for this training.