

SpringBoard Mathematics from the CollegeBoard  
*Courses 1-3 for Grades 6-8*  
Publisher Response to Ed Reports Common Core Program Review

### **Program and Pedagogy**

SpringBoard Mathematics Courses 1-3 is a comprehensive and flexible curriculum that supports schools and districts making the transition to the rigorous Common Core State Standards.

In developing our new Common Core edition of SpringBoard Courses 1-3, we aimed to design a scope & sequence and materials that covered the broad range of the Common Core Standards at each level, while also providing opportunities for differentiation, building foundations, and enrichment. Our Understanding by Design approach, gives teachers an instructional model to build sufficient connections between the strands and foster student accountability for conceptual understanding. For example, each Unit contains approximately 2-3 Embedded Assessments, which are performance based tasks. Using the Understanding by Design model, students and teachers collaboratively preview and unpack each Embedded Assessment prior to beginning that Unit chunk. During this process, classes are able to identify and connect previous topics to upcoming concepts. The unpacking exercise is further enhanced with student created visual representations showing these concepts and connections to topics within the Unit and from previous grades or units. The unpacked Embedded Assessment allows students to focus on the major work of the grade as well as see applications to the major work in Units aligned to non-major work clusters. Support for students and teachers in making these connections is provided in the Unit Overview, Unit Teacher Support Videos on Springboard Digital, Professional Learning opportunities, and online modules. Students work through the process of unpacking their embedded assessments to make these connections between and among both supporting and major content. See the Planning the Unit pages in the Teacher Edition and the Unit Overview pages in the Student Edition and Teacher Edition for all Units-- and connect these to the Assessment Focus noted on the Embedded Assessments.

### **Focus and Coherence**

We provide a Pacing Guide chart in the Teacher Edition Planning the Unit pages as a suggested pacing calendar with enough allowable days ( there are approximately 120-140 instructional days per level and most districts have 180 instructional days) to support teacher flexibility in supporting differentiation, use of our instructional resources like Bell Ringer Activities, Mini Lessons, Teacher to Teacher tips, point of use Differentiating Instruction strategies, custom assignments in the Teacher Assessment Builder, Getting Ready Practice, Additional Unit Practice, Khan Academy video correlations with easy access hyperlinks and SpringBoard Digital tools to reinforce and enrich as necessary. Through this differentiation, additional days of instruction are added allowing for more instructional content and days focused on the major work of the grade. Our SpringBoard Digital platform allows for easy student assignment for these resources. Teachers can easily adjust pacing with the added lessons or accelerate pacing if mastery is achieved quicker than the suggestion pacing guide chart.

In addition, the Getting Ready Practice exercises at the beginning of each Unit provide teachers with a metric for determining prerequisite mastery or deficiency to make instructional modifications; these could include omitting content if mastery is shown as well as supporting foundational lessons and material if needed from an earlier course. At the beginning of each Unit there is also reference in the Teacher's Edition to the Getting Started Practice available on SpringBoard Digital. These resources offer a worked out example and instructional practice to build proficiency of the foundational concepts and further support the grade level content progressions. These can be used throughout the instructional unit for more emphasis on major work. The content progressions for these prior grades are clearly identified in the title of the Getting Ready Practice assignment to support the prerequisite standards identified in the Getting Ready Exercises that begin each instructional Unit (prior to unpacking the Embedded Assessment).

There are some places in the Courses 1-3 Materials in Course 1, Unit 2, for example, where prerequisite and foundational standards are included to build a solid understanding of the standard and that specific concept. There is flexibility in the pacing to accelerate instruction if students show mastery and proficiency of these standards. SpringBoard has a newly updated suite of virtual tools to support a variety of problem types that are categorized by domain: Algebra, Geometry, Number Concepts, and Probability & Statistics. These can be accessed at point of use in each problem in SpringBoard Digital. Click/Tap on the + sign icon and then the "toolbox" icon to see the array of virtual tools to support procedural skill and fluency. (i.e. Algebra Tiles, Number Line, Protractor, Graphing Calculator, GeoGebra Dynamic Software). The focused topical units in SpringBoard were built to align with the CCSS. The SpringBoard activities are based in real world problem scenarios and the supporting content provides applications to connect to major content in meaningful ways. Our scenario based content makes connections to real world applications and does not intentionally use gratuitous labeling for teachers or students, so as not to interrupt the flow of instruction.

Materials connect supporting and major cluster content through meaningful problem scenarios and applications so coherence is enhanced throughout the year. This also provides ample time and opportunities to focus on the Major Work of the grade. See Example Course 2, Unit 4- Geometry- and shows the relationship of Ratio & Proportion and Equations & Expressions in the context of Geometry. The Getting Ready Exercises for each Unit provides a view into these domain connections. See the Prerequisite standards in the TE on the Getting Ready Exercises at the opening of each Unit. See also the Teacher Support Videos on SpringBoard Digital under Teacher Resources and Videos.

### Rigor and Mathematical Practices

The mathematics instruction in SpringBoard follows a balanced approach in which concepts are presented based on the most effective methods: **Directed** for basic mathematics principles, including examples and practice; **Guided** for concepts that need a combination of direct instruction and investigatory learning; and **Investigative** activities that allow students to explore and discover mathematics concepts through a contextual setting. You will see a balance of these activity types throughout the instruction.

The Standards for Mathematical Practice are truly embedded within the SpringBoard instructional design. They are evident in the Problem Solving, Collaborative, Reading, and Writing Strategies that are called out in the Student and Teacher Editions for each Activity as well as at point of use in the problem sets, practice, Embedded Assessments, and Checks for Understanding. In any given chunk of instruction and practice problems, students are provided with diverse questions that include open ended opportunities to write, explain, reason, construct arguments, and justify in each of our Guided, Directed, and Investigative Activities. There is support in the Teacher Edition wrap on implementation and support of these strategies that are in close alignment with the mathematical practices. In addition, our Professional Learning opportunities provide guidance for teachers in effective implementation of the Practices. Our writers were very mindful in integrating and labeling the Mathematical Practices so that they could provide focused opportunities for students and teachers to place emphasis on them. As a general rule, we only highlight (in boldface type) a few (no more than 4 problems or questions during the full lesson instruction) throughout the lesson. We typically only highlight 1 in each lesson practice and 1 or 2 in each Activity Practice. SpringBoard uses a pedagogically intrinsic model with the Mathematical Practices; they should not be looked at in isolation, but as a standard for building positive habits of mind within the instructional content. Most of our embedded Learning Strategies embody the Mathematical Practices such as Construct an Argument, Critique Reasoning, Create Representations, Visualization, and Predict and Confirm, just to call out a few. In addition, the questioning strategies and other Teacher support elements that the reviewer points out that are missing are really elements that we cover and support in our professional learning.

We feel that tools, representations, and manipulatives greatly improve a student's conceptual understanding of the standards and supports building proficiency of the Standards for Mathematical Practice. SpringBoard offers suite of virtual tools accessible via SpringBoard Digital to students and teachers at point of use for every problem to support a variety of problem types that are categorized by domain: Algebra, Geometry, Number Concepts, and Probability & Statistics. These can be accessed at point of use in each problem in SpringBoard Digital. Click/Tap on the + sign icon and then the "toolbox" icon to see the array of virtual tools to support procedural skill and fluency. (i.e. Algebra Tiles, Number Line, Protractor, Graphing Calculator powered by Desmos, GeoGebra Dynamic Software, Probability instruments, and an array of data displays).

In Summary, SpringBoard Courses 1-3 was developed to meet the rigors of the Common Core State Standards with a focus on developing conceptual understanding through rich problem solving opportunities and embedded student-centered learning strategies.