

Instructional Learning Series

Grade 3—Operations and Algebraic Thinking Playlist

The Digital Library Instructional Learning Series links Smarter Balanced Digital Library resources with content from Interim Assessment Blocks. The Digital Library resources on this list are intended to supplement a teacher's core curriculum and may not address every standard assessed by the Grade 3—Operations and Algebraic Thinking Interim Assessment Block. For each resource on this list, a brief description is provided along with the Common Core State Standards (CCSS) of focus and estimated instructional time. Many of the formative assessment practices featured in these resources can be used across grades and content areas.

Learning Goals

Students understand how to:

- represent and solve problems involving multiplication and division.
- solve problems involving the four operations.
- describe the properties of multiplication and the relationship between multiplication and division.
- demonstrate that multiplication is repeated addition and division is repeated subtraction.

Success Criteria

Students can:

- find products to multiplication facts.
- find the missing factor in a multiplication equation.
- represent multiplication and division problems with equations, drawings, arrays, and base ten pieces.
- solve word problems related to multiplication and division.

Title	Resource Overview
<p>Multiplication Fact Assessment: Factors 0-5 </p> <p>CCSS of focus: 3.OA.C, 3.OA.C.7</p> <p>Estimated Instructional Time: 60 min.</p>	<p>This resource includes materials to be used in conjunction with two videos intended to help students memorize multiplication facts. Students practice multiplying by 0, 1, 2, 3, 4, and 5, then track their progress, assess their learning, and reflect on future practice.</p>
<p>Relate Multiplication to the Array Model </p> <p>CCSS of focus: 3.OA.A, 3.OA.A.1</p>	<p>This resource includes a developed lesson plan from Engage New York. It scripts teacher directives for guiding students through story problems. Working independently or in small groups, students problem solve to draw an array</p>

Estimated Instructional Time: 75 min.	that accurately represents the story problem delivered during instruction.
Interpret the Meaning of Factors in a Group  CCSS of focus: 3.OA.A, 3.OA.A.1 Estimated Instructional Time: 75 min.	This resource includes materials from Engage New York that can be used in a small group or a whole class setting. Using a variety of instructional strategies, teachers direct students to determine the total amount in a group by factoring the number of groups by the total size of each group.
Applying the Distributive Property to Third Grade Multiplication  CCSS of focus: 3.NBT.A.3, 3.OA.B.5 Estimated Instructional Time: 90 min.	This resource includes a lesson plan for multiple days of explicit instruction. Students follow instructions to create various arrays, then work with peers to determine appropriate ways to develop smaller arrays using those they created. By the third day of instruction, students apply the distributive property to solve a story problem.
Understanding the Properties of Multiplication  CCSS of focus: 3.OA.B, 3.OA.B.5 Estimated Instructional Time: 60 min.	This resource encourages students to express their understanding of the properties of multiplication in a writing assignment designed to elicit higher level thinking. It could be used in a collaborative group or individual setting.
Find the Missing Factor Game and Video  CCSS of focus: 3.OA.B, 3.OA.B.5 Estimated Instructional Time: 60 min.	This resource includes a video lesson, collaborative discussion questions, and lesson materials for students to develop the use of mathematical reasoning to find the missing factors of a product. Students ultimately use those multiplication skills to play a game with classmates.
Representing Multiplication  CCSS of focus: 3.OA.A, 3.OA.A.3, 3.OA.D.8 Estimated Instructional Time: 90 min.	This resource includes a lesson plan that begins with a diagnostic assessment, then asks teachers to organize small-group discussions to match multiple representations of multiplication problems. Through the collaborative process, students justify their representations of area models, equal groups, repeated additions, and word problems, then work independently to improve their original assessment tasks to show understanding.

Questions: [CAASPP](#) | caaspp@cde.ca.gov | 916-445-8765

Last Modified: Monday, September 26, 2016