

# Instructional Learning Series

## Grade 6—Ratios and Proportional Relationships 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 6—Ratios and Proportional Relationships 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:

- use ratio language to describe a ratio relationship between two quantities.
- find a unit rate.
- use ratio and rate reasoning to solve real-world and mathematical problems, by reasoning about tables of equivalent ratios, tape diagrams, double number lines, or equations.

### Success Criteria

Students can:

- describe proportional relationships using ratios and ratio language and use ratio reasoning to manipulate and transform units when multiplying or dividing quantities.
- find the unit rate of a given ratio and/or use unit rates to solve real world problems, such as finding a percent of a quantity as a rate per 100.
- find missing values in tables of equivalent ratios.
- plot points on the coordinate plane.

Title	Resource Overview
<a href="#">A Class Party</a>  CCSS of focus: 6.RP.1, 6.RP.3 Estimated Instructional Time: 120 min.	This resource includes a lesson plan intended for use as a wrap-up or review for whole group or with individuals who need more practice working with concepts of ratio, unit rate, and percent.
<a href="#">Crawfish Boil: Using Ratios and Proportional Reasoning</a>  CCSS of focus: 6.RP.1, 6.RP.2, 6.RP.3a, 6.RP.3b	This resource includes a performance task, student materials, and an exemplar response. This resource is a complex, real-world task in which students use their understanding of ratios and proportional reasoning to determine how many crawfish and other items to purchase

<p>Estimated Instructional Time: 240 min. (four 60-minute lessons)</p>	<p>within a budget. Students write narratives explaining their choices and justifying their decisions.</p>
<p><a href="#">Chocolate Chip Cookies: Rates, Ratios and Division of Fractions</a> </p> <p>CCSS of focus: 6.RP.A.3c, 6.RP.A.3d, 6.NS.A.1</p> <p>Estimated Instructional Time: 120 min.</p>	<p>This resource includes a lesson plan, a task readiness tool, and remedial information to consider prior to the lesson. This complex, real-world task involves students' use of ratio, rate reasoning, and division of fractions by fractions as they adjust a recipe for cookies.</p>
<p><a href="#">Using NFL Data to Understand Ratio and Percent</a> </p> <p>CCSS of focus: 6.RP.A.1, 6.RP.A.3c</p> <p>Estimated Instructional Time: 60 min.</p>	<p>This resource includes a lesson plan, student materials, and a key for student materials. The lesson uses the win/loss records of National Football League (NFL) teams to develop student understanding of writing and interpreting ratios and writing equivalent ratios when finding the percent of games won or lost in a season.</p>
<p><a href="#">Friends Meeting on Bicycles: Working with Ratios and Rates</a> </p> <p>CCSS of focus: 6.RP.A.3b</p> <p>Estimated Instructional Time: 60 min.</p>	<p>This resource includes a lesson plan, a task readiness tool, remedial information to consider prior to the lesson, and constructed response extension activities. Students are asked to use ratios and rates related to constant speed to determine the time that friends would meet when riding their bicycles and then explain and justify their responses.</p>
<p><a href="#">Percent QR Code Hunt</a> </p> <p>CCSS of focus: 6.RP.A.3a, 6.RP.A.3b, 6.RP.A.3c, 6.RP.A.3d</p> <p>Estimated Instructional Time: 60 min.</p>	<p>This resource includes an activity plan and student materials. The collaborative activity is designed to follow instructions on finding the percent of a number. A correct response on each item is required to reveal the next problem in the sequence, so this review activity is a bit like a puzzle. Additionally, if cell phones are available, QR code readers reveal the actual content of each problem.</p>
<p><a href="#">Optimizing: Security Cameras Math Challenge for 6<sup>th</sup>Grade</a> </p> <p>CCSS of focus: 6.RP.A.1, 6.RP.A.2, 6.G.1, 6.G.2</p> <p>Estimated Instructional Time: 60 min.</p>	<p>This resource includes presentation slides, student materials, and a teacher's guide. This activity challenges students to use their knowledge of geometry and proportional reasoning to analyze and recommend the best placement of a shop owner's security cameras to maximize video surveillance coverage.</p>
<p><a href="#">Illustrative Mathematics 6.RP and 7.RP Module</a> </p> <p>CCSS of focus: 6.RP.A.3</p> <p>Estimated Instructional Time: 240 min. (four 60-minute lessons)</p>	<p>This resource includes a professional learning component, lesson plans, and classroom materials. In addition to providing two well-developed lessons with video support and sample student work, this resource provides a web based learning opportunity through Desmos (a free, online graphing calculator).</p>

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

Last Modified: Monday, September 26, 2016