

BC K-9 Mathematics Curriculum

Big Ideas and Elaborations

Grade Six Big Ideas	Elaborations <i>questions to inspire student inquiry</i>
<p>Number represents and describes quantity.</p> <p>Mixed numbers and decimal numbers represent quantities that can be decomposed into parts and wholes.</p>	<ul style="list-style-type: none"> • <i>In how many ways can you represent the number ___?</i> • <i>What are the connections between fractions, mixed numbers, and decimal numbers?</i> • <i>How are mixed numbers and decimal numbers alike? Different?</i>
<p>Computational fluency develops from a strong sense of number.</p> <p>Computational fluency and flexibility with numbers extend to operations with whole numbers and decimals.</p>	<ul style="list-style-type: none"> • <i>When we are working with decimal numbers, what is the relationship between addition and subtraction?</i> • <i>When we are working with decimal numbers, what is the relationship between multiplication and division?</i> • <i>When we are working with decimal numbers, what is the relationship between addition and multiplication?</i> • <i>When we are working with decimal numbers, what is the relationship between subtraction and division?</i>
<p>We use patterns to represent identified regularities and to make generalizations.</p> <p>Linear relations can be identified and represented using expressions with variables and line graphs and can be used to form generalizations.</p>	<ul style="list-style-type: none"> • <i>What is a linear relationship?</i> • <i>How do linear expressions and line graphs represent linear relations?</i> • <i>What factors can change or alter a linear relationship?</i>
<p>We can describe, measure, and compare spatial relationships.</p> <p>Properties of objects and shapes can be described, measured, and compared using volume, area, perimeter, and angles.</p>	<ul style="list-style-type: none"> • <i>How are the areas of triangles, parallelogram, and trapezoids interrelated?</i> • <i>What factors are considered when selecting a viable referent in measurement?</i>
<p>Analyzing data and chance enables us to compare and interpret.</p> <p>Data from the results of an experiment can be used to predict the theoretical probability of an event and to compare and interpret.</p>	<ul style="list-style-type: none"> • <i>What is the relationship between theoretical and experimental probability?</i> • <i>What informs our predictions?</i> • <i>What factors would influence the theoretical probability of an experiment?</i>

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Big Ideas and Elaborations

Grade Seven Big Ideas	Elaborations <i>questions to inspire student inquiry</i>
<p>Number represents and describes quantity.</p> <p>Decimals, fractions, and percents are used to represent and describe parts and wholes of numbers.</p>	<ul style="list-style-type: none"> • <i>How many ways can you represent the number ___?</i> • <i>What is the relationship between decimals, fractions, and percents?</i> • <i>How can you prove equivalence?</i> • <i>How are parts and wholes best represented in particular contexts?</i>
<p>Computational fluency develops from a strong sense of number.</p> <p>Computational fluency and flexibility with numbers extend to operations with integers and decimals.</p>	<ul style="list-style-type: none"> • <i>When we are working with integers, what is the relationship between addition and subtraction?</i> • <i>When we are working with integers, what is the relationship between multiplication and division?</i> • <i>When we are working with integers, what is the relationship between addition and multiplication?</i> • <i>When we are working with integers, what is the relationship between subtraction and division?</i>
<p>We use patterns to represent identified regularities and to make generalizations.</p> <p>Linear relations can be represented in many connected ways to identify regularities and make generalizations.</p>	<ul style="list-style-type: none"> • <i>What is a linear relationship?</i> • <i>In how many ways can linear relationships be represented?</i> • <i>How do linear relationships differ?</i> • <i>What factors can change a linear relationship?</i>
<p>We can describe, measure, and compare spatial relationships.</p> <p>The constant ratio between the circumference and diameter of circles can be used to describe, measure, and compare spatial relationships.</p>	<ul style="list-style-type: none"> • <i>What is unique about the properties of circles?</i> • <i>What is the relationship between diameter and circumference?</i> • <i>What are the similarities and differences between the area and circumference of circles?</i>
<p>Analyzing data and chance enables us to compare and interpret.</p> <p>Data from circle graphs can be used to illustrate proportion and to compare and interpret.</p>	<ul style="list-style-type: none"> • <i>How is a circle graph similar to and different from other types of visual representations of data?</i> • <i>When would you choose to use a circle graph to represent data?</i> • <i>How are circle graphs related to ratios, percents, decimals, and whole numbers?</i> • <i>How would circle graphs be informative or misleading?</i>