

Mathematics Grade 3  
Year at a Glance 2017-2018

Unit	Duration	Assessed Standards	Big Ideas	Essential Questions	End of Unit Assessment
Unit 1: Understanding Multiplication and Division	<b>30 Days</b>	3.OA.A.1 3.OA.A.2 3.OA.A.3 3.OA.B.5 3.OA.C.7 3.OA.D.9	<ul style="list-style-type: none"> <li>• Computational fluency requires efficient, accurate, and flexible methods for computing.</li> <li>• Effective problem solvers select appropriate methods, employing a variety of strategies, and explore alternative approaches to solve problems.</li> <li>• Strong visual images of multiplication lead to development of flexible, efficient, and accurate strategies for solving multiplication problems.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>What are the meanings of multiplication and division?</i></li> <li>• <i>What are the different ways that multiplication and division can be represented using visual images and symbols?</i></li> <li>• <i>How can using the properties of multiplication make problem solving easier?</i></li> <li>• <i>How are different representations of multiplication and division related to each other?</i></li> <li>• <i>How can using the relationship between multiplication and division make solving division problems easier?</i></li> </ul>	<ul style="list-style-type: none"> <li>• Part I-Periodic/Unit Assessment (multiple choice and multi-select items)</li> <li>• Part II-Reasoning and Application/Modeling Items (open-ended items and short answer items)</li> </ul>

Mathematics Grade 3  
Year at a Glance 2017-2018

<p>Unit 2: Strategies and Properties for Addition and Subtraction</p>	<p><b>36 Days</b></p>	<p>3.NBT.A.1 3.NBT.A.2 3.OA.D.8 3.OA.D.9</p>	<ul style="list-style-type: none"> <li>• Graphs convey data in a concise way.</li> <li>• Computational fluency requires efficient, accurate, and flexible methods for computing.</li> <li>• Effective problem solvers select appropriate methods, employing a variety of strategies, and explore alternative approaches to solve problems.</li> <li>• Strong visual images of addition and subtraction lead to development of flexible, efficient, and accurate strategies for solving addition and subtraction problems.</li> <li>• Rounding provides students with a strategy to judge the reasonableness of their answers in addition and subtraction situations.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>How can information be gathered, recorded, and organized?</i></li> <li>• <i>How does the type of data gathered influence the choice of display?</i></li> <li>• <i>What aspects of a graph help people understand and interpret the data easily?</i></li> <li>• <i>How are addition and subtraction related?</i></li> <li>• <i>What are the different ways that addition and subtraction can be represented using visual images and symbols?</i></li> <li>• <i>How can using the properties of addition make problem solving easier?</i></li> <li>• <i>How can rounding numbers aid in solving addition and subtraction problems?</i></li> <li>• <i>How does place value connect with regrouping in addition and subtraction?</i></li> <li>• <i>How is zero different from any other whole number you might add or subtract?</i></li> </ul>	<ul style="list-style-type: none"> <li>• Part I-Periodic/Unit Assessment (multiple choice and multi-select items)</li> <li>• Part II-Reasoning and Application/Modeling Items (open-ended items and short answer items)</li> </ul>
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Year at a Glance 2017-2018

<p>Unit 3: Multiplication and Division</p>	<p><b>35 Days</b></p>	<p>3.MD.C.5 3.MD.C.5a 3.MD.C.</p>	<ul style="list-style-type: none"> <li>• Division can represent either sharing or grouping situations.</li> <li>• Division and multiplication are related as inverse operations.</li> <li>• Area can be determined by counting unit squares needed to cover a rectangle and by multiplying the side lengths.</li> <li>• Computational fluency requires efficient, accurate, and flexible methods for computing.</li> <li>• Effective problem solvers select appropriate methods, employing a variety of strategies, and explore alternative approaches to solve problems.</li> <li>• Visual images of division and multiplication lead to understanding how the operations are related and to developing problem-solving strategies.</li> <li>• Recognizing and continuing patterns can facilitate solving real world problems and computations.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>What are the meanings of multiplication and division?</i></li> <li>• <i>What are the different ways that multiplication and division can be represented using visual images and symbols?</i></li> <li>• <i>How can using the properties of operations be used to solve multiplication and division problems?</i></li> <li>• <i>How are different representations of multiplication and division related to each other?</i></li> <li>• <i>How can using the relationship between multiplication and division make solving division problems easier?</i></li> <li>• <i>How does finding patterns help in counting and/or computations?</i></li> <li>• <i>How might calculating area be useful in daily life?</i></li> </ul>	<ul style="list-style-type: none"> <li>• Part I-Periodic/Unit Assessment (multiple choice and multi-select items)</li> <li>• Part II-Reasoning and Application/Modeling Items (open-ended items and short answer items)</li> </ul>
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Unit 4: Fractions	<b>32 Days</b>	3.G.A.2 3.MD.B.4 3.NF.A.1 3.NF.A.2 3.NF.A.2.a 3.NF.A.2.b 3.NF.A.3 3.NF.A.3.a 3.NF.A.3.b 3.NF.A.3.c 3.NF.A.3.d	<ul style="list-style-type: none"> <li>• Fractions can be represented as numbers on a number line.</li> <li>• Fractions are numbers.</li> <li>• Fractions are an important part of our number system and an integral part of our daily life.</li> <li>• Fractions can be used to represent numbers equal to, less than, or greater than 1.</li> <li>• Fractions represent a quantity as indicated by the number of parts (numerator) and the size of the parts (denominator).</li> <li>• Fractional parts are relative to the size of the whole.</li> <li>• Measurement data can be represented by constructing line plots.</li> <li>• Rulers and measuring lengths can be connected to fractions.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>What is a fraction?</i></li> <li>• <i>How are fractions related to whole numbers?</i></li> <li>• <i>Why is the unit fraction an essential concept in understanding fractions in general?</i></li> <li>• <i>How can I represent fractions in multiple ways?</i></li> </ul>	<ul style="list-style-type: none"> <li>• Part I-Periodic/Unit Assessment (multiple choice and multi-select items)</li> <li>• Part II-Reasoning and Application/Modeling Items (open-ended items and short answer items)</li> </ul>
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Year at a Glance 2017-2018

<p>Unit 5: Applying Operations With Whole Numbers</p>	<p><b>19 Days</b></p>	<p>3.NBT.A.2 3.NBT.A.3 3.OA.D.7 3.OA.D.8</p>	<ul style="list-style-type: none"> <li>• Students fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that <math>8 \times 5 = 40</math>, one knows <math>40 \div 5 = 8</math>) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.</li> <li>• Students use the properties of multiplication: Commutative, Distributive, and Associative Properties of Multiplication.</li> <li>• Students describe and explain patterns using properties of operations.</li> <li>• Students solve two-step word problems using the four operations.</li> <li>• Computational fluency requires efficient, accurate, and flexible methods for Computing. Effective problem solvers select appropriate methods, employ a variety of strategies, and explore alternative approaches to solve problems.</li> <li>• Strong visual images of multiplication lead to development of flexible, efficient, and accurate strategies</li> </ul>	<ul style="list-style-type: none"> <li>• <i>What are the different ways that multiplication can be represented using visual models and symbols? How are those representations related to each other?</i></li> <li>• <i>How can using the properties of multiplication make problem solving easier?</i></li> <li>• <i>How does finding patterns help in counting and/or computations?</i></li> </ul>	<ul style="list-style-type: none"> <li>• Part I-Periodic/Unit Assessment (multiple choice and multi-select items)</li> <li>• Part II-Reasoning and Application/Modeling Items (open-ended items and short answer items)</li> </ul>
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Year at a Glance 2017-2018

			<p>for solving multiplication problems.</p> <ul style="list-style-type: none"> <li>Recognizing and continuing patterns can assist in solving real world problems and computations.</li> </ul>		
Unit 6: Geometry and Measurement	<b>28 Days</b>	3.G.A.1 3.MD.A.1 3.MD.A.2 3.MD.C.5 3.MD.C.5.b 3.MD.C.7 3.MD.C.7.b 3.MD.D.8	<ul style="list-style-type: none"> <li>Skip counting can be used to read an analog clock to tell time to the nearest minute.</li> <li>Solving real-world problems involving measuring intervals of time requires analyzing the known values such as starting time, ending time, and the amount of time passed.</li> <li>Standard measurement units provide common language for communicating length, time, mass, volume, etc.</li> <li>The choice of measurement tools depends on the degree of precision desired.</li> <li>The length around a polygon (perimeter) can be calculated by adding the lengths of its sides.</li> <li>Perimeter and area are related. Shapes can be classified by their attributes.</li> </ul>	<ul style="list-style-type: none"> <li><i>How might finding perimeter help to accomplish tasks in daily life?</i></li> <li><i>How are tools for telling time and measuring time intervals used?</i></li> <li><i>How do units within a measurement system relate to each other?</i></li> <li><i>How is geometry used to solve problems in everyday life?</i></li> <li><i>How can using visual models support reasoning about geometric concepts?</i></li> <li><i>How can attributes be used to classify shapes?</i></li> </ul>	<ul style="list-style-type: none"> <li>Part I-Periodic/Unit Assessment (multiple choice and multi-select items)</li> <li>Part II-Reasoning and Application/Modeling Items (open-ended items and short answer items)</li> </ul>