DISTRICT OF COLUMBIA
PUBLIC SCHOOLS

Cover Page for 4th Grade Math Scope and Sequence

The purpose of this document is to clarify the intentions of this Scope and Sequence (SAS) and to provide a window into the thinking behind the choices made. If you have further questions, concerns, and/or ideas, please reach out to Camsie McAdams, Director of STEM. We are excited to make our math work exemplary throughout the district!

1. **What is our main focus in each unit?**

Unit 1.1 – Patterns in Measurement: Generating number and shape patterns, applying understanding of patterns to know relative sizes of measurements; and using knowledge of relative sizes of measurement to solve word problems

Unit 1.2 – Patterns in Numbers: Understanding place value; reading and writing numbers; comparing numbers; rounding numbers

Unit 2.1 – Multiplication Mania: Multiplying multi-digit numbers; dividing four-digit dividends by one-digit divisors; multi-step word problems

Unit 2.2 – Decomposing a Circle: Recognizing angles; measuring angles; adding and subtracting angles

Unit 3.1 – Shape Parts: Points, lines, line segments, rays, angles, and perpendicular and parallel lines

Unit 3.2 – Composing and Decomposing Fractions: Adding and subtracting fractions; equivalent fractions; comparing fractions

Unit 4.1 – Multiplying Fractions: Multiplying fractions; solving word problems

Unit 4.2 – Decimals: Expressing fractions as decimals; comparing decimals

Unit 5.1 – Strategic Re-teaching and Review: Based on student data, prepare students for the DC CAS

Unit 6.1 – Bridge: Adding and subtracting fractions with unlike denominators; review of multiplication of fractions; and interpreting fractions as division

2. **Why are we starting with measurement when fractions and multiplication are so critical at this grade level?**

At the onset of the school year, we want to provide an opportunity for teachers and students to develop a community of math learners, and begin to develop the math practices highlighted in the Common Core. Measurement provides a tangible context for students to apply their learning and for a hands-on approach to creating a math classroom. The CCSS-M may be a shift for educators and students alike, so providing the time and space to really think conceptually about math content and build our language to support a strong mathematics classroom is important.

3. Is the order in which I teach the standards important?

The order of standards in the Scope and Sequence (SAS) was intentional. The SAS is designed to promote hands-on learning that allows students to develop conceptual understanding before learning problem-solving algorithms. For example, in Unit 2.1 Multiplication Mania, students first work with area, the meaning of multiplication equations, and using multiplication for problem solving. It is only after spending time developing this conceptual understanding that students are introduced to multiplying four digits by a one-digit number and multiplying two-digit numbers by two-digit numbers.

4. What am I supposed to teach and do in unit 5.1?

Unit 5 is meant to be a 10-day focused reviewing and re-teaching opportunity to help students feel prepared for success on the DC CAS. Use the data you have gathered about your students' understanding (journals, anecdotal records, PIA data, in-class quizzes, etc..) to strategically plan ways to address your students' needs. Incorporating whole group re-teaching as well as small-group and individualized instruction should comprise your instructional plan during this window.

5. What am I supposed to teach and do in unit 6.1?

The sixth instructional window is meant to be a bridge from one grade level to the next. We have selected some of the priority standards from this grade and linked them to similar standards in the upcoming one so that we are preparing our students for their next steps. Additionally, this is the time to really ensure all students have mastered the fluency standards and the major foci for this grade level.

6. How can I incorporate the routine/fluency standards since they happen throughout the year?

Fluently adding and subtracting multi-digit numbers using the standard algorithm are skills you can incorporate in daily morning meetings or morning/math messages. For example, have a "Problem of the Day" and challenge students to find multiple ways to solve it. Another suggestion is to keep track of the days in school and have students "play" with ways to make that number. For example, if we have been in school 25 days, we can find all the factors of 25, create equations that total 25, and think of other representations of 25 (one quarter, for instance). Children will also develop this fluency through repeated exposure, practice, and discussion. Playing math games on a weekly basis, for example, is a great way to incorporate this skill in a fun practice.

7. How can I incorporate the Standards for Mathematical Practice and why are only 2-3 underlined in each Instructional Unit?

While the Standards for Mathematical Practice are not necessarily content-specific, we felt that some were better aligned to each unit. These standards should drive your pedagogical work every day. They are "habits of mind" that permeate the way we think and act on a daily basis. We recommend naming these with your students (although putting them in kid-friendly language may help at this age), so that the standards become part of your classroom's norms.

8. **What role does assessment play in my math instruction?**

Formative (on-going) assessments are an important part of instruction at every grade level. We strongly encourage you to take anecdotal notes on what your students are doing, saying, figuring out, and moving towards on a daily basis (at least for a few students per day). Building this type of work into your practice as a routine will make it seem less daunting and will also provide you with valuable information to inform your instruction – whether it be for your class, for a small group, or for individual students.

9. **What does it really mean to have "real world applications"? Can I just use word problems in my instruction?**

This is an interesting question! We encourage you to have conversations with colleagues about "school math" versus "real world" applications. Are we writing word problems for word problems' sake or are we really asking students to apply concepts at a deeper level? For example, giving students the problem, "Jake had 24 candy bars and gave 2/3 away. How many does he have now?" is more of a "school math" problem. We may not need to figure this out in our "real life". However, if we are conducting a scientific investigation, we may authentically ask, "How much water will we need if we have 8 plants, and each plant needs 2/3 cups of water today?"

DISTRICT OF COLUMBIA PUBLIC SCHOOLS

SY 2012-2013 Grade 4 CCSSM Math Scope and Sequence

First Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
August 27 – October 11 Paced Interim Assessment: October 10th, 11th Instructional Days: 32	**1.1 Patterns in Measurement** Approximate number of instructional days: 15 days	**4. OA.5** Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. *For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.* **4. MD.1** Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. *For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), . . .* **4. MD.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. *[Note: For this instructional window, the focus should be on problems that require expressing measurements given in a larger unit in terms of a smaller unit.*
	1.2 Patterns in Numbers Approximate number of instructional days: 15 days	**4. NBT.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700/70 = 10 by applying concepts of place value and division.** **4. NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, < symbols to record the results of comparisons.** **4. NBT.3 Use place value understanding to round multi-digit whole numbers to any place.** **4. NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.**
		Routine/Fluency Standards: **4. NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.** **4. OA.2 Multiply or divide to solve word problems involving multiplicative comparisons, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.**

Copyright 2012 District of Columbia Government

		4. NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit number, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **4.OA. 5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.**
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. <u>Look for and make use of structure.</u> 8. Look for and express regularity in repeated reasoning**.**

Copyright 2012 District of Columbia Government

SY 2012-2013 Grade 4 CCSSM Math Scope and Sequence

Second Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
October 12 – December 5 Paced Interim Assessment: December 4th, 5th Instructional Days: 34	**2.1 Multiplication Mania** Approximate number of instructional days: 24 days	**4. MD.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.* **4.OA.1 Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 x 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.** **4. OA.2 Multiply or divide to solve word problems involving multiplicative comparisons, (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison).** **4. OA.4** Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite. **4. NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit number, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.** **4. NBT.6** Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationships between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models. **4. OA. 3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.**

Copyright 2012 District of Columbia Government

	2.2 Decomposing a Circle Approximate number of instructional days: 8 days	**4.MD.5** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: **a.** An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure angles. **b.** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees. **4. MD.6** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure. **4. MD.7** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, (e.g., by using an equation with a symbol for the unknown angle measure).
		Routine/Fluency Standards: **4. NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.** **4. OA.2 Multiply or divide to solve word problems involving multiplicative comparisons, (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison).** **4. NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.** **4.OA. 5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.**
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. <u>Model with mathematics.</u> 5. Use appropriate tools strategically. 6. <u>Attend to precision.</u> 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning**.**

Copyright 2012 District of Columbia Government

SY 2012-2013 Grade 4 CCSSM Math Scope and Sequence

Third Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
December 6 – February 6 Paced Interim Assessment: February 5th, 6th Instructional Days: 33	**3.1 Shape Parts** Approximate number of instructional days: 11 days (before winter break)	**4. G.3** Recognize a line of symmetry for a two-dimensional figure as a line across the figure, such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry. **4. G.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures. **4. G.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
	3.2 Composing and Decomposing Fractions Approximate number of instructional days: 20 days (after winter break)	**4. MD.4** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.* **4. NF.3 Understand a fraction a/b with a > 1 as a sum of fraction 1/b.** **a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.** **b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, (e.g., by using a visual fraction model. *Examples: 3/8 = 1/8 + 1/8 + 1/8; 3/8 = 1/8 + 2/8; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8).*** **c. Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.** **d. Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, (e.g., by using visual fraction models and equations to represent the problem).** *Note: Grade 4 expectations in this domain are limited to fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.* **4.NF.1 Explain why a fraction a/b is equivalent to a fraction (n x a)/(n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.** **4. NF.2 Compare two fractions with different numerators and different denominators, (e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as ½). Recognize that comparisons are valid only when the two**

Copyright 2012 District of Columbia Government

		fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, (e.g., by using a visual fraction model).
		Routine/Fluency Standards: **4. NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.** **4. OA.2 Multiply or divide to solve word problems involving multiplicative comparisons, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.** **4. NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit number, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.** **4.OA. 5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.**
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

Copyright 2012 District of Columbia Government

SY 2012-2013 Fourth Grade CCSSM Math Scope and Sequence

Fourth Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
February 7 – March 29 Paced Interim Assessment: March 27th, 28th Instructional Days: 34	**4.1 Multiplying Fractions** Approximate number of instructional days: 16	**4. NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.** **a. Understand a fraction a/b as a multiple of 1/b.** ***For example, use a visual fraction model to represent 5/4 as the product of 5 x (1/4), recording the conclusion by the equation 5/4 = 5 x (1/4).*** **b. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.** ***For example, use a visual fraction model to express 3 x (2/5) as 6 x (1/5), recognizing this product as 6/5. (In general, n x (a/b) = (n x a)/b.)*** **c. Solve word problems involving multiplication of a fraction by a whole number, (e.g., by using visual fraction models and equations to represent the problem).** ***For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*** **4. MD.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale. (*Note: In this instructional unit, the word problems should include fractions.)*
	4.2 Decimals Approximate number of instructional days: 16	**4. NF.5 Express a fraction with a denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. For example, express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100.** *Note: Students who can generate equivalent fractions can develop strategies for adding fractions with like and unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.* **4. NF.6 Use decimal notation for fractions with denominators 10 or 100. For example, require 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.** **4. NF.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, (e.g., by using a visual model).**

Copyright 2012 District of Columbia Government

		Routine/Fluency Standards: **4. NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.** **4. OA.2 Multiply or divide to solve word problems involving multiplicative comparisons, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.** **4. NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit number, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.** **4.OA. 5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.**
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. <u>Construct viable arguments and critique the reasoning of others</u>. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. <u>7. Look for and make use of structure.</u> 8. Look for and express regularity in repeated reasoning**.**

Copyright 2012 District of Columbia Government

SY 2012-2013 Grade 4 CCSSM Math Scope and Sequence

Fifth Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
April 8-May 3 **DC CAS April 22-May 2** Instructional Days: 18	**5. 1 Strategic Re-teaching and Review**	Identified standards based on PIA data and other sources.

Copyright 2012 District of Columbia Government

SY 2012-2013 Grade 4 CCSSM Math Scope and Sequence

Sixth Instructional Window	Instructional Units	Common Core State Standards for Mathematical Content For each instructional window, instruction should focus on these standards as they will be assessed on the interim assessment. Order of standards is intentional.
May 6 to June 20 Paced Interim Assessment: June 5th, 6th Instructional Days: 29	**6.1 Major Focus Standards and Bridge to Fifth Grade** Approximate number of instructional days: 27 days	**5.NF.1** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad+bc)/bd.)* **5.NF.2** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, (e.g., by using visual fraction models or equations to represent the problem). Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect results 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2.* **4. NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.** **a. Understand a fraction a/b as a multiple of 1/b.** ***For example, use a visual fraction model to represent 5/4 as the product of 5 x (1/4), recording the conclusion by the equation 5/4 = 5 x (1/4).*** **b. Understand a multiple of a/b as a multiple of 1/b, and use this understanding to multiply a fraction by a whole number.** ***For example, use a visual fraction model to express 3 x (2/5) as 6 x (1/5), recognizing this product as 6/5. (In general, n x (a/b) = (n x a)/b.)*** **c. Solve word problems involving multiplication of a fraction by a whole number, (e.g., by using visual fraction models and equations to represent the problem).** ***For example, if each person at a party will eat 3/8 of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?*** **5. NF.3** Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole number leading to answers in the form of fractions or mixed numbers, (e.g., by using visual fraction models or equations to represent the problem). *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie?*

Copyright 2012 District of Columbia Government

		Routine/Fluency Standards: **4. NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.** **4. OA.2 Multiply or divide to solve word problems involving multiplicative comparisons, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.** **4. NBT.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit number, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.** **4.OA. 5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.**
		Standards for Mathematical Practice: *Note: These standards should drive your pedagogical practice every day. The underlined standards are critical ones for this unit.* 1. Make sense of problems and persevere in solving them. 2. Reason abstractly and quantitatively. 3. Construct viable arguments and critique the reasoning of others. 4. Model with mathematics. 5. Use appropriate tools strategically. 6. Attend to precision. 7. Look for and make use of structure. 8. Look for and express regularity in repeated reasoning.

Copyright 2012 District of Columbia Government