Swedesboro-Woolwich School District's Mathematics Curriculum Guidance Document

GRADE 5– Unit 3

Mission Statement
The primary goal of the Swedesboro-Woolwich School District is to prepare each student with the real life skills needed to compete in a highly competitive global economy. This will be achieved by providing a comprehensive curriculum, the integration of technology, and the professional services of a competent and dedicated faculty, administration, and support staff. Guiding this mission will be Federal mandates, including No Child Left Behind, the New Jersey Core Curriculum Content Standards, and local initiatives addressing the individual needs of our students as determined by the Board of Education. The diverse resources of the school district, which includes a caring PTO and active adult community, contribute to a quality school system. They serve an integral role in supporting positive learning experiences that motivate, challenge and inspire children to learn.

Unit/Module Overview
Students will be working on: • Convert and Display Units of Measure • Plot Points in a Coordinate Plane • Understand Volume • Two- Dimensional Shapes

Standards Covered in Current Unit/Module		
CCS Priority Standard	**Learning Goals**	**Learning Targets**
5.M.A.1 - Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving	• -Students will be able to convert among different-sized standard measurement units within a given measurement system	• I can write lengths using equivalent metric measures. (11-1) • I can write masses and capacities using equivalent metric measures. (11-2)

multi-step, real world problems.		• I can write lengths using equivalent customary measures. (11-3) • I can write weights using equivalent customary measures. (11-4) • I can write capacities using equivalent customary measures. (11.5) • I can solve multi‑step word problems involving units of measure. (11-7)
MA.5.G.A.1 - [Standard] - Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., *x*-axis and *x*-coordinate, *y*-axis and *y*-coordinate).	• -Students will be use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates.	• I can identify and plot points in a coordinate plane. (12-1) • I can relate points and find distances in a coordinate plane. (12-2) • I can draw and identify polygons in a coordinate plane. (12-3) • I can graph and interpret data in a coordinate plane. (12-4) • I can make and interpret line graphs. (12-5)
MA.5.G.A.2 Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.	• Students will be able to represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation	• I can identify and plot points in a coordinate plane. (12-1) • I can relate points and find distances in a coordinate plane. (12-2) • I can draw and identify polygons in a coordinate plane. (12-3) • I can graph and interpret data in a coordinate plane. (12-4) • I can make and interpret line graphs. (12-5)

		• I can use a graph to describe the relationship between two numerical patterns. (12-6)
MA.5.M.B.4.a - Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.	• -Students will be able to find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base	• I can find volumes of right rectangular prisms. (13-2) • I can use a formula to find volumes of rectangular prisms.(13-3) • I can find unknown dimensions of rectangular prisms.(13-4)
MA.5.M.B.4.b - Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.	• -Students will be able to apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.	• I can use a formula to find volumes of rectangular prisms.(13-3) • I can find unknown dimensions of rectangular prisms.(13-4) • I can find volumes of composite figures. (13-5)
MA.5.G.B.4 - [Standard] - Classify two-dimensional figures in a hierarchy based on properties.	• -Students will be able to classify two-dimensional figures in a hierarchy based on properties.	• I can classify triangles by their angles and their sides. (14-1) • I can classify quadrilaterals by their angles and their sides. (14-2) • I can understand the hierarchy of quadrilaterals. (14-3)

MA.5.G.B.3 - [Standard] - Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.	• -Students will be able to understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category..	• I can classify triangles by their angles and their sides. (14-1) • I can classify quadrilaterals by their angles and their sides. (14-2) • I can understand the hierarchy of quadrilaterals. (14-3)

Essential Questions
How do we convert measurements within systems? How do we represent the inside of a 3 dimensional figure? How do we graph ordered pairs? What are the properties of 2 dimensional figures?

Weekly Learning Activities and Pacing Guide			
Topic & # Days	**NJ Standards**	**Critical Knowledge & Skills**	**Possible Resources & Activities**
Big Ideas Chapter 11 (11 days total)	5.M.A.1 5.M.A.1 5.M.A.1 5.M.A.1 5.M.A.1 5.DL.B.5 5.M.A.1 5.DL.B.5	**Obj. We are learning to**: • Write lengths using equivalent metric measures. • Write masses and capacities using equivalent metric measures. • Write lengths using equivalent customary measures. • Write weights using equivalent customary measures. • Write capacities using equivalent customary measures. • Make line plots and use them to solve problems. • Solve multi-step word problems involving units of measure	**Activities:** Chapter 11 Opener: Convert and Display Units of Measure Lesson 11.1: Length in Metric Units Lesson 11.2: Mass and Capacity in Metric Units Lesson 11.3: Length in Customary Units Lesson 11.4: Weight in Customary Units Lesson 11.5: Capacity in Customary Units Lesson 11.6: Make and Interpret Line Plots Lesson 11.7: Problem Solving: Measurement End of Chapter 11: Convert and Display Units of Measure End of Chapter 11: Convert and Display Units of Measure End of Chapter 11: Convert and Display Units of Measure **Materials** *Big Ideas Materials

		Suggested Formative Assessment(s): ● Performance Task Preview & Vocabulary ● Day 1 Performance Task ● Day 2 Centers ● Day 3 Chapter Assessment ● Big Ideas assessments ● iReady .	*Stop watches/timers *Multiplication and division charts *Manipulatives (cubes, money, coins, counters) *Paper (chart, graph, lined, and blank) *Dry erase boards Fabulous, Fraction Stories (Martha Crunch) Grid paper Counters Number Lines Masking Tape Index Cards Money Number Lines Google Classroom Math Khan Academy Math Reflex Math Freckle Math Math Aids http://www.math-aids.com/Fractions/ Math Drills Printable Worksheets https://www.math-drills.com/fractions/fractions_convert_improper_to_mixed_001.php K5 Learning Geometry http://www.k5learning.com/free-math-worksheets/fifth-grade-5/geometry Better Lessons (Measurement) https://betterlesson.com/community/directory/fifth_grade/measurement Utilize TPT and purchase games/activities for Daily 3 in Math Volumeville City Project
Big Ideas Chapter 12 (11 days total)	5.G.A.1 5.G.A.2 5.G.A.1 5.G.A.2 5.G.A.1 5.G.A.2 5.G.A.1 5.G.A.2 5.G.A.1	**Obj. We are learning to**: ● Identify and plot points in a coordinate plane. ● Relate points and find distances in a coordinate plane ● Draw and identify polygons in a coordinate plane. ● Graph and interpret data in a coordinate plane. ● Make and interpret line graphs. ● Create and describe numerical patterns.	**Activities:** Chapter 12 Opener: Patterns in the Coordinate Plane Lesson 12.1: Plot Points in a Coordinate Plane Lesson 12.2: Relate Points in a Coordinate Plane Lesson 12.3: Draw Polygons in a Coordinate Plane Lesson 12.4: Graph Data Lesson 12.5: Make and Interpret Line Graphs Lesson 12.6: Numerical Patterns Lesson 12.7: Graph and Analyze Relationships End of Chapter 12: Patterns in the Coordinate Plane End of Chapter 12: Patterns in the Coordinate Plane

	5.G.A.2 5.OA.B.3 5.OA.B.3 5.G.A.2	• Use a graph to describe the relationship between two numerical patterns. **Suggested Formative Assessment(s)**: • Performance Task Preview & Vocabulary • Day 1 Performance Task • Day 2 Centers • Day 3 Chapter Assessment • Big Ideas assessments • iReady .	End of Chapter 12: Patterns in the Coordinate Plane **Materials** *Big Ideas Materials *Stop watches/timers *Multiplication and division charts *Manipulatives (cubes, money, coins, counters) *Paper (chart, graph, lined, and blank) *Dry erase boards Fabulous, Fraction Stories (Martha Crunch) Grid paper Counters Number Lines Masking Tape Index Cards Money Number Lines Google Classroom Math Khan Academy Math Reflex Math Freckle Math Math Aids http://www.math-aids.com/Fractions/ Math Drills Printable Worksheets https://www.math-drills.com/fractions/fractions_convert_improper_to_mixed_001.php K5 Learning Geometry http://www.k5learning.com/free-math-worksheets/fifth-grade-5/geometry Better Lessons (Measurement) https://betterlesson.com/community/directory/fifth_grade/measurement Utilize TPT and purchase games/activities for Daily 3 in Math Volumeville City Project
Big Ideas Chapter 13 (9 days total)	5.M.B.2a, 5.M.B.2b 5.M.B.3 5.M.B.3 5.M.B.4a 5.M.B.4a 5.M.B.4b 5.M.B.4a 5.M.B.4b	**Obj. We are learning to**: • Count to find volumes of solid figures. • Find volumes of right rectangular prisms. • Use a formula to find volumes of rectangular prisms. • Find unknown dimensions of rectangular prisms.	**Activities:** Chapter 13 Opener: Understand Volume Lesson 13.1: Understand the Concept of Volume Lesson 13.2: Find Volumes of Right Rectangular Prisms Lesson 13.3: Apply the Volume Formula Lesson 13.4: Find Unknown Dimensions Lesson 13.5: Find Volumes of Composite Figures

	5.M.B.4b 5.M.B.4c	• Find volumes of composite figures. **Suggested Formative Assessment(s)**: • Performance Task Preview & Vocabulary • Day 1 Performance Task • Day 2 Centers • Day 3 Chapter Assessment • Big Ideas assessments • iReady .	End of Chapter 13: Understand Volume End of Chapter 13: Understand Volume End of Chapter 13: Understand Volume **Materials** *Big Ideas Materials *Stop watches/timers *Multiplication and division charts *Manipulatives (cubes, money, coins, counters) *Paper (chart, graph, lined, and blank) *Dry erase boards Fabulous, Fraction Stories (Martha Crunch) Grid paper Counters Number Lines Masking Tape Index Cards Money Number Lines Google Classroom Math Khan Academy Math Reflex Math Freckle Math Math Aids http://www.math-aids.com/Fractions/ Math Drills Printable Worksheets https://www.math-drills.com/fractions/fractions_convert_improper_to_mixed_001.php K5 Learning Geometry http://www.k5learning.com/free-math-worksheets/fifth-grade-5/geometry Better Lessons (Measurement) https://betterlesson.com/community/directory/fifth_grade/measurement Utilize TPT and purchase games/activities for Daily 3 in Math Volumeville City Project
Big Ideas Chapter 14 (7 days total)	5.G.B.4 5.G.B.3 5.G.B.4 5.G.B.3	**Obj. We are learning to**: • Classify triangles by their angles and their sides. • Classify quadrilaterals by their angles and their sides.	**Activities:** Chapter 14 Opener: Classify Two-Dimensional Shapes Lesson 14.1: Classify Triangles Lesson 14.2: Classify Quadrilaterals Lesson 14.3: Relate Quadrilaterals

	5.G.B.4	• Understand the hierarchy of quadrilaterals. **Suggested Formative Assessment(s)**: • Performance Task Preview & Vocabulary • Day 1 Performance Task • Day 2 Centers • Day 3 Chapter Assessment • Big Ideas assessments • iReady .	End of Chapter 14: Classify Two-Dimensional Shapes End of Chapter 14: Classify Two-Dimensional Shapes End of Chapter 14: Classify Two-Dimensional Shapes **Materials** *Big Ideas Materials *Stop watches/timers *Multiplication and division charts *Manipulatives (cubes, money, coins, counters) *Paper (chart, graph, lined, and blank) *Dry erase boards Fabulous, Fraction Stories (Martha Crunch) Grid paper Counters Number Lines Masking Tape Index Cards Money Number Lines Google Classroom Math Khan Academy Math Reflex Math Freckle Math Math Aids http://www.math-aids.com/Fractions/ Math Drills Printable Worksheets https://www.math-drills.com/fractions/fractions_convert_improper_to_mixed_001.php K5 Learning Geometry http://www.k5learning.com/free-math-worksheets/fifth-grade-5/geometry Better Lessons (Measurement) https://betterlesson.com/community/directory/fifth_grade/measurement Utilize TPT and purchase games/activities for Daily 3 in Math Volumeville City Project

Technology Integration	Interdisciplinary Connections	21st Century Life and Career Skills

• Google Classroom • Prodigy to help review skills • http://www.abcya.com/fifth_grade_computers.htm • http://www.mathchimp.com/5th-grade-math-resources • https://www.illustrativemathematics.org/5 • https://www.khanacademy.org/commoncore/grade-5-NBT • http://www.learningfarm.com/web/practicePassThrough.cfm?TopicID=636 • Big Ideas Exit Ticket • Iready Math • SplashLearn	Next Gen Science Standards (5. Structure and Properties of Matter Unit have connections to 5.NBT.A.1; 5.NF.B.7; 5.MD.A.1; 5.MD.C.3; 5.MD.C.4) Next Gen Science Standards (5. Matter and Energy in Organisms and Ecosystems Unit have connections to 5.MD.A.1) Next Gen Science Standards (5. Space Systems: Stars and the Solar System Unit have connections to 5.NBT.A.2 and 5.G.A.2) Reading Connection: RI.MF.5.6. Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, timelines, animations, or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears. L.VL.5.2. Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.	• CRP2. Apply appropriate academic and technical skills. • CRP4. Communicate clearly and effectively and with reason • CRP6. Demonstrate creativity and innovation. • CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. • CRP11. Use technology to enhance productivity.

Link to Additional Components including Cross Curricular Connections, Accommodations, Assessments, Etc

ELA Enduring Understanding Statements