Alpena Montmorency Alcona Educational Service District
6 Pacing Guide

Unit 4: Surface Area of Prisms and Pyramids
15-17 Days

Math Background:
- Research - TE p365J-365K
- Background - TE p365L-365V

Last year, students…	This year, students will…	Next year, students will…
Understood attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.	Represent prisms and pyramids using nets made from rectangles and triangles.	Describe the two-dimensional figures that results from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.
	Use nets to find the surface area of prisms and pyramids	
	Solve real world and mathematical problems involving surface area	

Big Idea 1: Nets and Surface Area of Prisms (About 4 days)

Vocabulary: face, lateral face, edge, vertex (vertices), base, congruent, prism, rectangular prism, net, surface area, cube

Common Core State Standards for Mathematics [CCSS-M]
CC.6.G.1: Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
CC.6.G.4: Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
CC.6.EE.2: Write, read, and evaluate expressions in which letters stand for numbers.
CC.6.EE.2c: Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

Common Core Standards of Mathematical Practice [SMPs]
CC.K-12.MP.1: Make sense of problems and persevere in solving them.
CC.K-12.MP.2: Reason abstractly and quantitatively.
CC.K-12.MP.3: Construct viable arguments and critique the reasoning of others.
CC.K-12.MP.4: Model with math.
CC.K-12.MP.5: Use appropriate tools strategically.
CC.K-12.MP.6: Attend to precision.
CC.K-12.MP.7: Look for and make use of structure.
CC.K-12.MP.8: Look for and express regularity in repeated reasoning.

Lesson	Focus	CCSS-M and SMPs	Additional Resources Supplemental/Reteaching Materials Essential (E) Non-essential (NE)	Hints
4.1	**I can** • Use nets to model rectangular prisms. • Explore the surface area of rectangular prisms. **Formative Assessment:** Ask students to explain how to find the surface area of a rectangular prism.	G.1 G.4 EE.2 EE.2c SMP 1 SMP 3 SMP 4 SMP 5 SMP 6	SAB p141-148 (E) HW p87-88 (E) AC 4-1 ● (NE) AC 4-1 ▲ (NE) AC 4-1 ■ (NE) MCC 13 (NE)	Read TE p365U Read the Class Management section on TE p365 The Activity Cards are excellent for this lesson This lesson may take two days
	Lesson 4.1 Notes			
4.2	**I can** • Learn a Quick Practice Routine. • Solve and make Factor Puzzles **Formative Assessment:** Ask students to explain how to find the surface area of a prism with a base that has 10 congruent sides.	G.1 G.4 EE.2 EE.2c SMP 1 SMP 3 SMP 4 SMP 5 SMP 6 SMP 8	SAB p149-150 (E) HW p89-90 (E) AC 4-2 ● (NE) AC 4-2 ▲ (NE) AC 4-2 ■ (NE)	
	Lesson 4.2 Notes			

4.3	**I can** • Find the surface area of prisms • Solve real world problems involving surface area of prisms. **Formative Assessment:** Ask students to explain how to find the surface area of a prism with a base that has 12 congruent sides.	G.1 G.4 EE.2 EE.2c SMP 3 SMP 4 SMP 5 SMP 6	SAB p151-152 (E) HW p91-92 (E) AC 4-3 ● (NE) AC 4-3 ▲ (NE) AC 4-3 ■ (NE) MCC 14 (NE)	
	Lesson 4.3 Notes			
Quiz 1	AG Quick Quiz 1			
Reteach	To reteach, use the resources listed above (Essentials and Non-Essentials) as well as the Response to Intervention Resource Books.			

Big Idea 2: Nets and Surface Area of Pyramids (About 4 days.)

Vocabulary: pyramid, face, edge, vertex (vertices), base, slant height

Common Core State Standards for Mathematics [CCSS-M]
CC.6.G.1: Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.
CC.6.G.4: Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.
CC.6.EE.2: Write, read, and evaluate expressions in which letters stand for numbers.
CC.6.EE.2c: Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).
CC.6.EE.6: Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.

Common Core Standards of Mathematical Practice [SMPs]
CC.K-12.MP.1: Make sense of problems and persevere in solving them.
CC.K-12.MP.2: Reason abstractly and quantitatively.
CC.K-12.MP.3: Construct viable arguments and critique the reasoning of others.
CC.K-12.MP.4: Model with math.
CC.K-12.MP.5: Use appropriate tools strategically.
CC.K-12.MP.6: Attend to precision.
CC.K-12.MP.7: Look for and make use of structure.
CC.K-12.MP.8: Look for and express regularity in repeated reasoning.

Lesson	Focus	CCSS-M and SMPs	Additional Resources Supplemental/Reteaching Materials Essential (E) Non-essential (NE)	Hints
4.4	**I can** • Use nets to model pyramids **Formative Assessment:** Ask students to explain how to make a net for a pyramid. See possible explanation on TE p 398.	G.14 SMP 1 SMP 3 SMP 4 SMP 5 SMP 6 SMP 7 SMP 8	SAB p153-154 (E) HW p93-94 (E) AC 4-4 ● (NE) AC 4-4 ▲ (NE) AC 4-4 ▪ (NE) MCC 15 (NE)	Read TE p365V
	Lesson 4.4 Notes			
4.5	**I can** • Find the surface area of pyramids • Solve real world problems involving surface area of pyramids **Formative Assessment:** Ask students to explain how to find the surface area of a pyramid with a base that has 10 congruent sides.	G.1 G.4 EE.2 EE.2c SMP 2 SMP 3 SMP 4 SMP 5 SMP 6	SAB p155-156 (E) HW p95-96 (E) AC 4-5 ● (NE) AC 4-5 ▲ (NE) AC 4-5 ▪ (NE) MCC 16 (NE)	
	Lesson 4.5 Notes			
Quiz 2	AG Quick Quiz 2			

Reteach	To reteach, use the resources listed above (Essentials and Non-Essentials) as well as the Response to Intervention Resource Books.			
4.6	**Math Practices Lesson**	G.1 G.4 EE.2 EE.2c EE.6 SMP 1-8	SAB p157-158 (E) HW p97-98 (E) AC 4-6 ● (NE) AC 4-6 ▲ (NE) AC 4-6 ■ (NE)	This lesson may take two days.
	Lesson 4.6 Notes			

Unit 4: Enrichment/Intervention Loop (About 3-5 days)

Unit Test Objectives
- 4A Use nets to model rectangular prisms
- 4B Use nets to model nonrectangular prisms
- 4C Find the surface area of rectangular prisms
- 4D Find the surface area of nonrectangular prisms
- 4E Use nets to model pyramids
- 4F Find the surface area of pyramids
- 4G Solve real world problems.

Day 1: Final Formative Assessment - SAB p159-160

Day 2-4: Reteaching Activities- TE p414-415

Day 5: Assessment - Unit 4 Test AG