6Richmond Public Schools

Department of Curriculum and Instruction
Curriculum Pacing And Resource Guide – Unit Plan

Course Title/ Course #: Pre-Algebra Math 8

Unit Title/ Marking Period # (MP): Composite Figures/MP 3

Start day: 69

Meetings (Length of Unit): 8 Days

Desired Results ~ What will students be learning?

Standards of Learning/ Standards

8.11 The student will solve practical area and perimeter problems involving composite plane figures.

Essential Understandings/ Big Ideas

- How does knowing the areas of polygons assist in calculating the areas of composite figures?
  The area of a composite figure can be found by subdividing the figure intro triangles, rectangles, squares, trapezoids and semi-circles, calculating their areas, and adding the areas together.

Key Essential Skills and Knowledge

- Subdivide a figure into triangles, rectangles, squares, trapezoids and semicircles. Estimate the area of subdivisions and combine to determine the area of the composite figure.
- Use the attributes of the subdivisions to determine the perimeter and circumference of a figure.
- Apply perimeter, circumference and area formulas to solve practical problems.

Vocabulary

Area Perimeter Subdivide Circumference	Semi-circle	

Assessment Evidence ~ What is evidence of mastery? What did the students master & what are they missing?

Assessment/ Evidence

Mulligan Checkpoint 8.11
Mulligan Checkpoint 8.11
Interactive Achievement
HCPS Mini Quizzes

Students should be able to subdivide the composite figure into regular polygons
The student should be able to apply the correct formula to the regular polygon

Learning Plan ~ What are the strategies and activities you plan to use?

Learning Experiences/ Best Practice

- Reviewing area and perimeter of triangles, squares, trapezoids, circles and introduce semi-circles. Use a foldable or stations for this review activity.
- Differentiate by using several different colors markers to subdivide the shapes.
- Start with students practicing subdividing various shapes and labeling the sides with the appropriate lengths.
- Using attribute blocks to create composite figures to discuss how knowing the area of a regular polygon will help us find the area of a composite shape (intro activity)

Technology Integrations

Gizmo
Educational Games-under resources
Compass Learning
Allen Teachers
Brain Pop
Khan Academy

Resources

Text
Glencoe Pre-Algebra pages:
223-228 (Perimeter and Area)
662-668 (Area of Parallelograms, Triangles and Trapezoids)
671-675 (Circles and Circumference)

678-683 (Area of Circles)
684-689 (Area of Composite Figures)

Mulligan Math in Minutes 8.11
SOL Coach Book Va Edition: pages 113-119

Technology
Area and Perimeter Tiered Tutorial-Area and Perimeter
Teacher Videos-Area and Perimeter of Complex Shapes-Videos
Compass Learning-https://www.thelearningodyssey.com - M7141, M7143, 76272, 8086, 8087

Virginia Department of Education
VDOE-Area and Perimeter-Lesson Plan

Other Sites
HCPS - Perimeter and Area of Complex Shapes - Instructional materials, practice page, assessments
Illuminations-Finding the Area of Complex Shapes-Lesson Plan

Cross Curricular Connection

.English-explain to someone who was absent the process of finding the area or perimeter of a complex shape.
History-Discuss the importance of a ship in a period of history. Have the students draw a blue-print of one of the sides of the ship, on graph paper. Have them calculate the area and perimeter of the blue-print.