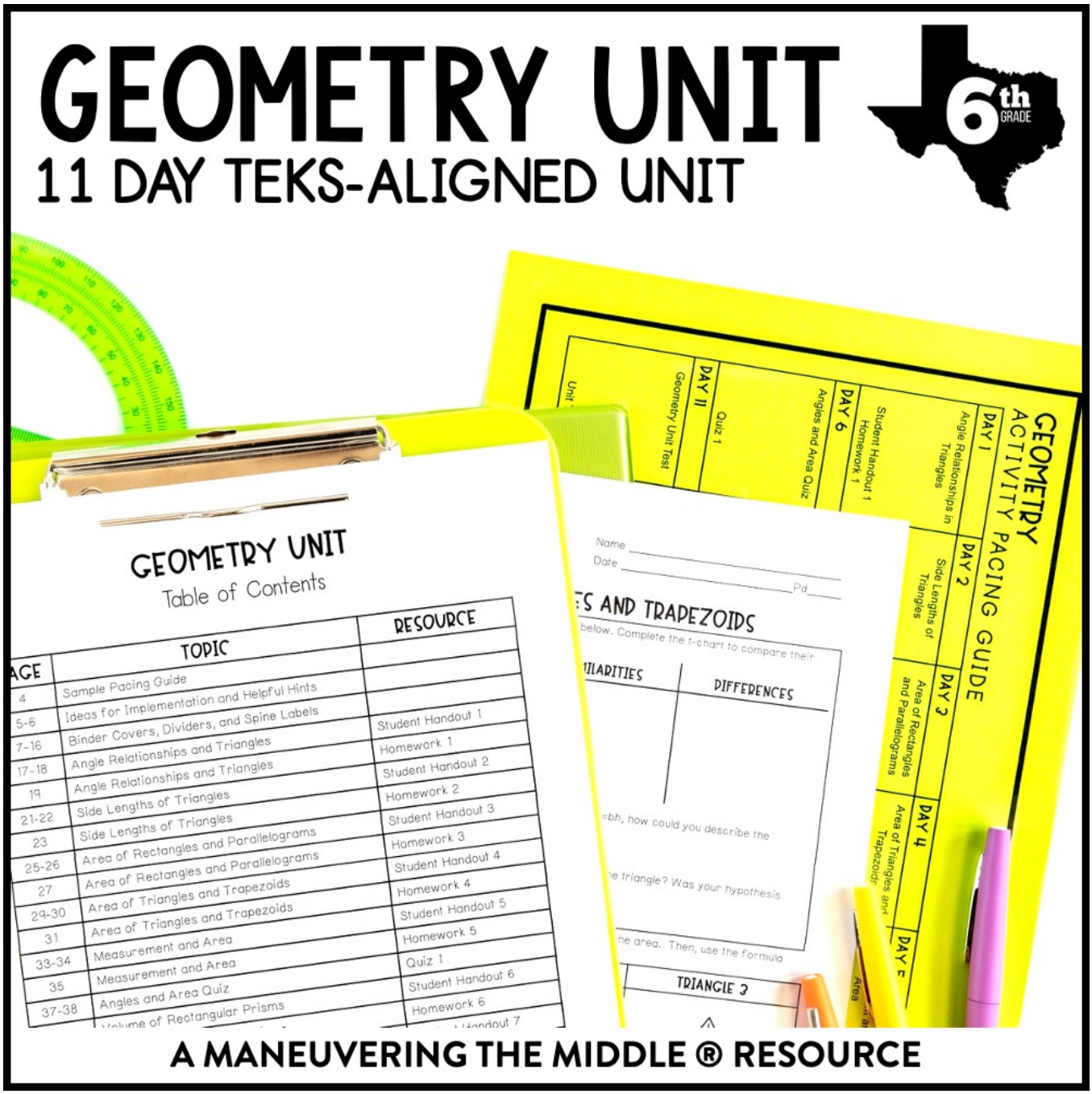
learning focus:

- ✓ apply properties of triangles including side lengths and angle relationships
- ✓ graph ordered pairs on a coordinate plane
- ✓ write equations and determine solutions for problems involving area and volume



GEOMETRY

an 11 day TEKS-aligned unit

TEKS: 6.8A, 6.8B, 6.8C, 6.8D, 6.10A, 6.11A

ready-to-go, scaffolded student materials

GEOMETRY UNIT

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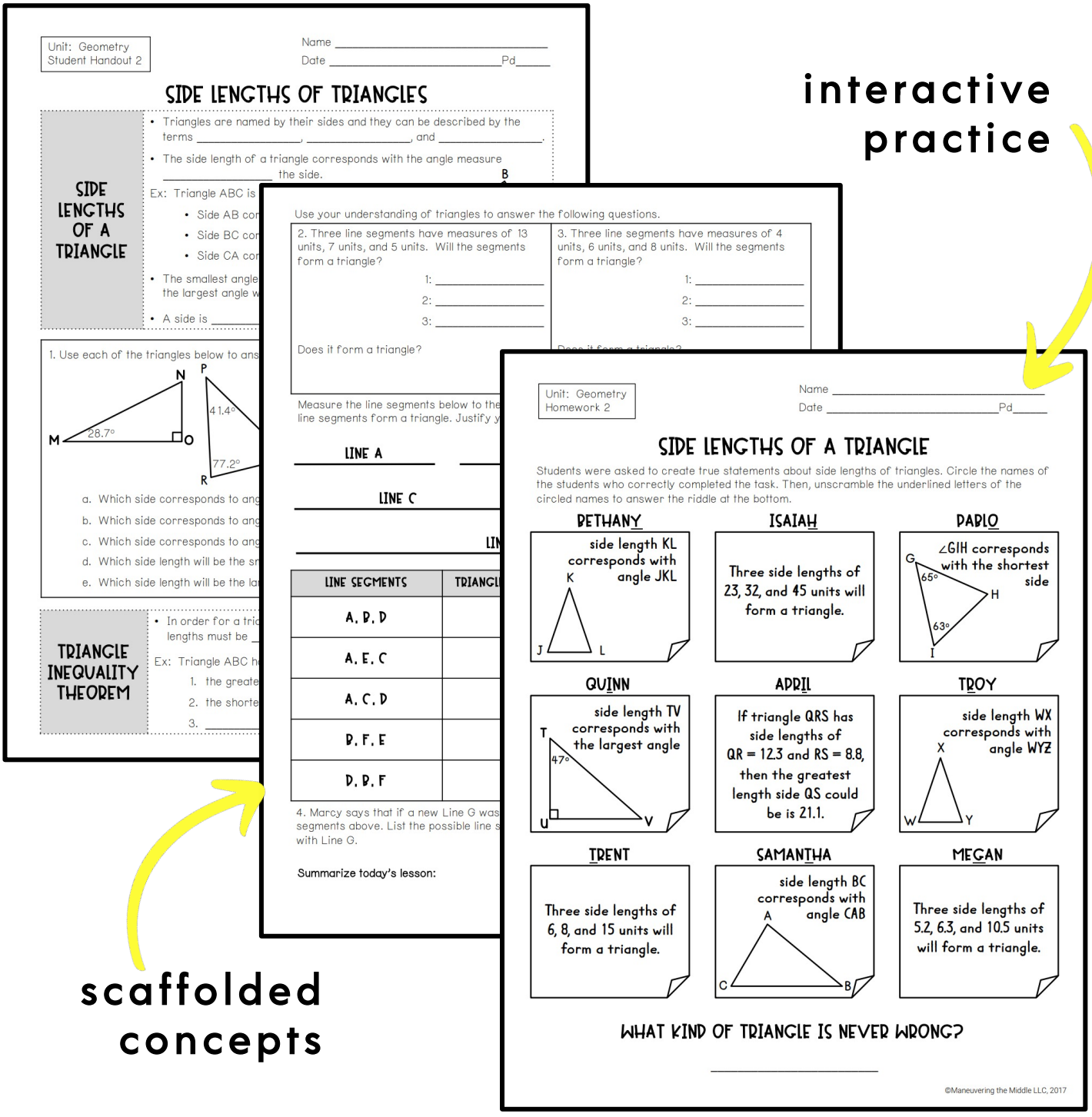
student friendly + real-world application



Unit: Geometry
Student Handout 2

Name _____
Date _____ Pd_____

SIDE LENGTHS OF TRIANGLES

SIDE LENGTHS OF A TRIANGLE

- Triangles are named by their sides and they can be described by the terms _____, _____, and _____.
- The side length of a triangle corresponds with the angle measure _____ the side.

Ex: Triangle ABC is

- Side AB cor
- Side BC cor
- Side CA cor

- The smallest angle
- the largest angle w
- A side is _____

1. Use each of the triangles below to ans

a. Which side corresponds to ang
b. Which side corresponds to ang
c. Which side corresponds to ang
d. Which side length will be the sr
e. Which side length will be the la

TRIANGLE INEQUALITY THEOREM

- In order for a tri
lengths must be _

Ex: Triangle ABC h

1. the greate
2. the shorte
3. _____

Use your understanding of triangles to answer the following questions.

2. Three line segments have measures of 13 units, 7 units, and 5 units. Will the segments form a triangle?

1: _____
2: _____
3: _____

Does it form a triangle?

3. Three line segments have measures of 4 units, 6 units, and 8 units. Will the segments form a triangle?

1: _____
2: _____
3: _____

Measure the line segments below to the
line segments form a triangle. Justify y

LINE A

LINE C

LIN

LINE SEGMENTS	TRIANGL
A, D, D	
A, E, C	
A, C, D	
D, F, E	
D, D, F	

4. Marcy says that if a new Line G was
segments above. List the possible line s
with Line G.

Summarize today's lesson:

Unit: Geometry
Homework 2

Name _____
Date _____ Pd_____

SIDE LENGTHS OF A TRIANGLE

Students were asked to create true statements about side lengths of triangles. Circle the names of the students who correctly completed the task. Then, unscramble the underlined letters of the circled names to answer the riddle at the bottom.

BETHANY
side length KL corresponds with angle JKL

ISAIAH
Three side lengths of 23, 32, and 45 units will form a triangle.

PABLO
∠GIH corresponds with the shortest side

QUINN
side length TV corresponds with the largest angle

APRIL
If triangle QRS has side lengths of QR = 12.3 and RS = 8.8, then the greatest length side QS could be is 21.1.

TROY
side length WX corresponds with angle WYZ

TRENT
Three side lengths of 6, 8, and 15 units will form a triangle.

SAMANTHA
side length BC corresponds with angle CAB

MEGAN
Three side lengths of 5.2, 6.3, and 10.5 units will form a triangle.

WHAT KIND OF TRIANGLE IS NEVER WRONG?

_____

interactive practice

scaffolded concepts

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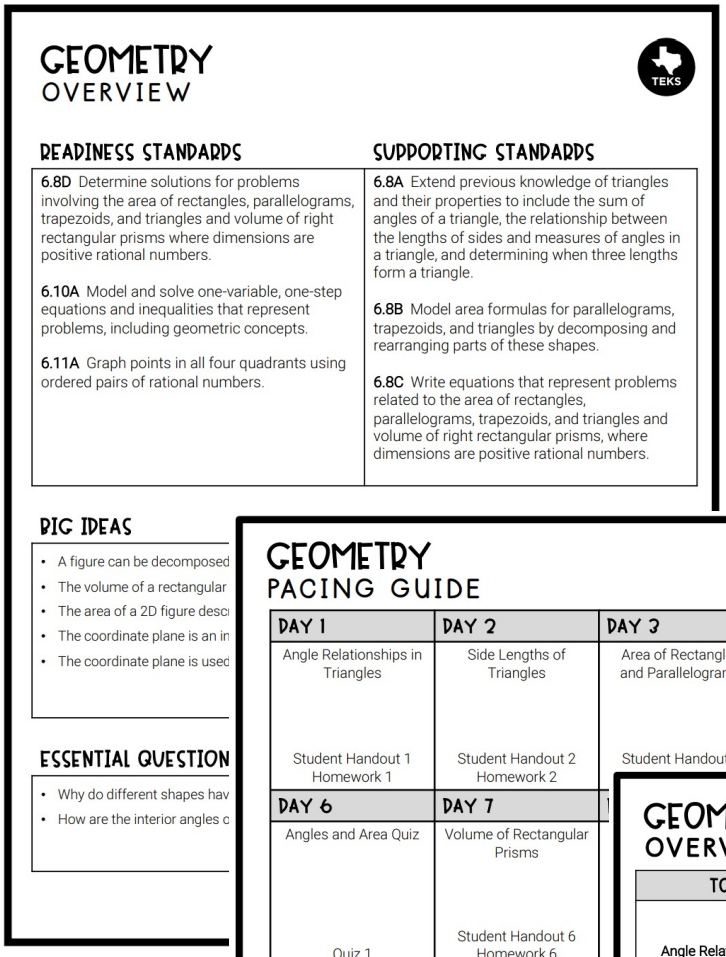
streamline your planning process with unit overviews



GEOMETRY
OVERVIEW

TEKS

READINESS STANDARDS	SUPPORTING STANDARDS
6.8D Determine solutions for problems involving the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms where dimensions are positive rational numbers. **6.10A** Model and solve one-variable, one-step equations and inequalities that represent problems, including geometric concepts. **6.11A** Graph points in all four quadrants using ordered pairs of rational numbers.	**6.8A** Extend previous knowledge of triangles and their properties to include the sum of angles of a triangle, the relationship between the lengths of sides and measures of angles in a triangle, and determining when three lengths form a triangle. **6.8B** Model area formulas for parallelograms, trapezoids, and triangles by decomposing and rearranging parts of these shapes. **6.8C** Write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of right rectangular prisms, where dimensions are positive rational numbers.

BIG IDEAS

- A figure can be decomposed
- The volume of a rectangular
- The area of a 2D figure desc
- The coordinate plane is an in
- The coordinate plane is used

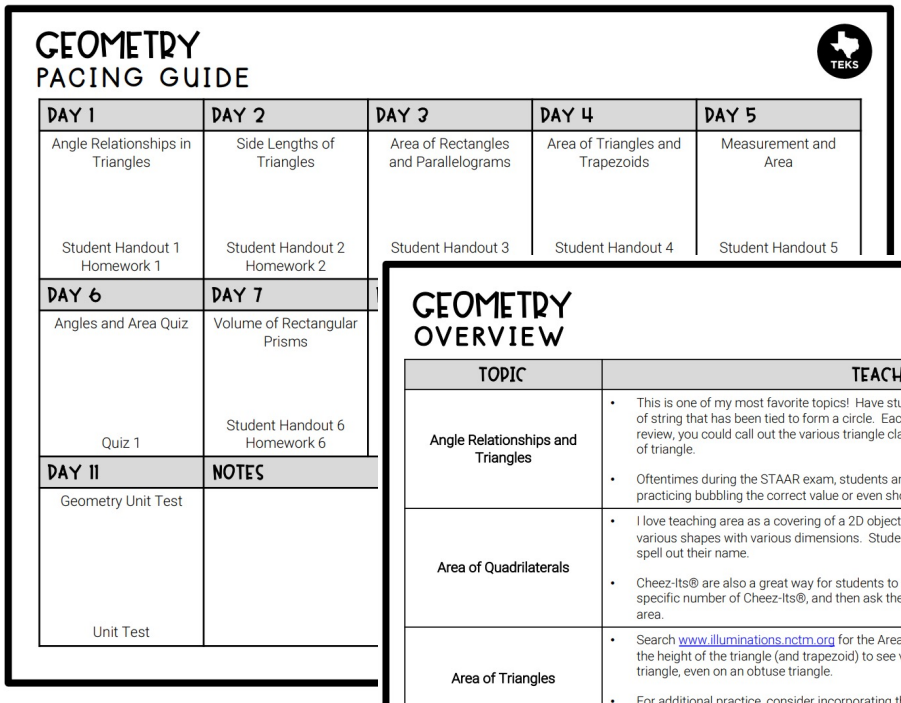
ESSENTIAL QUESTION

- Why do different shapes hav
- How are the interior angles c

✓ key vocabulary

✓ vertical alignment

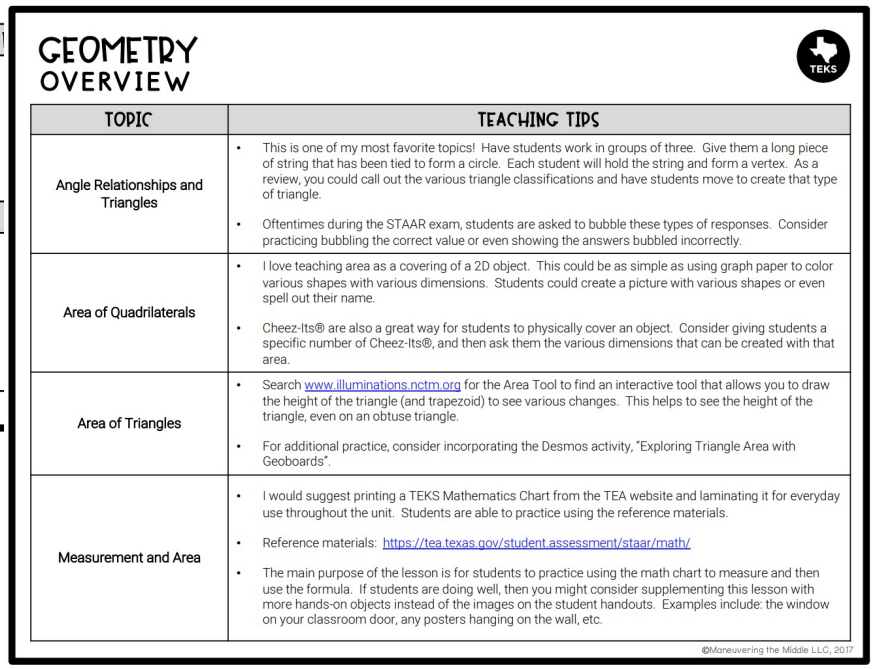
sample pacing calendar



GEOMETRY
PACING GUIDE

TEKS

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Angle Relationships in Triangles Student Handout 1 Homework 1	Side Lengths of Triangles Student Handout 2 Homework 2	Area of Rectangles and Parallelograms Student Handout 3	Area of Triangles and Trapezoids Student Handout 4	Measurement and Area Student Handout 5
DAY 6	**DAY 7**			
Angles and Area Quiz Quiz 1	Volume of Rectangular Prisms Student Handout 6 Homework 6			
DAY 11	**NOTES**			
Geometry Unit Test Unit Test				



GEOMETRY
OVERVIEW

TEKS

TOPIC	TEACHING TIPS
Angle Relationships and Triangles	• This is one of my most favorite topics! Have students work in groups of three. Give them a long piece of string that has been tied to form a circle. Each student will hold the string and form a vertex. As a review, you could call out the various triangle classifications and have students move to create that type of triangle. • Oftentimes during the STAAR exam, students are asked to bubble these types of responses. Consider practicing bubbling the correct value or even showing the answers bubbled incorrectly.
Area of Quadrilaterals	• I love teaching area as a covering of a 2D object. This could be as simple as using graph paper to color various shapes with various dimensions. Students could create a picture with various shapes or even spell out their name. • Cheez-Its® are also a great way for students to physically cover an object. Consider giving students a specific number of Cheez-Its®, and then ask them the various dimensions that can be created with that area.
Area of Triangles	• Search www.illuminations.nctm.org for the Area Tool to find an interactive tool that allows you to draw the height of the triangle (and trapezoid) to see various changes. This helps to see the height of the triangle, even on an obtuse triangle. • For additional practice, consider incorporating the Desmos activity, "Exploring Triangle Area with Geoboards".
Measurement and Area	• I would suggest printing a TEKS Mathematics Chart from the TEA website and laminating it for everyday use throughout the unit. Students are able to practice using the reference materials. • Reference materials: https://tea.texas.gov/student.assessment/staar/math/ • The main purpose of the lesson is for students to practice using the math chart to measure and then use the formula. If students are doing well, then you might consider supplementing this lesson with more hands-on objects instead of the images on the student handouts. Examples include: the window on your classroom door, any posters hanging on the wall, etc.

teaching ideas

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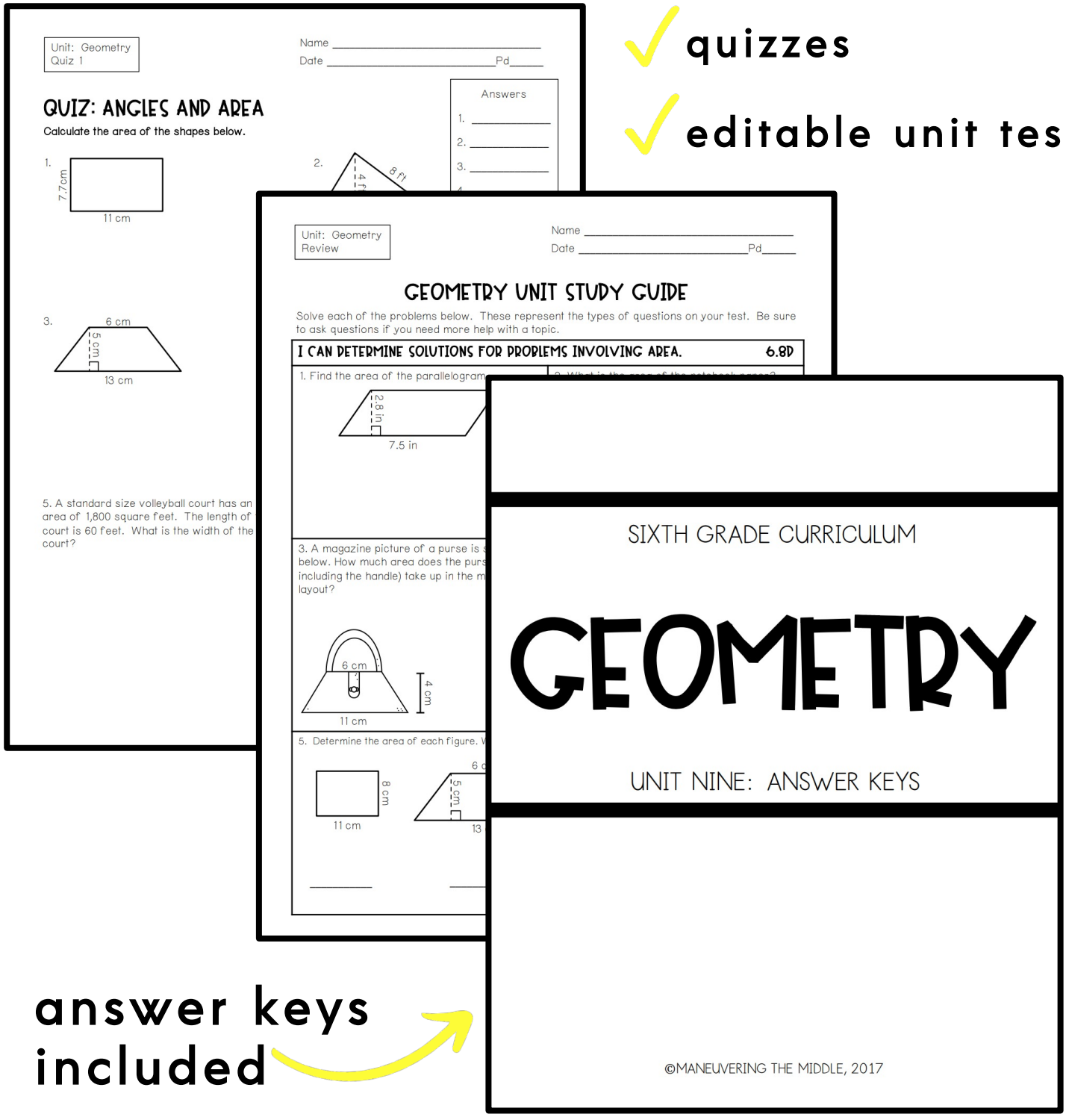
unit study guide + assessments



- ✓ quizzes
- ✓ editable unit test

answer keys included

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