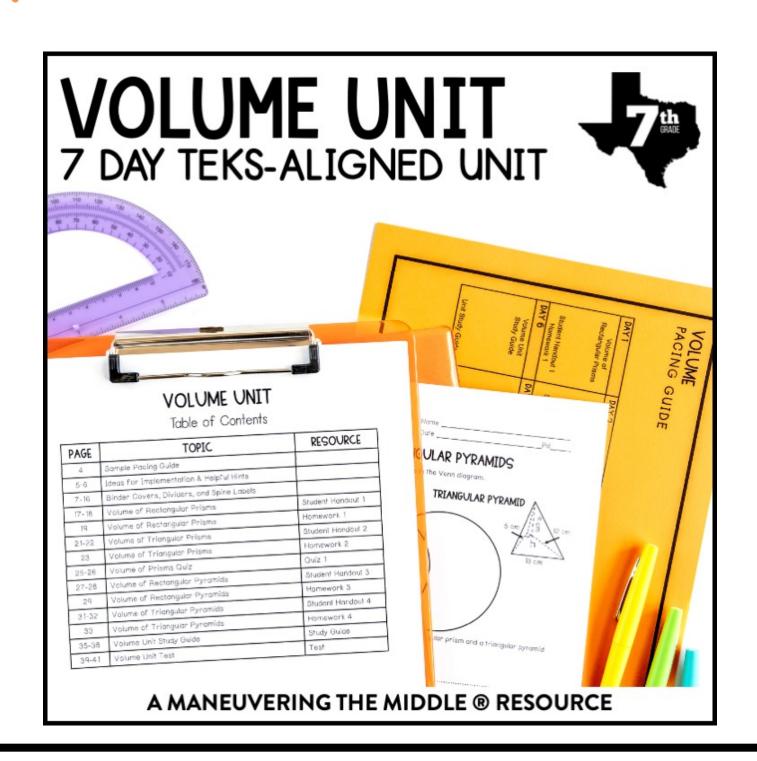# learning focus:

✓ model the relationship between the volume of a rectangular prism & pyramid

✓ model the relationship between the volume of a triangular prism and pyramid

✓ determine the volume of prisms and pyramids

VOLUME UNIT
7 DAY TEKS-ALIGNED UNIT

7th GRADE

VOLUME UNIT
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VOLUME PACING GUIDE

TRIANGULAR PYRAMIDS

TRIANGULAR PYRAMID

A MANEUVERING THE MIDDLE ® RESOURCE

VOLUME

a 7 day TEKS-aligned unit
TEKS: 7.8A, 7.9A, 7.9B

7th GRADE

ready-to-go, scaffolded student materials

VOLUME UNIT
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VOLUME

a 7 day TEKS-aligned unit
TEKS: 7.8A, 7.9A, 7.9B

7th GRADE

student friendly + real-world application

scaffolded concepts

self-checking practice

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VOLUME

a 7 day TEKS-aligned unit
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7th GRADE

streamline your planning process with unit overviews

VOLUME
OVERVIEW

TEKS

READINESS STANDARDS

7.9A Solve problems involving the volume of rectangular prisms, triangular prisms, rectangular pyramids, and triangular pyramids.

SUPPORTING STANDARDS

7.8A Model the relationship between the volume of a rectangular prism and a rectangular pyramid having both congruent bases and heights and connect that relationship to the formulas.

7.8B Explain verbally and symbolically the relationship between the volume of a triangular prism and a triangular pyramid having both congruent bases and heights and connect that relationship to formulas.

BIG IDEAS

- The volume of a 3D figure de...
- Formulas can be used to find... problems.

ESSENTIAL QUESTION

- How are the volumes of rect...
- What are the different variab... pyramid, and what do they re...
- How is finding the volume of...

✓ **key vocabulary**

✓ **vertical alignment**

sample pacing calendar

VOLUME
PACING GUIDE

TEKS

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Volume of Rectangular Prisms	Volume of Triangular Prisms	Volume of Prisms Quiz	Volume of Rectangular Pyramids	Volume of Triangular Pyramids
Student Handout 1 Homework 1	Student Handout 2 Homework 2			

DAY 6	DAY 7
Volume Unit Study Guide	Volume Unit Test
Unit Study Guide	Unit Test

VOLUME
OVERVIEW

TEKS

TOPIC	TEACHING TIPS
Rectangular Prisms	• Search www.pbslearningmedia.org for "Volume of Right Rectangular Prisms" for a quick video. If you have time for exploration, allow groups to create their own prism with unit blocks. • This should be a review from sixth grade, including the formula V=Bh. Students tend to struggle with "B" as the unit goes on and the base changes shape. Consider printing a class set of measurement charts on cardstock and laminating them so students can become confident using the chart and decoding the variables.
Triangular Prisms	• It can be hard for students to remember that "B" in the formula requires an extra step of calculating the area of the base. I like to tell students that a capital letter in the formula usually means that there will be work involved to find it. • The biggest challenge is when the triangle is not actually pictured to be on the bottom. Students tend to associate the bottom with the base. Ask students to shade the base of each and every figure and sketch a figure if necessary.
Rectangular Pyramids	• If you own a set of geometry figures, then take the pyramid and fill it with rice or water. Then, pour the pyramid into the prism to demonstrate that it is only filled one-third of the way. • Check out the blog post on www.maneuveringthemiddle.com entitled "20 Must Have Math Teacher Supplies" for the specific set that I used.
Triangular Pyramids	• This can be the most difficult figure to calculate the volume. Students should be very familiar with how to substitute the values for each variable and the various steps. Require students to show each and every step. • I really like connecting the triangular prism to the triangular pyramid. Then, it is just one more step. So, students can think of this like finding the volume of a prism and then dividing by three. It sometimes seems a bit less overwhelming.

teaching ideas

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VOLUME

a 7 day TEKS-aligned unit
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unit study guide + assessments

✓ quizzes

✓ editable unit test

answer keys included

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