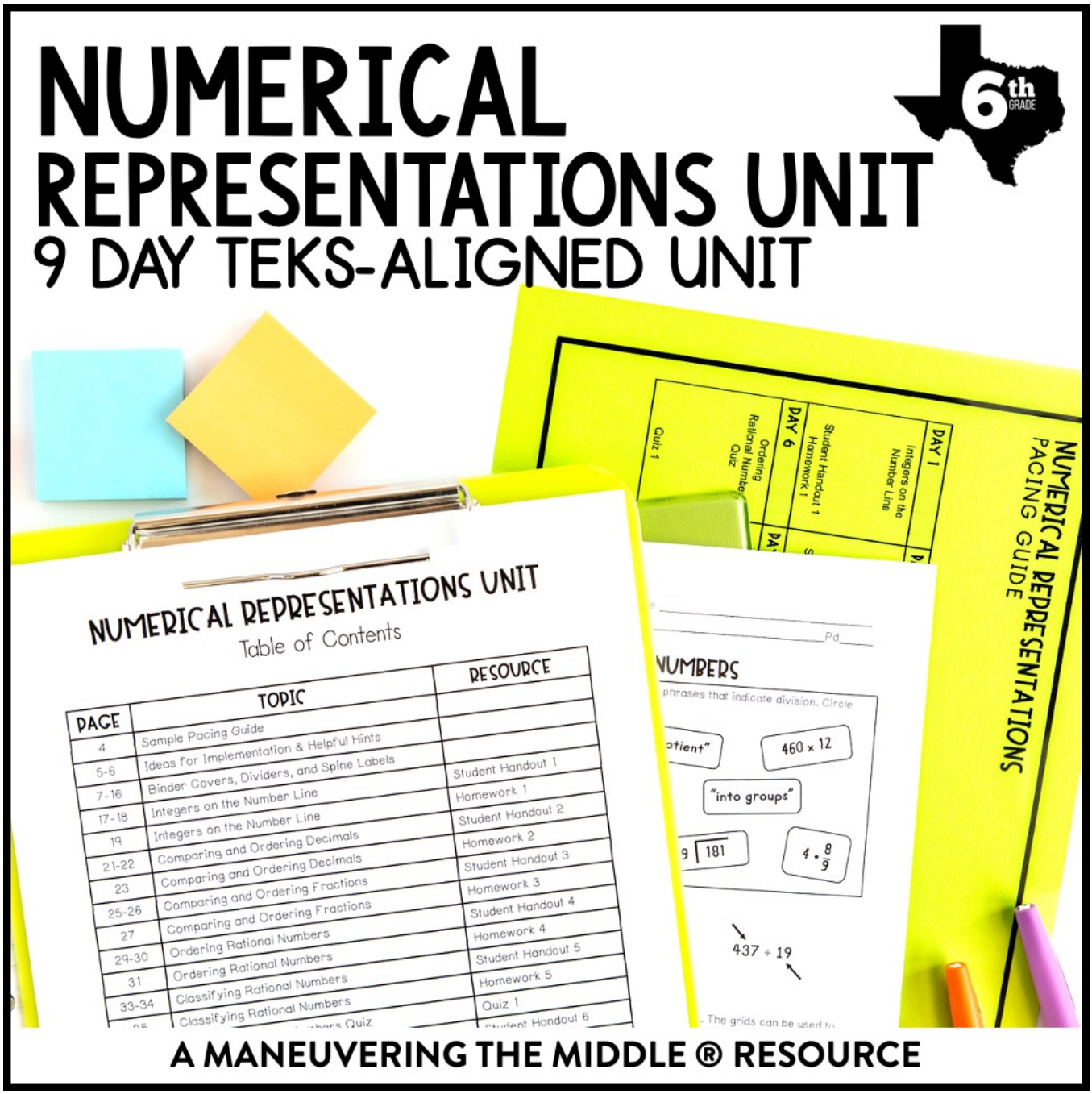
learning focus:

- ✓ use a number line to represent integers and absolute value
- ✓ compare and order decimals and fractions
- ✓ classify and order rational numbers from mathematical and real-world situations



NUMERICAL REPRESENTATIONS

a 9 day TEKS-aligned unit

TEKS: 6.2A, 6.2B, 6.2C, 6.2D, 6.2E

ready-to-go, scaffolded student materials

NUMERICAL REPRESENTATIONS UNIT

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A MANEUVERING THE MIDDLE® RESOURCE

NUMERICAL REPRESENTATIONS

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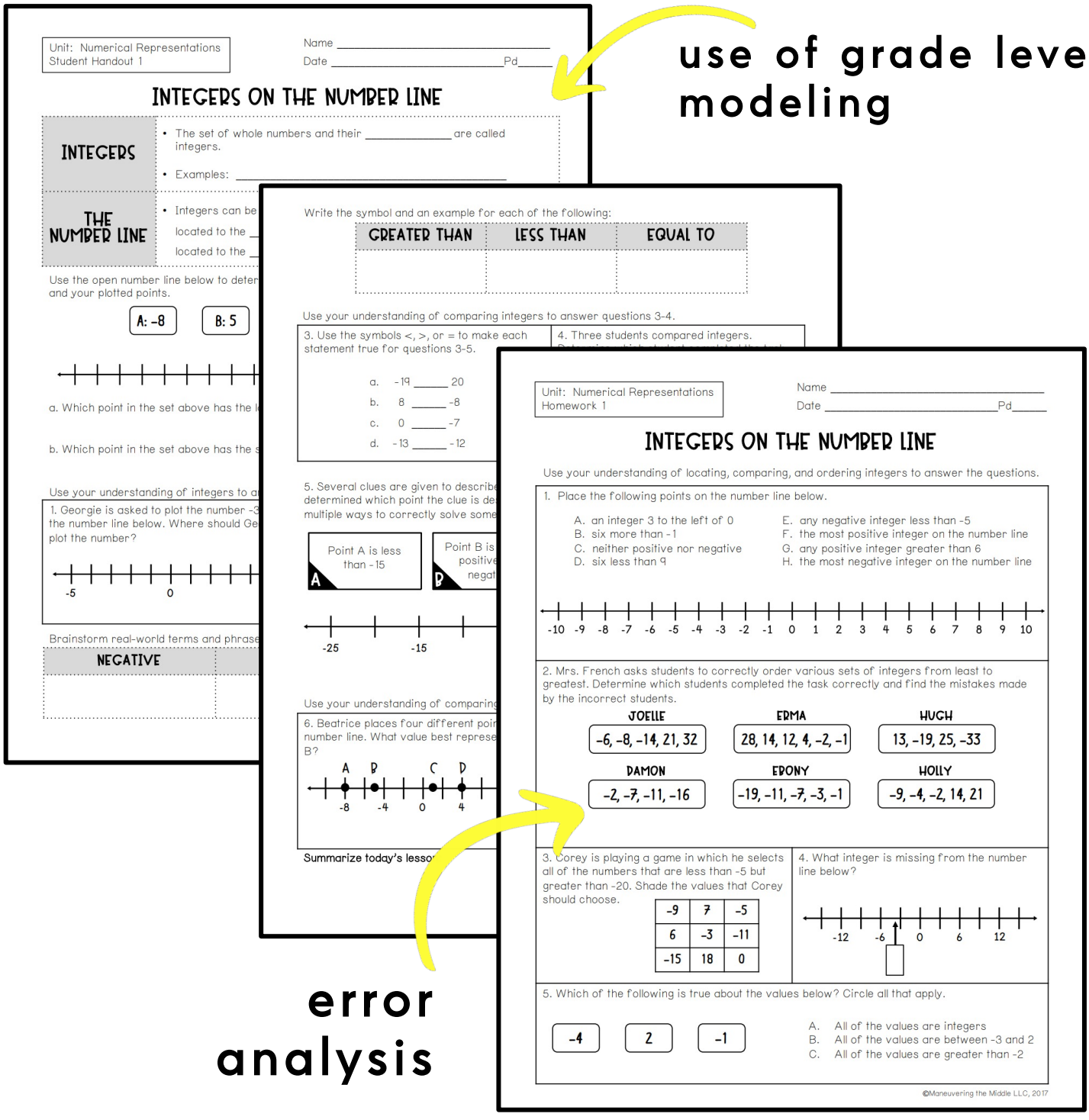
TEKS: 6.2A, 6.2B, 6.2C, 6.2D, 6.2E

student friendly + real-world application

use of grade level modeling



error analysis

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streamline your planning process with unit overviews

NUMERICAL REPRESENTATIONS
OVERVIEW

READINESS STANDARDS	SUPPORTING STANDARDS
6.2D Order a set of rational numbers arising from mathematical and real-world contexts.	**6.2A** Classify whole numbers, integers, and rational numbers using a visual representation, such as a Venn diagram, to describe relationships between sets of numbers. **6.2B** Identify a number, its opposite, and its absolute value. **6.2C** Locate, compare, and order integers and rational numbers using a number line. **6.2E** Extend representations for division to include fraction notation such as a/b represents the same number as $a \div b$ where $b \neq 0$.

BIG IDEAS
- All numbers are organize
- A set of numbers exists th

ESSENTIAL QUESTION
- How are numbers organiz
- What is the relationship b
- What pattern do you notic
- What is the relationship b

✓ key vocabulary

✓ vertical alignment

sample pacing calendar

NUMERICAL REPRESENTATIONS
PACING GUIDE

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Integers on the Number Line Student Handout 1 Homework 1	Comparing and Ordering Decimals Student Handout 2 Homework 2	Comparing and Ordering Fractions	Ordering Rational Numbers	Classifying Rational Numbers
DAY 6	**DAY 7**			
Ordering Rational Numbers Quiz Quiz 1	Absolute Value Student Handout 6 Homework 6			

teaching ideas

NUMERICAL REPRESENTATIONS
OVERVIEW

TOPIC	TEACHING TIPS
Integers on the Number Line	• Consider introducing both a horizontal and a vertical number line. Seeing the vertical number line (which is more intuitive to how we count) next to a horizontal vertical line may help students to make connections and provides another visual model. • Consider having students build a number line as a class or in small groups. You can do this with a line of string or yarn and by folding cardstock in half. The fold of the cardstock will rest on the number line. Begin with zero and then discuss where different numbers belong. This concept can continue throughout the unit by including additional number representations.
Ordering Decimals and Percents	• Use masking tape (or chalk if outdoors) to mark off a number line on the floor from -10 to 10. Assign five students a number and have them order themselves without talking, allowing the class to help. Repeat and make the numbers increasingly more difficult.
Ordering Rational Numbers	• Use the number line from the day before, repeat with a slightly different variation. Use three different colored papers or markers for: fractions, decimals, and percents. Teach students to order like forms of numbers by passing out the cards, then asking students to order themselves on the number line.
Absolute Value	• At the beginning of class, play a game of Simon Says. In this math twist, ask students to do the opposite of what you say. Then, give them a number and ask for the opposite of the number. Ask students to keep that in mind as you continue to learn about absolute value. By the end, students should be able to differentiate between the opposite of a number and its absolute value.
Classifying Rational Numbers	• Begin class by asking students to classify themselves based on characteristics. For example: has siblings, plays an instrument, plays a sport, eye color. Give students a minute to group up based on characteristics. Then, ask students to share the characteristics of the group. Question students as to whether or not other students from outside the group could also be included.

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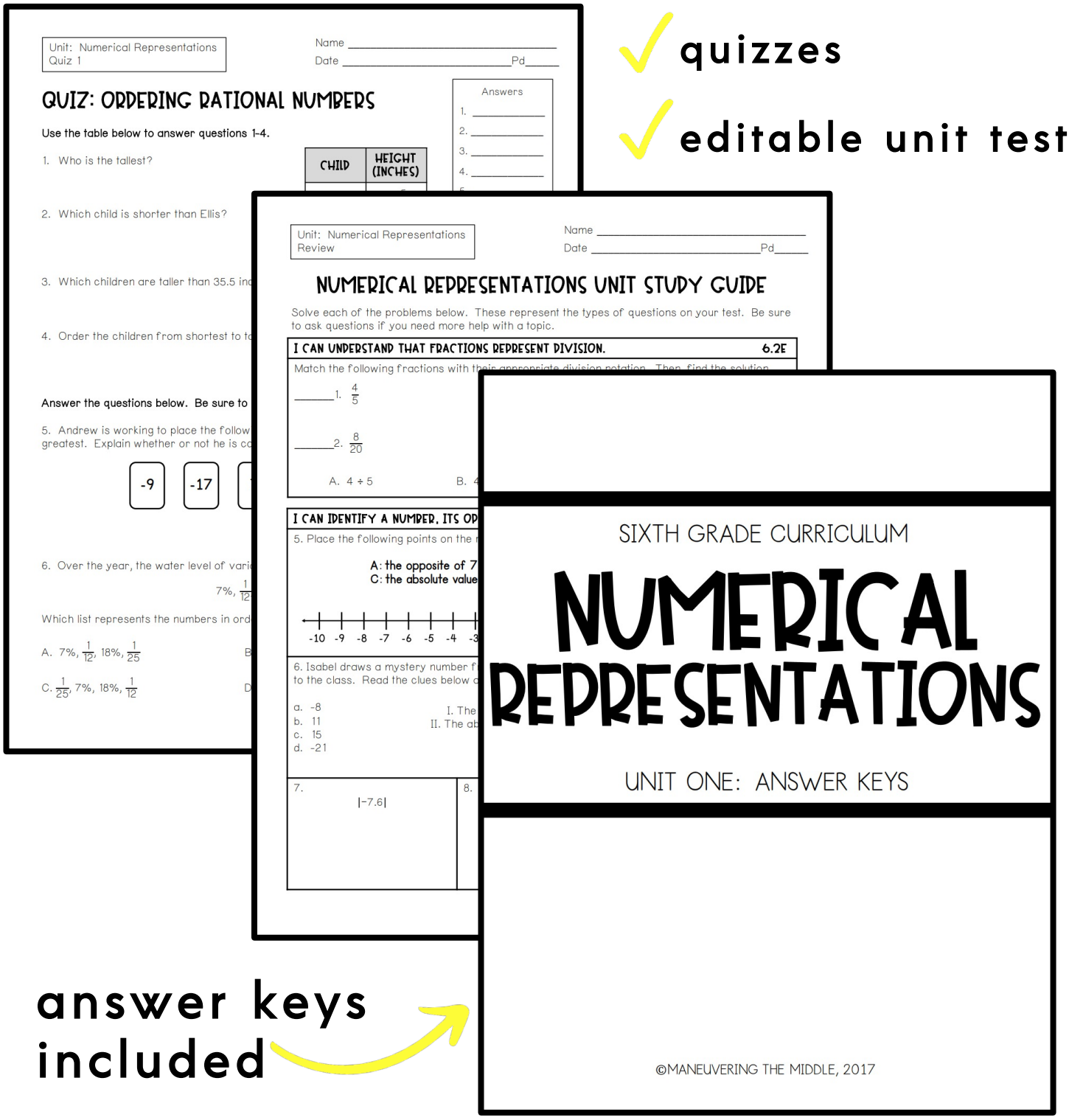
unit study guide + assessments



- ✓ quizzes
- ✓ editable unit test

answer keys included

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