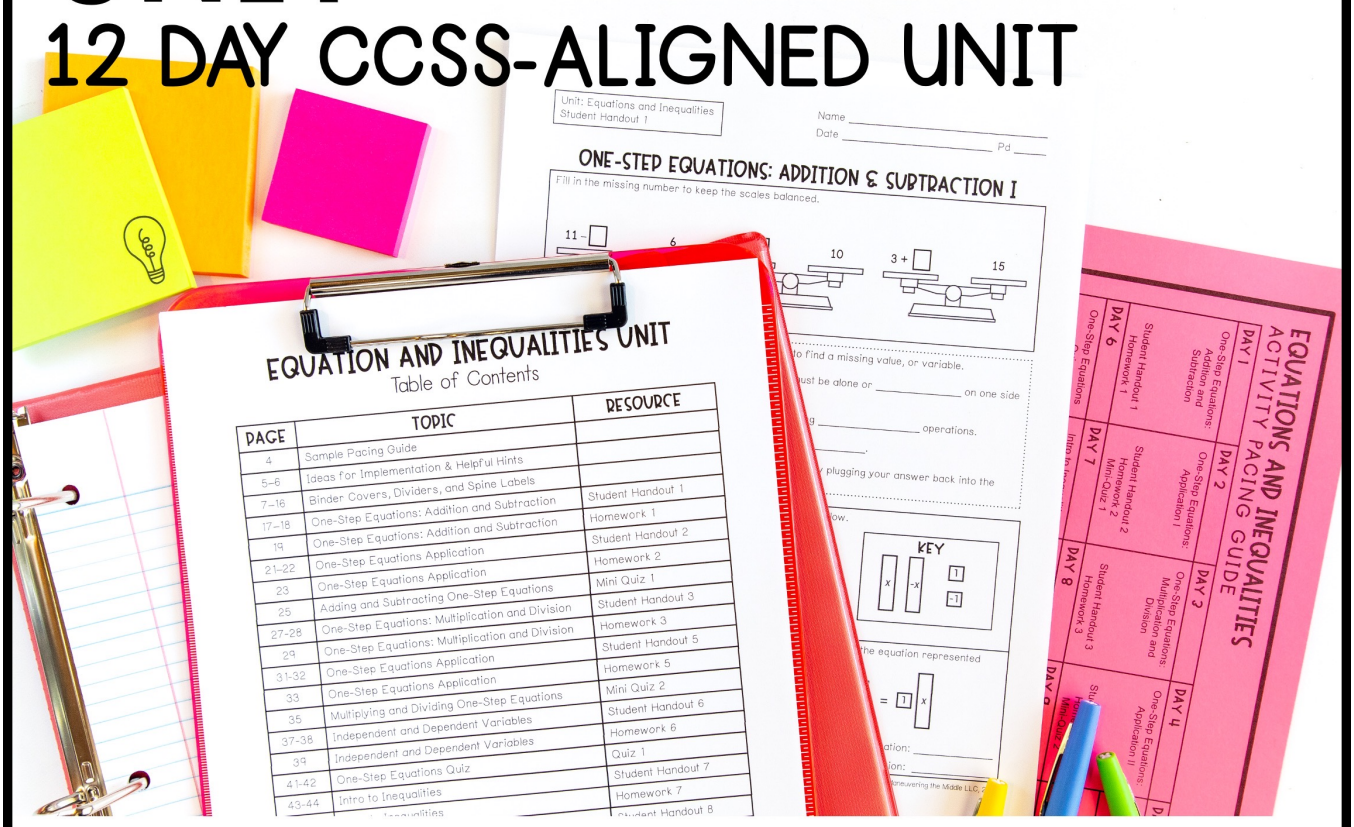
learning focus:

- ✓ model, write, and solve one-step equations and inequalities
- ✓ determine if a given value makes an equation or inequality true
- ✓ represent solutions for equations and inequalities on a number line

EQUATIONS & INEQUALITIES UNIT

6th GRADE

12 DAY CCSS-ALIGNED UNIT



A MANEUVERING THE MIDDLE ® RESOURCE

EQUATIONS & INEQUALITIES

6th GRADE

a 12 day CCSS-aligned unit

CCSS: 6.EE.5, 6.EE.6, 6.EE.7, 6.EE.8, 6.EE.9

ready-to-go, scaffolded student materials

EQUATIONS AND INEQUALITIES UNIT

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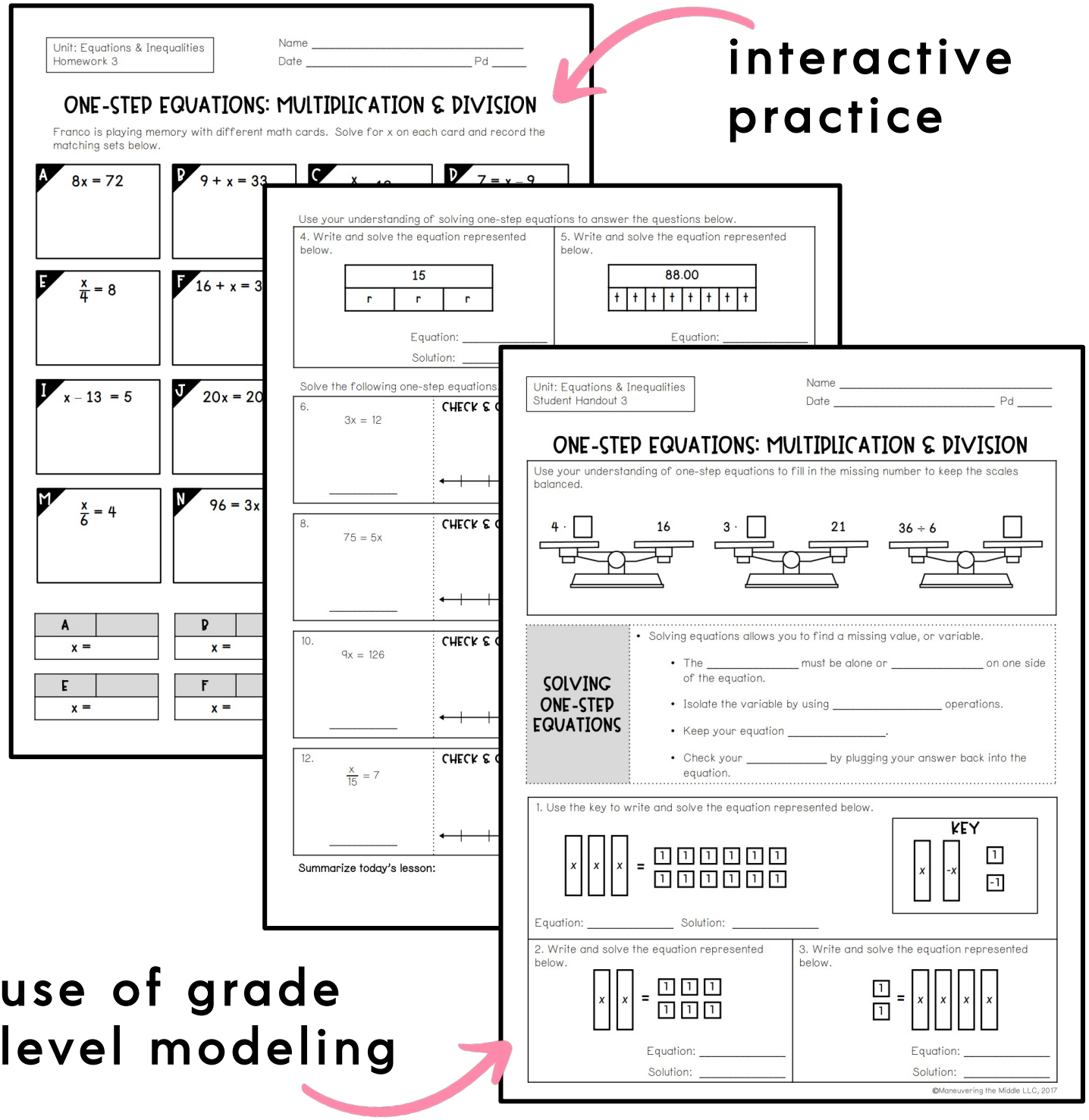
student friendly + real-world application

interactive practice

use of grade level modeling



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streamline your planning process with unit overviews

EQUATIONS AND INEQUALITIES
OVERVIEW

CCSS

STANDARDS

6.EE.5 Understand solving an equation or an inequality as a process of answering a question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.

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.

6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p, q, and x are all nonnegative rational numbers.

6.EE.8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or a condition in the real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.

6.EE.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the other quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.

BIG IDEAS

- Equations are two mathema
- An inequality represents tw
- An inequality has infinitely n
- An equation has one solutic

ESSENTIAL QUESTIO

- What process can you use t
- How does a graph on a nun
- How are independent and d
- What patterns do you notice

- ✓ key vocabulary
- ✓ vertical alignment

sample pacing calendar

EQUATIONS AND INEQUALITIES
PACING GUIDE

CCSS

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
One-Step Equations: Addition and Subtraction Student Handout 1 Homework 1	One-Step Equations: Application I Student Handout 2 Homework 2 Mini-Quiz 1	One-Step Equations: Multiplication and Division Student Handout 3	One-Step Equations: Application II Student Handout 4 Homework 4	Independent and Dependent Variables Student Handout 5
DAY 6	**DAY 7**			
One-Step Equations Quiz Quiz 1	Intro to Inequalities Student Handout 6 Homework 6			
DAY 11	**NOTES**			
Equations and Inequalities Unit Test Unit Test				

EQUATIONS AND INEQUALITIES
PACING GUIDE

CCSS

TOPIC	TEACHING TIPS
Combining Like Terms	• Write several different types of terms on the board. Ask two students to come up to the board with a fly swatter. When you call out a term, the first student to "swat" a like term wins the point for the team. Continue with other students. Keep score if your students can handle it. ☺
One-Step Equations	• Start by displaying a very long and complex equation on the board. Explain that today you are setting the foundation for these types of equations. Then, require students to show their steps as they solve. This will come in handy when rational numbers are included in a few days. • White board races, markers, and graffiti actives are all great ideas to spice up practice. Search www.maneuveringthemiddle.com for the post called "Turn Any Worksheet into an Activity" for more details and ideas.
Independent and Dependent Variables	• This can be a difficult concept, even with Algebra 1 students. There are various acronyms and ideas in science, several teachers use "DRY MIX" for dependent reactive y-axis and measured independent x-axis. I found it helpful to make that connection in math. • Students also should be able to notice that the x-value in a table is always on the left or the top, and the y-value is always on the right or the bottom.
One-Step Inequalities	• Typically inequalities are more difficult because of the vocabulary required. Though it is helpful for them to use a chart or notes, it can be beneficial to have them think about the context of the problem using these three questions: 1. Can it be equal to the value? 2. Can it be more than the value? 3. Can it be less than the value? • It is also always helpful to relate it back to something they are very comfortable with (e.g. money, grades).
Graphing Inequalities	• Once a student has graphed their solution, encourage them to test a number on the number line that is included. Practice substituting a number back into the inequality.

teaching ideas

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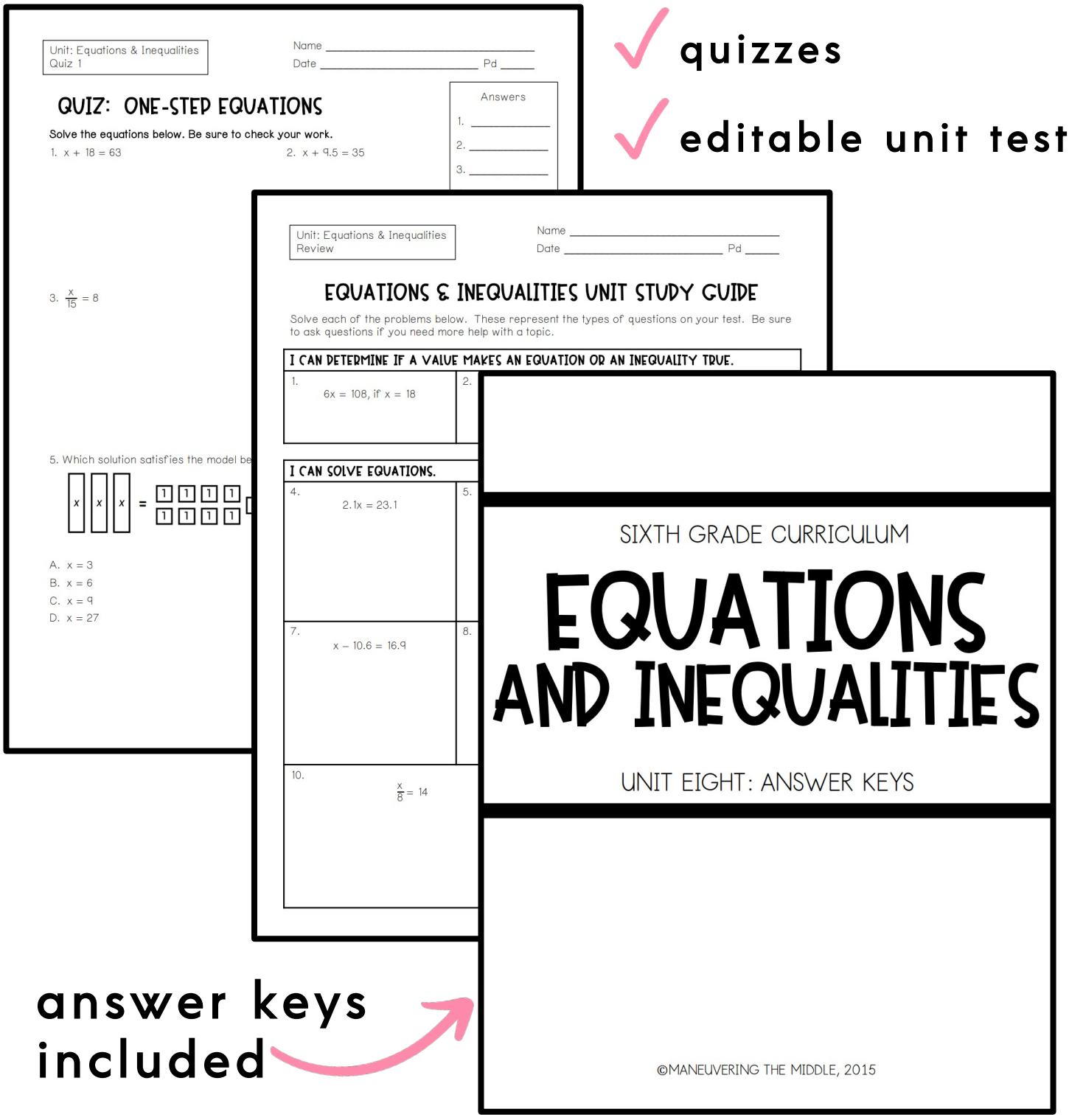
unit study guide + assessments



✓ quizzes

✓ editable unit test

answer keys included

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