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**Practicing for Success: STAAR
Mathematics
Grade 3**

This sample includes the following:

Teacher's Guide pages (8 pages)

- Cover and Table of Contents
- Pacing Plan
- Teacher Notes
- TEKS Correlations

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Practicing for Success



STAAR[®]

Grade

3



Teacher's Guide



UPDATED
for the
STAAR
REDESIGN



Mathematics

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Pacing Plan

The following eight-week pacing plan is designed to provide students with standards-based mathematics practice every day. Lessons in the student book appear in this order and can be used to prepare students in just 30 minutes a day. You can customize this pacing plan according to students' needs.

	Day 1	Day 2	Day 3	Day 4	Day 5
Number and Operations	Compose and Decompose Numbers 3.2(A) & Base Ten 3.2(B)	Number Lines 3.2(C) & Comparisons 3.2(D)	Representing Fractions 3.3(A) & Locating Fractions on a Number Line 3.3(B)	Representing Fractions on a Number Line 3.7(A) & Unit Fractions 3.3(C)	Compose and Decompose Fractions 3.3(D) & Fractions as Pictures 3.3(E)
Number and Operations	Equivalent Fractions 3.3(F) & Equivalent Fraction Models 3.3(G)	Comparing Fractions 3.3(H) & Problem Solving 3.4(A)	Rounding 3.4(B) & Money 3.4(C)	Arrays 3.4(D) & Representing Multiplication 3.4(E)	Multiplication Facts 3.4(F)
Number and Operations	Multiplying Whole Numbers 3.4(G)	Equal Shares 3.4(H)	Odd or Even? 3.4(I)	Quotients 3.4(J)	One- and Two-Step Equations 3.4(K)
Algebraic Reasoning	Addition and Subtraction 3.5(A)	Multiplication and Division 3.5(B)	Multiplication Expressions 3.5(C)	Finding the Unknown 3.5(D)	Real-World Relationships 3.5(E)
Geometry and Measurement	Classifying Figures 3.6(A)	Quadrilaterals 3.6(B)	Areas of Rectangles 3.6(C)	Areas of Nonrectangles 3.6(D)	Decomposing Figures 3.6(E)
Geometry and Measurement	Perimeter 3.7(B)	Time 3.7(C)	Measurement 3.7(D)	Using Tools to Measure 3.7(E)	Representing Data 3.8(A)
Data Analysis & Personal Financial Literacy	Using Data to Solve Problems 3.8(B)	Labor and Income 3.9(A)	Resources and Cost 3.9(B)	Credit 3.9(D)	Savings Plan 3.9(E)
Practice Tests	Test 1	Test 1 Review	Test 2	Test 2 Review	Celebration

Compose and Decompose Numbers

This lesson guides students as they work on pages 6–7.



Teacher Tip

Remind students that composing and decomposing numbers can be done in many different ways. There is not only one correct answer.

Explain what a hundreds grid, a tens rod, and a ones cube are. Remind students how they are used to represent numbers. For additional practice, have students represent 274. Students should use 2 hundreds grids, 7 tens rods, and 4 ones cubes.




Answers for page 7—1. A; 2. D; 3. B; 4. C; 5. C; 6. A

Let's Practice!


Break it Down

Example 1: Write 352 using pictures.


First, we can use hundreds grids to represent the 300.



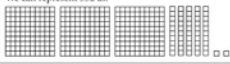
Next, we can use 5 tens rods to represent the 50.



To represent the 2 ones, we could use blocks.



We can represent 352 as:



Example 2: Write 352 in expanded form.

There are 3 hundreds in 352, so we can write 300.

There are 5 tens in 352, so we can write 50.

There are 2 ones in 352, so we can write 2.

In expanded form, 352 can be written as $300 + 50 + 2$.

What kind of picture can you draw? What would you use to represent the 3? What about the 5? What would represent the 2?

How do you write a number in expanded form?

Remind students how to write numbers in expanded form. For additional practice, have students write 274 in expanded form. Students should write $200 + 70 + 4$.

Base Ten

This lesson guides students as they work on pages 8–9.



Teacher Tip

Review place value with students before going through the lesson. Have place value charts available to support students.

Explain to students that the place value to the left of the current place value is 10 times greater. For additional practice, have students explain how the digits in the ten thousands and hundred thousands places are related in the number 664,397. Students should explain that the digit in the hundred thousands place is 10 times greater than the number in the ten thousands place.

Let's Practice!

How are Numbers Related?

What is the relationship between the thousands place and the hundreds place in the number 5,523?

The number in the hundreds place is a 5. There are 5 hundreds (500) in the number.

The number in the thousands place is also a 5, so this represents 5,000 in the number.

Because 5,000 is ten times greater than 500, we know that the number in the thousands place is ten times the number in the hundreds place.

What number is in the thousands place? What number is in the hundreds place?



Answers for page 9—1. C; 2. B; 3. C; 4. A; 5. B; 6. C

TEKS Correlations

The strategies in the lessons are written to align with each standard as outlined by the Texas Education Agency. Each lesson strategy corresponds with a skill to be assessed in the STAAR tests.

Lesson Title	Standard	Description
Compose and Decompose Numbers	3.2(A)	Compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate.
Base Ten	3.2(B)	Describe the mathematical relationships found in the base-ten place value system through the hundred thousands place.
Number Lines	3.2(C)	Represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers to round whole numbers.
Comparisons	3.2(D)	Compare and order whole numbers up to 100,000 and represent comparisons using the symbols $<$, $>$, or $=$.
Representing Fractions	3.3(A)	Represent fractions greater than zero and less than or equal to one with denominators of two, three, four, six, and eight using concrete objects and pictorial models, including strip diagrams and number lines.
Locating Fractions on a Number Line	3.3(B)	Determine the corresponding fraction greater than zero and less than or equal to one with denominators of two, three, four, six, and eight given a specified point on a number line.
Representing Fractions on a Number Line	3.7(A)	Represent fractions of halves, fourths, and eighths as distances from zero on a number line.
Unit Fractions	3.3(C)	Explain that a unit fraction $\frac{1}{b}$ represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero whole number.
Compose and Decompose Fractions	3.3(D)	Compose and decompose a fraction $\frac{a}{b}$ with a numerator greater than zero and less than or equal to b as a sum of parts $\frac{1}{b}$.
Fractions as Pictures	3.3(E)	Solve problems involving partitioning an object or set of objects among two or more recipients using pictorial representations of fractions with denominators of two, three, four, six, and eight.
Equivalent Fractions	3.3(F)	Represent equivalent fractions with denominators of two, three, four, six, and eight using a variety of objects and pictorial models, including number lines.

TEKS Correlations *(cont.)*

Lesson Title	Standard	Description
Equivalent Fraction Models	3.3(G)	Explain that two fractions are equivalent if, and only if, they are both represented by the same point on a number line or represent the same portion of a same size whole for an area model.
Comparing Fractions	3.3(H)	Compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models.
Problem Solving	3.4(A)	Solve with fluency one- and two-step problems, involving addition and subtraction, within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction.
Rounding	3.4(B)	Round to the nearest 10 or 100 or use compatible numbers to estimate solutions to addition and subtraction problems.
Money	3.4(C)	Determine the value of a collection of coins and bills.
Arrays	3.4(D)	Determine the total number of objects when equally-sized groups of objects are combined or arranged in arrays up to 10 by 10.
Representing Multiplication	3.4(E)	Represent multiplication facts by using a variety of approaches, such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting.
Multiplication Facts	3.4(F)	Recall facts to multiply up to 10 by 10 with automaticity and recall corresponding division facts.
Multiplying Whole Numbers	3.4(G)	Use strategies and algorithms, including the standard algorithm, to multiply a two-digit number by a one-digit number. Strategies may include mental math, partial products, and the commutative, associative, and distributive property.
Equal Shares	3.4(H)	Determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally.
Odd or Even?	3.4(I)	Determine if a number is even or odd using divisibility rules.
Quotients	3.4(J)	Determine a quotient using the relationship between multiplication and division.
One- and Two-Step Equations	3.4(K)	Solve one-step and two-step problems involving multiplication and division within 100 using strategies based on objects, pictorial models, including arrays, area models, and equal groups; properties of operations; or recall of facts.

TEKS Correlations *(cont.)*

Lesson Title	Standard	Description
Addition and Subtraction	3.5(A)	Represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations.
Multiplication and Division	3.5(B)	Represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations.
Multiplication Expressions	3.5(C)	Describe a multiplication expression as a comparison such as 3×24 represents 3 times as much as 24.
Finding the Unknown	3.5(D)	Determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product.
Real-World Relationships	3.5(E)	Represent real-world relationships using number pairs in a table and verbal descriptions.
Classifying Figures	3.6(A)	Classify and sort two- and three-dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes based on attributes using formal geometric language.
Quadrilaterals	3.6(B)	Use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.
Area of Rectangles	3.6(C)	Determine the area of rectangles with whole-number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row.
Area of Nonrectangles	3.6(D)	Decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area.
Decomposing Figures	3.6(E)	Decompose two congruent two-dimensional figures into parts with equal areas and express the area of each part as a unit fraction of the whole and recognize that equal shares of identical wholes need not have the same shape.
Perimeter	3.7(B)	Determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in a problem.

TEKS Correlations *(cont.)*

Lesson Title	Standard	Description
Time	3.7(C)	Determine the solutions to problems, involving addition and subtraction, of time intervals in minutes using pictorial models or tools, such as a 15-minute event plus a 30-minute event equals 45 minutes.
Measurement	3.7(D)	Determine when it is appropriate to use measurements of liquid volume (capacity) or weight.
Using Tools to Measure	3.7(E)	Determine liquid volume (capacity) or weight using appropriate units and tools.
Representing Data	3.8(A)	Summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals.
Using Data to Solve Problems	3.8(B)	Solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals.
Labor and Income	3.9(A)	Explain the connection between human capital/labor and income.
Resources and Cost	3.9(B)	Describe the relationship between the availability or scarcity of resources and how that impacts cost.
Credit	3.9(D)	Explain that credit is used when wants or needs exceed the ability to pay and that it is the borrower's responsibility to pay it back to the lender, usually with interest.
Savings Plan	3.9(E)	List reasons to save and explain the benefit of a savings plan, including for college.