

May CCRS 2025

Federal Allocation Updates

Bluebonnet Learning Math: Deep Dive

Bluebonnet Learning Math Deep Dive

Aligned to the TEKS and ELPS with Student Learning Research

Materials Not Aligned with Research

Stand-alone scope and sequence and modules

Isolated practice of skills by standard, at **one point** in the year

Prioritize **procedural skill and fluency** at expense of strong Tier 1 instruction

Below grade-level tasks grounded in remediation

Problems requiring **one word or numerical answer** without justification

Materials Designed Based on Research

Strategic and **coherent modules and lessons sequenced** to build upon learning within modules and across grades

Concentrates time and effort on going deep on the **most important** topics for the grade level

Balances **conceptual understanding, procedural skill and fluency, and application**

All students working on **grade-level tasks**

Provides **multiple opportunities for practice, discussion, representation, and writing**

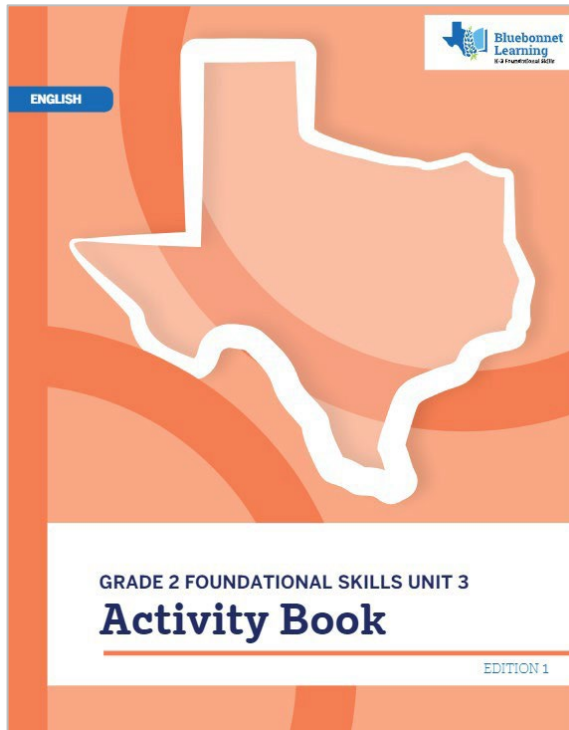
Bluebonnet Learning K–5 Math

Pre-Test

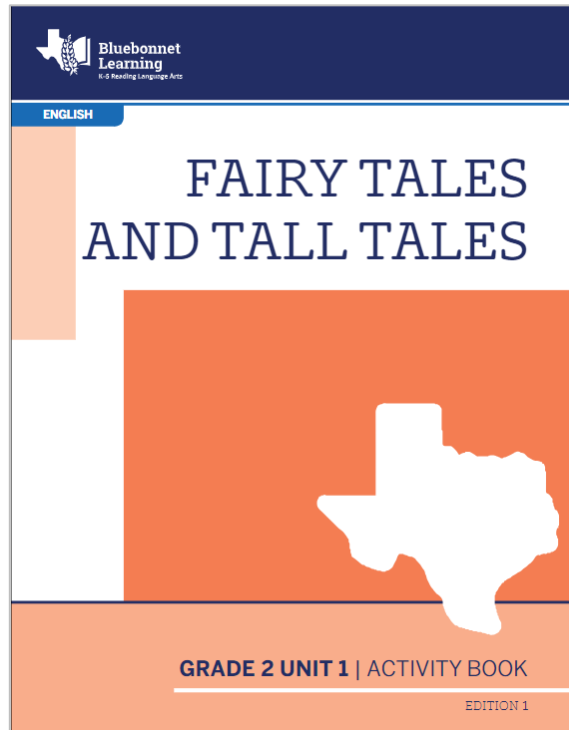
- How are **modules, topics, and lessons** related in the Bluebonnet Learning K-5 Math materials?
- What are the **four components** of a Bluebonnet Learning K-5 Math lesson?
- What are the purposes of the **three student books** in K-5 Math?

Bluebonnet Learning Instructional Materials

Reading Language Arts (RLA)

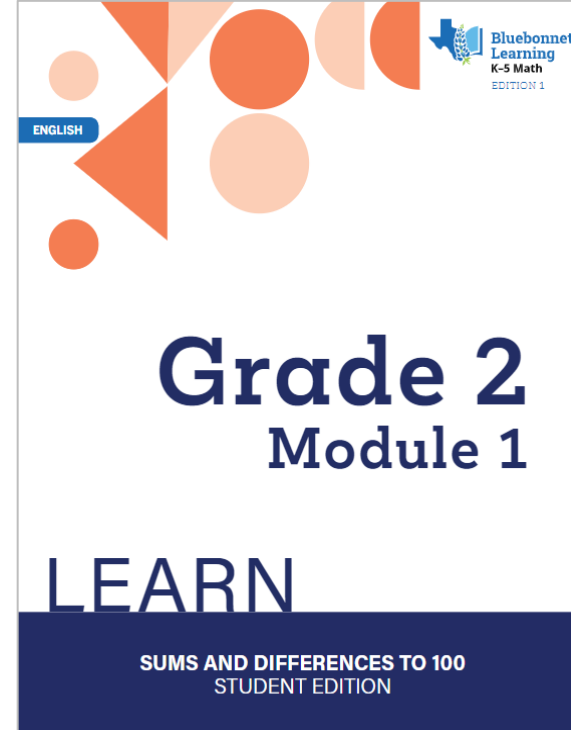


K–3 Foundational Skills

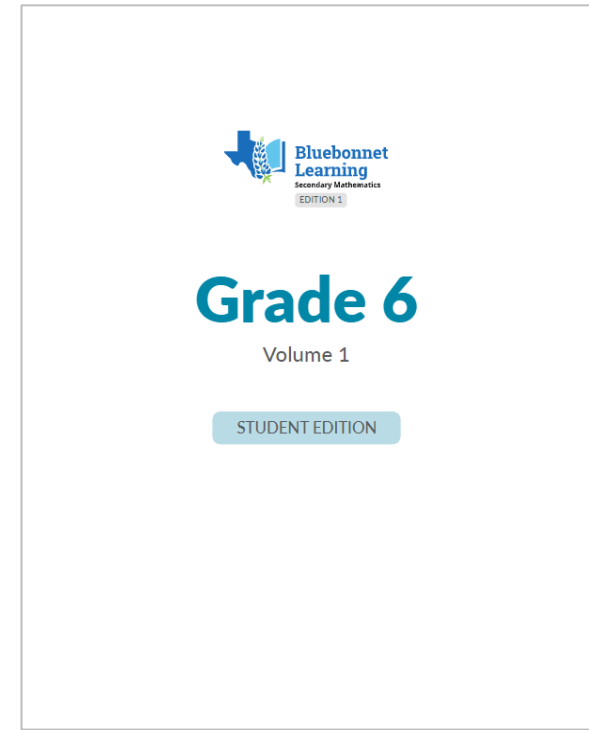


K–5 RLA Knowledge

Mathematics



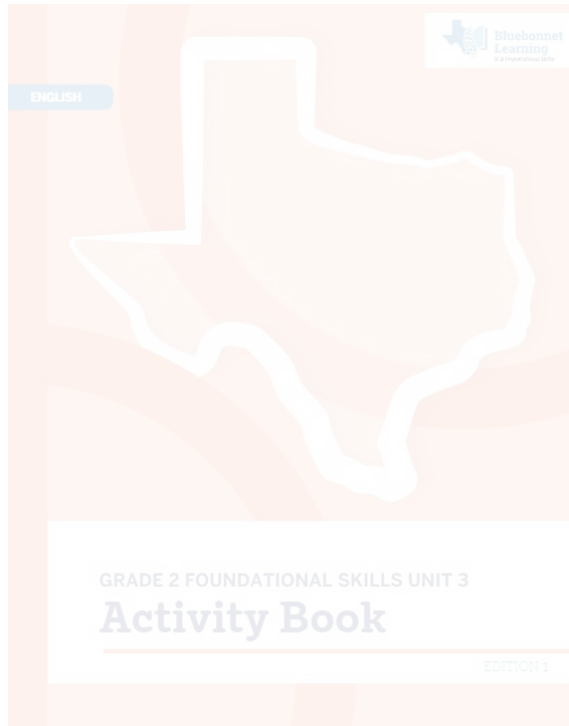
K–5 Math



Secondary Mathematics

Bluebonnet Learning Instructional Materials

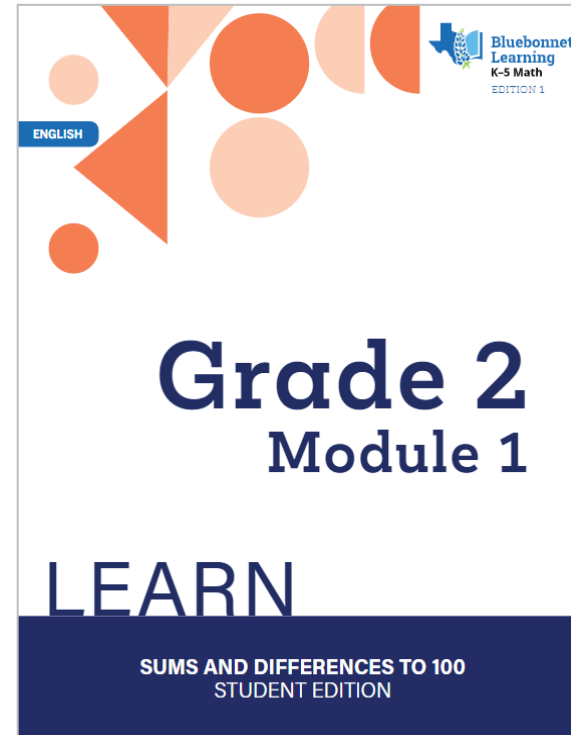
Reading Language Arts (RLA)



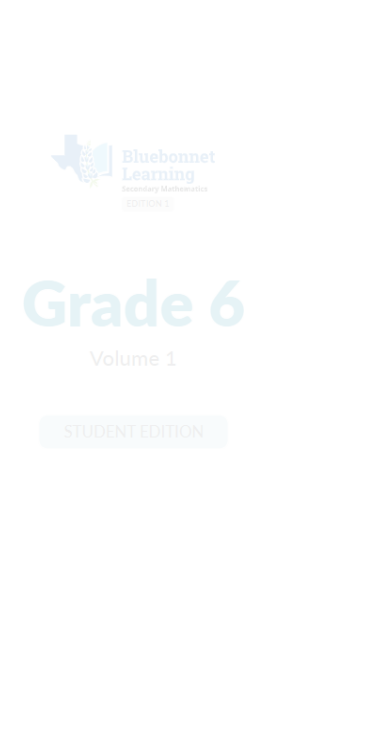
K–3 Foundational Skills



K–5 RLA Knowledge




K–5 Math



Secondary Mathematics

Bluebonnet Learning K–5 Math Progression of Mathematical Concepts



Bluebonnet Learning
K-5 Math
EDITION 1

ENC

The scope and sequences changed from 180 days to 165 days.

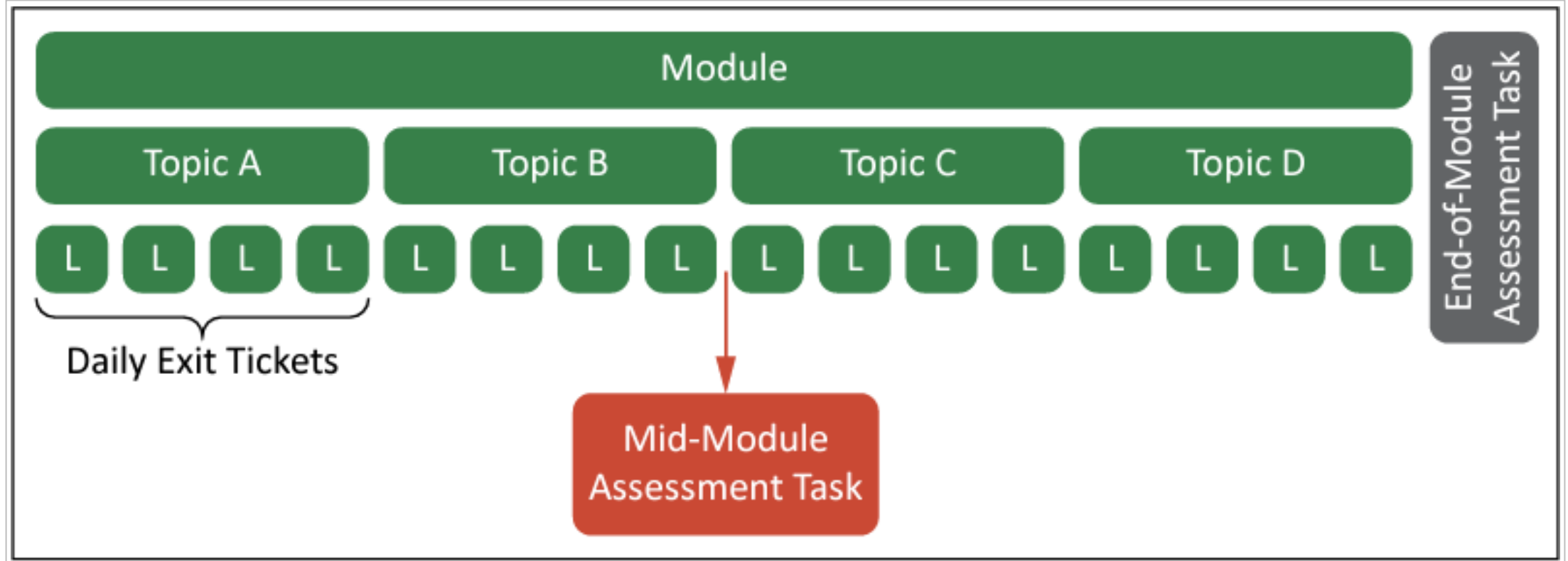
Grade K Course Guide

TEACHER EDITION

| | Kindergarten | Grade 1 | Grade 2 | Grade 3 | Grade 4 | Grade 5 | |
|---------------|---|--|---|---|--|---|--|
| 1st TRIMESTER | M1: Numbers to 10 (41 days) | M1: Sums and Differences to 10 (43 days) | M1: Sums and Differences to 100 (9 days) | M1: Properties of Multiplication and Division and Solving Problems with Units of 2–5 and 10 (22 days) | M1: Place Value, Rounding, and Algorithms for Addition and Subtraction (23 days) | M1: Place Value and Decimals (19 days) | 1st QUARTER |
| | | | M2: Addition and Subtraction of Length Units (11 days) | | | M2: Multi-Digit Whole Number and Decimal Operations (37 days) | |
| | | | M3: Place Value, Counting, and Comparison of Numbers to 1,200 (22 days) | M2: Place Value and Problem Solving with Units of Measure (31 days) | M2: Unit Conversions and Problem Solving with Metric Measurement (10 days) | | |
| 2nd TRIMESTER | M2: Two-Dimensional and Three-Dimensional Shapes (10 days) | M2: Introduction to Place Value Through Addition and Subtraction Within 20 (33 days) | M4: Addition and Subtraction Within 200 with Word Problems to 100 (30 days) | M3: Multiplication and Division with Units of 0, 1, 6–9, and Multiples of 10 (26 days) | M3: Multi-Digit Multiplication and Division (38 days) | M3: Addition and Subtraction of Fractions (18 days) | 2nd QUARTER |
| | M3: Comparison of Length, Weight, Capacity, and Numbers to 10 (33 days) | | | | M4: Angle Measure and Plane Figures (20 days) | | |
| | 3rd TRIMESTER <td>M4: Number Pairs, Addition and Subtraction to 10 (44 days)</td> <td>M3: Ordering and Comparing Length Measurements as Numbers (13 days)</td> <td>M5: Addition and Subtraction Within 1,000 with Word Problems Within 1,000 (23 days)</td> <td>M4: Multiplication and Area (10 days)</td> <td rowspan="2">M5: Fraction Equivalence, Ordering, and Operations (35 days)</td> <td>M4: Multiplication and Division of Fractions (30 days)</td> <td rowspan="2">3rd QUARTER</td> | M4: Number Pairs, Addition and Subtraction to 10 (44 days) | M3: Ordering and Comparing Length Measurements as Numbers (13 days) | M5: Addition and Subtraction Within 1,000 with Word Problems Within 1,000 (23 days) | M4: Multiplication and Area (10 days) | M5: Fraction Equivalence, Ordering, and Operations (35 days) | M4: Multiplication and Division of Fractions (30 days) |
| | | M4: Place Value, Comparison, Addition and Subtraction to 40 (23 days) | M6: Foundations of Multiplication, Division, and Area (22 days) | M5: Fractions as Numbers on the Number Line (36 days) | M5: Addition and Multiplication with Volume and Area (23 days) | | |
| 4th TRIMESTER | | M5: Numbers 10–20, Counting to 100, and Understanding Work (31 days) | M5: Identifying, Composing, and Partitioning Shapes (18 days) | M7: Problem Solving with Length, Money, and Data (29 days) | M6: Financial Literacy and Data (17 days) | M6: Introduction to Decimals and Financial Literacy (22 days) | M6: Problem Solving with the Coordinate Plane and Data (38 days) |
| | M6: Analyzing, Comparing, and Composing Shapes (6 days) | M6: Place Value, Comparison, Understanding Income with Addition and Subtraction to 100 (35 days) | M8: Time, Shapes, and Fractions as Equal Parts of Shapes (19 days) | M7: Geometry and Measurement Word Problems (23 days) | M7: Exploring Measurement with Multiplication and Data (17 days) | | |

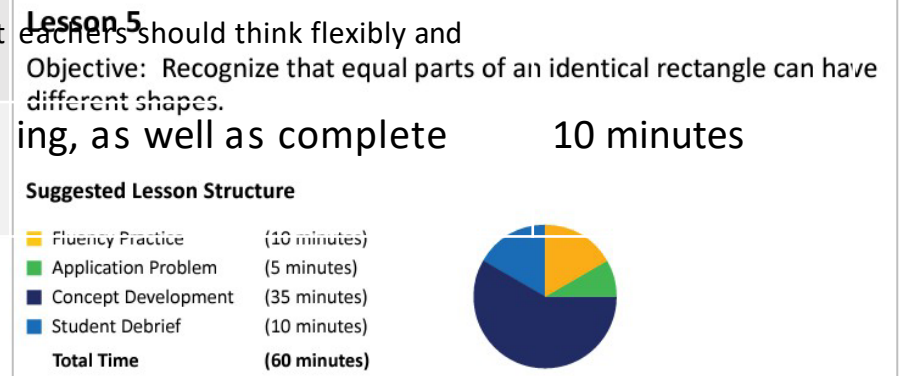
| Key: | | | |
|--------|----------|----------------------------------|-----------|
| Number | Geometry | Number and Geometry, Measurement | Fractions |

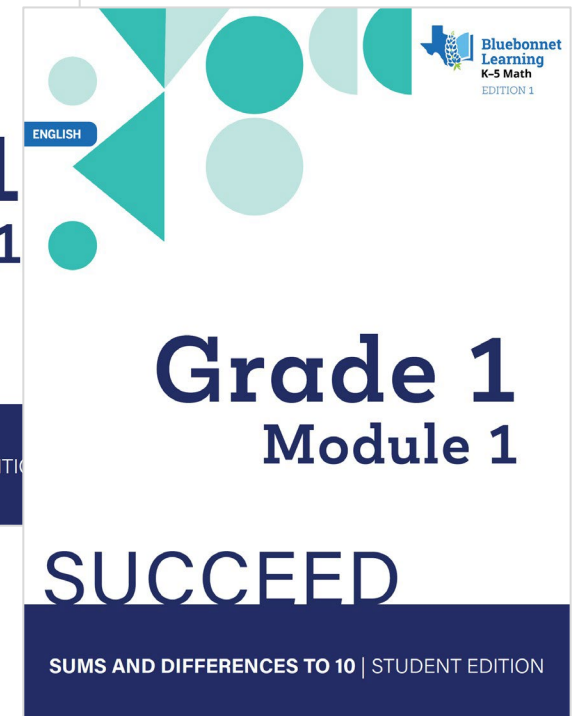
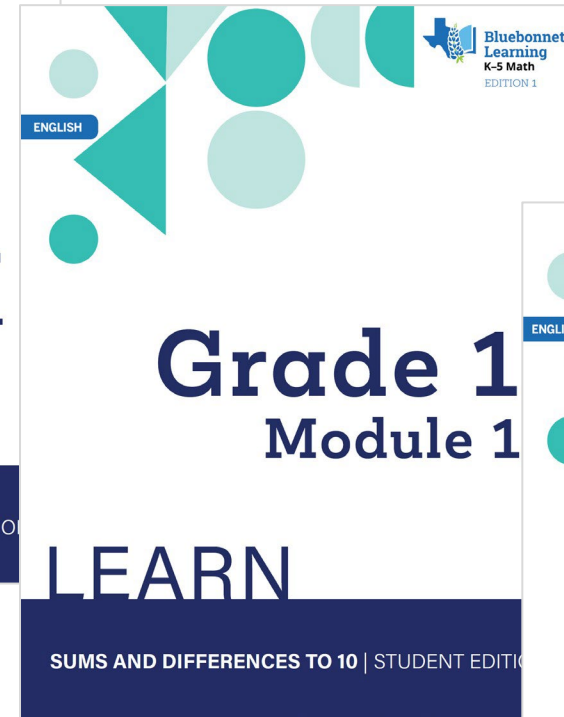
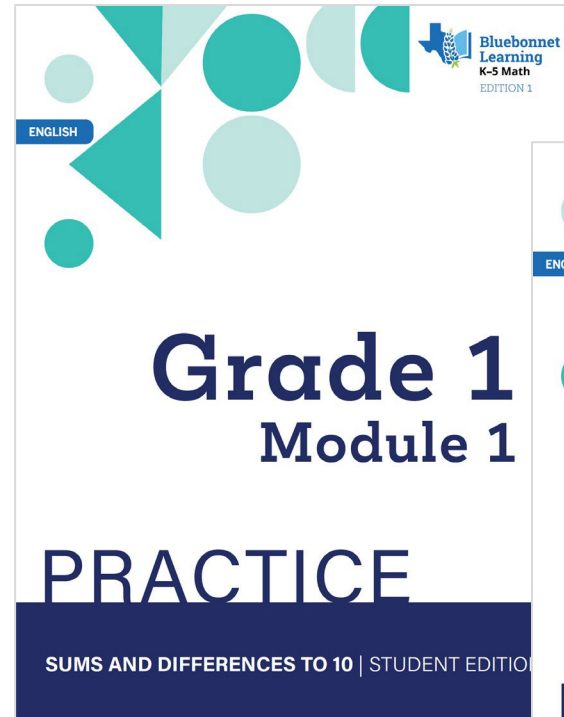
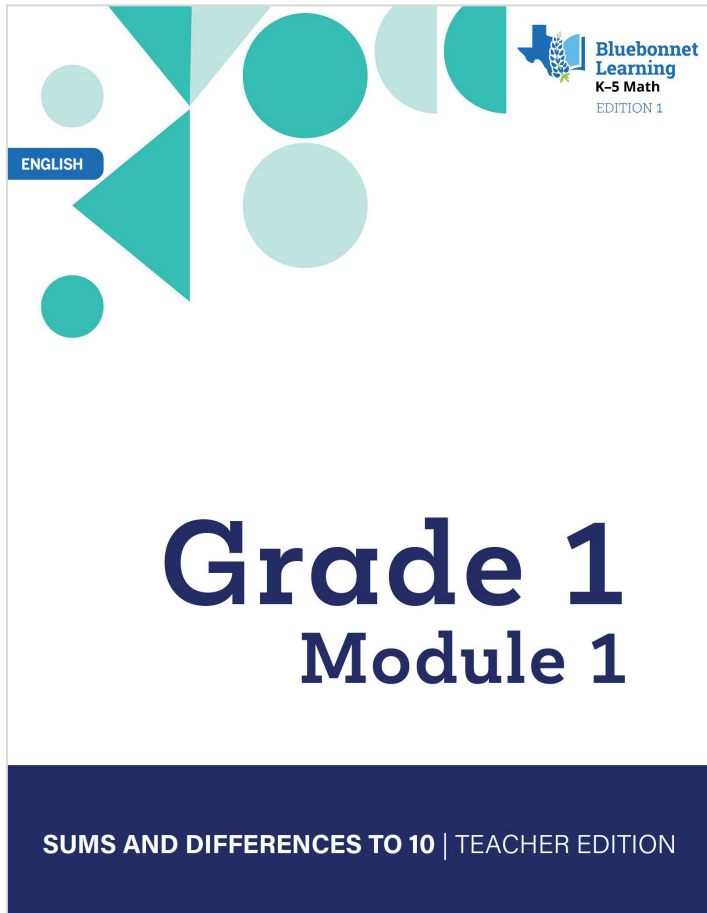
Bluebonnet Learning K–5 Math: Modules, Topics, Lessons, and Assessment




Bluebonnet Learning K–5 Math Lesson Structure

| Lesson Component | Purpose | Approx. Time |
|-----------------------------|---|---------------|
| Fluency Practice | <p>Maintenance: stay sharp on previously learned skills</p> <p>Preparation: targeted practice for the current lesson</p> <p>Anticipation: skills that ensure students are ready for the in-depth work of upcoming lessons</p> | 10 minutes |
| Application Problems | Apply conceptual understanding to make sense of and persevere through new problems | 5 minutes |
| Concept Development | <p>Major portion of instruction, includes time for Problem Set, an opportunity for independent practice</p> <p>(Problem Sets are intentionally crafted from simple to complex, and teachers should think flexibly and adjust the Problem Set based on the needs of their students)</p> | 20-30 minutes |
| Student Debrief | Student reflect on the lesson and analyze new learning, as well as complete the 3-minute Exit Ticket | 10 minutes |





ENGLISH



Bluebonnet Learning
K-5 Math
EDITION 1

Grade 1
Module 1

SUMS AND DIFFERENCES TO 10 | TEACHER EDITION

BLUEBONNET LEARNING K-5 MATH

Module Overview 1 • 1

Grade 1 • Module 1
Sums and Differences to 10

OVERVIEW

In this first module of Grade 1, students make significant progress towards fluency with addition and subtraction of numbers to 10 (1.3D) as they are presented with opportunities intended to advance them from counting all to counting on, which leads many students then to decomposing and composing addends and total amounts.

Topic A continues the work of developing this ability with all the numbers within 10 in joining situations (1.3B, 1.5D), with a special focus on the numbers 6, 7, 8, and 9, since recognizing how much a number needs to make 10 is simpler for most students. Students decompose numbers into two sets, or conceptually subitize (1.2A), in Lessons 1 and 2, and record their decompositions as number bonds.

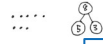
T: How many dots do you see?
S: 8.
T: What two parts do you see?
S: I see 5 and 3.
T: Did you need to count all the dots?
S: No! I could see the top row was a full five, so I just said 6, 7, 8.

In Lesson 3, students see and describe 1 more as + 1. They use the structure of its cardinality (1.2A), just as the student speaking in the above vignette to which they can add one, or count on by one, without recounting. All students to solve addition problems by counting on rather than counting all.

Topic B continues the process of having the students compose and decompose. They describe joining situations (pictured to the right) with number bonds and count on from the first part to totals of 6, 7, 8, 9, and 10 (1.3B, 1.5D, 1.5D). As they represent all the partners of a number, they reflect and see the decompositions, "Look at all these ways to make 8. I can see connections between them."

Through dialogue, they engage in self-invitation by the joining situation and the invited by the number bonds. Express model both the stories and the bonds, the decompositions (1.3B, 1.5D).

The work with story problems in Topic to real-world situations. Students advance change unknown problems such as:



Module Overview

BLUEBONNET LEARNING K-5 MATH

Module Overview 1 • 1

Terminology

A Spanish cognate is included when the term has a similar meaning and spelling in English. Not every term in this module has a Spanish cognate.

New or Recently Introduced Terms

- **Addend:** one of the numbers being added


addends

$2 + 1$

addends

$8 = 3 + 3 + 2$

- **Count on:** count up from one part to the total



Fill in...

$6, 7$

- **Doubles (Doubles):** an addition number sentence or expression
- **Doubles plus 1:** an addition number sentence or expression

doubles

$2 + 2 = \square$

doubles

$2 + 3 = \square$

doubles

$3 + 3 = \square$

doubles

$3 + 4 = \square$

doubles

$4 + 4 = \square$

doubles

$4 + 5 = \square$

- **Expression (Expression):** a number sentence without an equal sign

$2 + 1$

$5 - 3$

Terminology

BLUEBONNET LEARNING K-5 MATH

Module Overview 1 • 1

| Topic | TEKS | Student Misconception | How to Bridge to a Better Understanding |
|----------------|--------------|--|--|
| Topics C and H | 1.3B 1.5D | Students scan word problems for numbers and key words to determine which operation to use (e.g., "More means add. I find the numbers in the story problem and add them together"). | Notice how concrete and pictorial models are used to represent a story problem. Make the connection between the models and the story in the problem even clearer. For example, you can ask the following: <ul style="list-style-type: none">• What does the 4 tell us about in the story? The 2? The 6?• What are we looking for? A part or a total?• What is happening in this story? What symbol can we use to show what is happening? |
| Topic D | 1.3D | Students rely on counting all (e.g., "I have to count from 1"). | Make 5-group cards available at centers. To support counting on, have Partner A show a numeral. Have Partner B show a number of dots and count on to find the total (e.g., "Sixty, 7, 8, 9.") |

Misconceptions

BLUEBONNET LEARNING K-5 MATH

Lesson 1 1 • 1

Lesson 1

Objective: Analyze and describe embedded numbers (to 10) using 5-groups and number bonds.

Suggested Lesson Structure

Fluency Practice (16 minutes)

Application Problem (7 minutes)

Concept Development (30 minutes)

Student Debrief (7 minutes)

Total Time (60 minutes)


Fluency Practice (16 minutes)

Math Fingers Flash 1.2A (3 minutes)

Sprint: Count Dots 1.2A (13 minutes)


Math Fingers Flash (3 minutes)

Note: Visually recognizing (conceptually subitizing) sets of objects, particularly fingers, allows students to move toward seeing two sets of objects together (conceptually subitizing), thus preparing them for the fluency objective of Grade 1.



Teacher flashes fingers the Math Way for numbers 0–10. When using a document camera, teacher begins by raising the left pinky and ends with the right pinky as shown above. When facing the students, teacher's raised fingers should begin with the right pinky and end with the left pinky as seen below. At all times, students see fingers move from left to right.

T: I'm going to hold up some fingers the Math Way and then hide them. Look carefully and say the number you saw when I snap.
T: (Flash 3 fingers for 2–3 seconds and then hide them.) Ready (snap).
S: 3.
Repeat process for numbers within 5.
T: (Flash 7 fingers.) Ready (snap).



NOTES ON FLUENCY PRACTICE:

Think of Fluency Practice as having three goals:

1. Maintenance (staying sharp on previously learned skills).
2. Preparation (targeted practice for the current lesson).
3. Anticipation (skills that ensure that students are ready for the in-depth work of upcoming lessons).

Example of anticipatory fluency: Students must be secure in counting to 10 long before they can be expected to decompose 10.

Detailed Lessons

Bluebonnet Learning K–5 Math (3/3)

ENGLISH

Grade 1

Module 1

PRACTICE

SUMS AND DIFFERENCES TO 10 | STUDENT EDITION

Fluency Practice

ENGLISH

Grade 1

Module 1

LEARN

SUMS AND DIFFERENCES TO 10 | STUDENT EDITION

Problem Solving and Problem Sets

ENGLISH

Grade 1

Module 1

SUCCEED

SUMS AND DIFFERENCES TO 10 | STUDENT EDITION

Homework and Practice

BLUEBONNET LEARNING K-5 MATH

Lesson 1 Sprint 1x1

A

Name _____ Date _____

Number Connect

*Write the number of dots. Find 1 or 2 groups that make finding the total number of dots more efficient!

| | |
|-----|-----|
| 1. | 16. |
| 2. | 17. |
| 3. | 18. |
| 4. | 19. |
| 5. | 20. |
| 6. | 21. |
| 7. | 22. |
| 8. | 23. |
| 9. | 24. |
| 10. | 25. |
| 11. | 26. |
| 12. | 27. |
| 13. | 28. |
| 14. | 29. |
| 15. | 30. |

Lesson 1A

Analyze and describe embedded numbers in 10 using 5 groups and number bonds.

BLUEBONNET LEARNING K-5 MATH

Lesson 2 Fluency Template 1x1

Name _____ Date _____

Number Bond Dash!

Do as many as you can in 90 seconds. Write the number of bonds you finished here:

| | |
|-----|-----|
| 1. | 6. |
| 2. | 7. |
| 3. | 8. |
| 4. | 9. |
| 5. | 10. |
| 11. | 12. |
| 13. | 14. |
| 15. | 16. |
| 17. | 18. |
| 19. | 20. |
| 21. | 22. |
| 23. | 24. |
| 25. | 26. |
| 27. | 28. |
| 29. | 30. |

Number bond dash 5

Lesson 2

Reason about embedded numbers in varied configurations using number bonds.

BLUEBONNET LEARNING K-5 MATH

Lesson 3 Application Problem 1x1

Read

Bella spilled some pencils on the carpet. Geno came over to help her pick them up. Geno found 5 pencils under the desk and Bella found 4 by the door. How many pencils did they find together?

Draw a math picture and write a number bond and a number sentence that tells about the story.

Draw

Lesson 3

Reason about embedded numbers in varied configurations using number bonds.

BLUEBONNET LEARNING K-5 MATH

Lesson 4 Problem Set 1x1

Name _____ Date _____

Circle 5, and then make a number bond.

1.

2.

3.

4.

Draw rings on the fingers from left to right to show the total in the number bond. Then, fill in the parts to complete the number bond.

5.

6.

Lesson 4

Analyze and describe embedded numbers in 10 using 5 groups and number bonds.

BLUEBONNET LEARNING K-5 MATH

Lesson 5 Homework Helper 1x1

1. Circle 2 parts you see. Make a number bond to match.

1 one a group of 4 and a group of 5. My parts are 4 and 3.

2. How many fruits do you see? Write at least 2 different number bonds to show different ways to break apart the total.

1 one 6 small pieces of fruit and 3 large pieces of fruit.

1 one 5 apples and 4 strawberries.

Lesson 5

Reason about embedded numbers in varied configurations using number bonds.

BLUEBONNET LEARNING K-5 MATH

Lesson 6 Homework 1x1

Name _____ Date _____

Circle 5, and then make a number bond.

1.

2.

3.

4.

Make a number bond that shows 5 as one part.

5.

6.

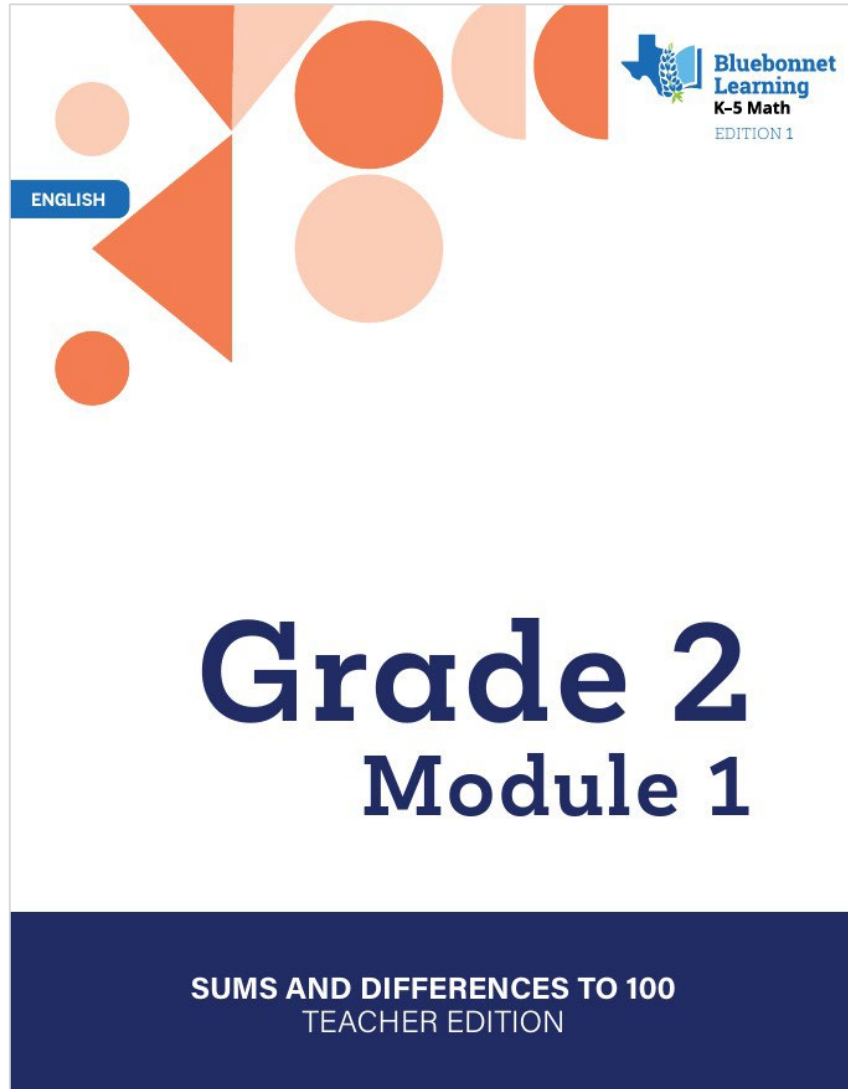
7.

8.

Lesson 6

Analyze and describe embedded numbers in 10 using 5 groups and number bonds.

K-5 Math Lesson Structure | Fluency



OER K-5 MATH

Lesson 4

Objective: Make a ten to add within 20.

Suggested Lesson Structure

| | |
|---------------------|---------------------|
| Fluency Practice | (12 minutes) |
| Application Problem | (8 minutes) |
| Concept Development | (30 minutes) |
| Student Debrief | (10 minutes) |
| Total Time | (60 minutes) |

Fluency Practice (12 minutes)

- Draw Tens and Ones 2.2A (3 minutes)
- Make Ten 1.3D (3 minutes)
- Make the Next Ten Within 100 2.4B (4 minutes)
- Take Out One 2.4A (2 minutes)

Draw Tens and Ones (3 minutes)

Materials: (T) Linking cubes with ten-sticks and extra cubes, place value chart (S) Personal white board

Note: This fluency activity reviews place value as students analyze two representations of two-digit numbers.

T: Draw the number of cubes I show with quick tens and ones.
T: (Show 2 linking cube ten-sticks and 4 ones.)
S: (Draw as pictured to the right.)
T: Show me your boards. Tell me the number.
S: 24.
T: Draw the number I show with quick tens and ones.
T: (Write the number 42 on the place value chart.)
S: (Draw as pictured to the right.)
T: Tell me the number.
S: 42.


For the next minute, represent 18 and 81, 37 and 73, 29 and 92, alternating between showing the smaller number of each pair with cubes and the larger number with the place value chart.

OER Lesson 4: Make a ten to add within 20. 57

Suggested
Lesson
Structure

Fluency
Practice

K–5 Math Lesson Structure | Application Problem



Bluebonnet Learning
K-5 Math
EDITION 1

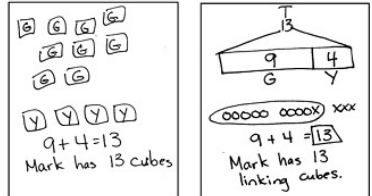
ENGLISH

Grade 2 Module 1

SUMS AND DIFFERENCES TO 100
TEACHER EDITION

OER K-5 MATHLesson 42 • 1


Take Out One (2 minutes)
Materials: (S) Personal white board
Note: In the lesson, students add 9 and 6 by adding 9 and 1 and 5. They “take out 1” from 5. This fluency activity prepares them to take 1 out of a variety of numbers and say how many are left.
T: Let’s take out 1 from each number. I say 5. You write the number bond and say the two parts, 1 and 4.
T: 5.
S: (Draw number bond.) 1 and 4.
Continue with the following possible sequence: 3, 10, 4, 7, 9, 8, and 6.

Application Problem (8 minutes)
Mark had a stick of 9 green linking cubes. His friend gave him 4 yellow linking cubes. How many linking cubes does Mark have now?

Note: This *add to result unknown* problem’s strip diagram can be compared to that of Lesson 3 when a part was subtracted.

Concept Development (30 minutes)
Materials: (S) Personal white board
Part 1: Making ten from an addend of 9, 8, or 7.
Note: In Grade 1, students used ten-sticks and quick ten drawings extensively when making ten. Now in Grade 2, the objective is to work at the numerical level as soon as possible.
T: (Write $9 + 4$ on the board.)
T: Let’s draw to solve $9 + 4$ using circles and Xs.

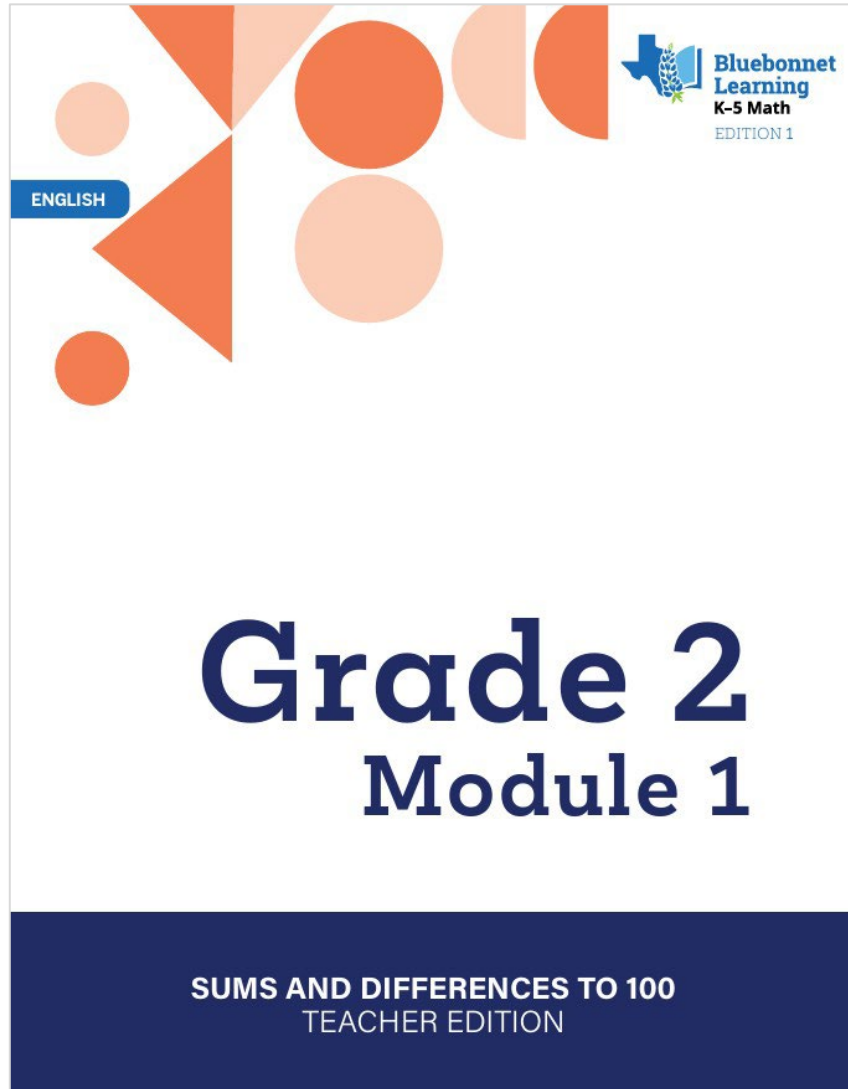
NOTES ON MULTIPLE MEANS OF REPRESENTATION:
“Mark’s Linking Cubes” bridges into today’s Concept Development of making a ten to add. Rather than teach the *make ten* strategy during the Application Problem, notice what strategies students are independently using and integrate these observations into the Concept Development. During the Student Debrief, consider coming back to the Application Problem, and invite students to apply today’s learning to show another way to solve the problem.

NOTES ON MULTIPLE MEANS OF ENGAGEMENT:
If time or precision is a factor, create templates of pre-drawn circles to model addends of 9, 8, and 7. Then, students can attend to drawing Xs to complete the ten and model the remainder of the problem.

Lesson 4: Make a ten to add within 20.59

Application Problem

K–5 Math Lesson Structure | Concept Development and Problem Set



OER K–5 MATH Lesson 4 2 • 1

T: (Quickly draw and count aloud 9 circles in a 5-group column as seen in the first image.)
T: How many Xs will we add?
S: 4 Xs.
T: (Using the X symbol, complete the ten and draw the other 3 Xs to the right as seen in the second image.)
T: Did we make a ten?
S: Yes!
T: Our $9 + 4$ is now a ten-plus fact. What fact can you see in the drawing?
S: $10 + 3 = 13$.
T: $10 + 3$ equals?
S: 13.
T: So, $9 + 4$ equals?
S: 13. (Write the solution.)
T: What did we take out of 4 so that we could make 10?
S: 1.
T: (Draw the number bond under 4 as shown to the right.)
T: (Write $9 + 5$.)
T: Solve using a number bond. (If students want or need to draw, allow them to.)

Continue with the following possible sequence: $9 + 6$, $9 + 7$, $8 + 9$, $8 + 3$, $8 + 4$, $8 + 7$, and $7 + 5$. Have students explain their work to a partner.

Part 2: Observing patterns.

T: Look at our list of problems where one part, or addend, is 9. Tell your partner what you notice about adding to 9.
S: You get 1 out! → The answer is 10 and 1 less than the other addend.
T: Look at the problems with 8 as an addend. Tell your partner what you notice.
S: You get 2 out! → You always take 2 out of the other addend.
T: How is solving $9 + 4$ and $8 + 4$ different?
S: We used 2 to make 10 when we added to 8 and 1 to make 10 when we added to 9. → We used a different number bond.

Problem Set (10 minutes)

Students should do their personal best to complete the Problem Set within the allotted 10 minutes. Some problems do not specify a method for solving. This is an intentional reduction of scaffolding that invokes 2.1.C, Use Appropriate Tools Strategically. Students should solve these problems using the RDW approach used for Application Problems.



NOTES ON MULTIPLE MEANS OF ENGAGEMENT:

Emergent bilingual students benefit from speaking with their peers at key points in the lesson before their classmates are asked for responses. An opportunity to turn and talk to a partner to discuss their understanding of *making a ten* gives them a chance to practice their words and express their thinking, encouraging them to participate more fully in class discussions.

60 Lesson 4: Make a ten to add within 20.

Concept Development and Problem Set

K–5 Math Lesson Structure | Student Debrief and Exit Ticket



ENGLISH

Grade 2 Module 1

SUMS AND DIFFERENCES TO 100
TEACHER EDITION

OER K–5 MATHLesson 42 • 1

Student Debrief (10 minutes)

Lesson Objective: Make a ten to add within 20.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience.

Invite students to review their solutions for the Problem Set. They should check work by comparing answers with a partner. Look for misconceptions or misunderstandings that can be addressed in the Debrief. Guide students in a conversation to debrief the Problem Set and process the lesson.

Any combination of the questions below may be used to lead the discussion.

- Let's look at Problems 11–14. How are the problems the same and different?
- Do you notice a pattern that will help you memorize your 9-plus facts? What other patterns do you notice?
- Explain the strategy we reviewed today. Can you think of another problem that the *make ten* strategy will help us solve?
- Can you figure out the math goal of today's lesson? What name would you give this lesson?

| | |
|-----------------|-----------------|
| 1. $9 + 2 = 12$ | 2. $9 + 5 = 14$ |
| 3. $8 + 4 = 12$ | 4. $8 + 7 = 15$ |
| 5. $7 + 2 = 9$ | 6. $7 + 6 = 13$ |
| 7. $8 + 3 = 11$ | 8. $9 + 8 = 17$ |


| | |
|-----------------------------------|-----------------------------------|
| 9. $10 + 2 = 12$ $9 + 3 = 12$ | 10. $10 + 3 = 13$ $9 + 4 = 13$ |
| 11. $10 + 4 = 14$ $8 + 6 = 14$ | 12. $10 + 6 = 16$ $7 + 9 = 16$ |

13. Lina has 2 blue beads and 9 purple beads. How many beads does Lina have in all?

$9 + 2 = 11$
Lina has 11 beads in all.

14. Ben had 8 pencils and bought 5 more. How many pencils does Ben have all together?

$8 + 5 = 13$
Ben has 13 pencils all together.

Lesson 4: Make a ten to add within 20.61

Student Debrief
and Exit Ticket

Post-Test

- How are **modules**, **topics**, and **lessons** related in the Bluebonnet Learning K-5 Math materials?
- What are the **four components** of a Bluebonnet Learning K-5 Math lesson?
- What are the purposes of the **three student books** in K-5 Math?

Reflection

- What do you want to remember about **Bluebonnet Learning K–5 Math**?
- What do you want to learn more about?

Bluebonnet Learning Secondary Mathematics

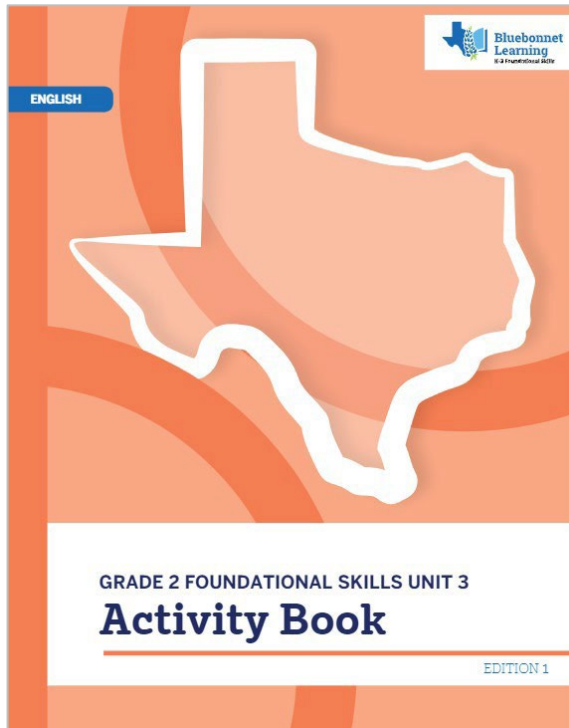
Pre-Test

- What are the **two types of instructional days** in the Bluebonnet Learning Secondary Mathematics materials?
- What are the **three components** of a Bluebonnet Learning Secondary Mathematics lesson?
- What is **spaced practice** and how is it built into the Bluebonnet Learning Secondary Mathematics materials?

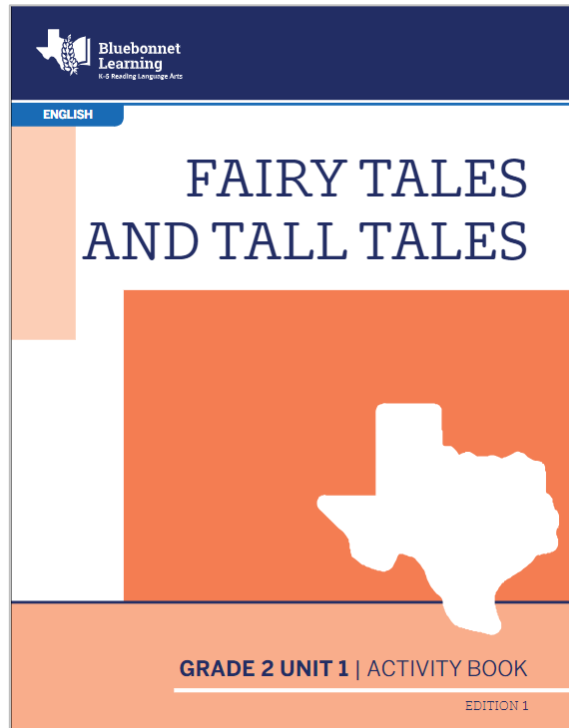
Bluebonnet Learning Instructional Materials

Reading Language Arts (RLA)

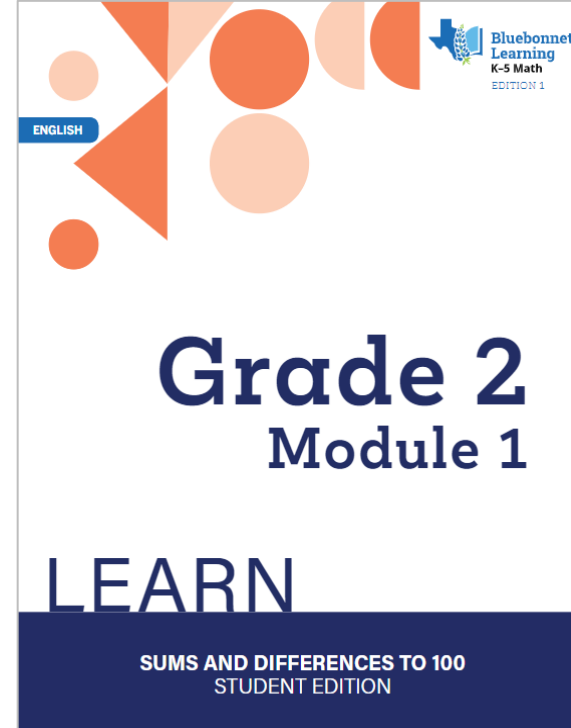
Mathematics



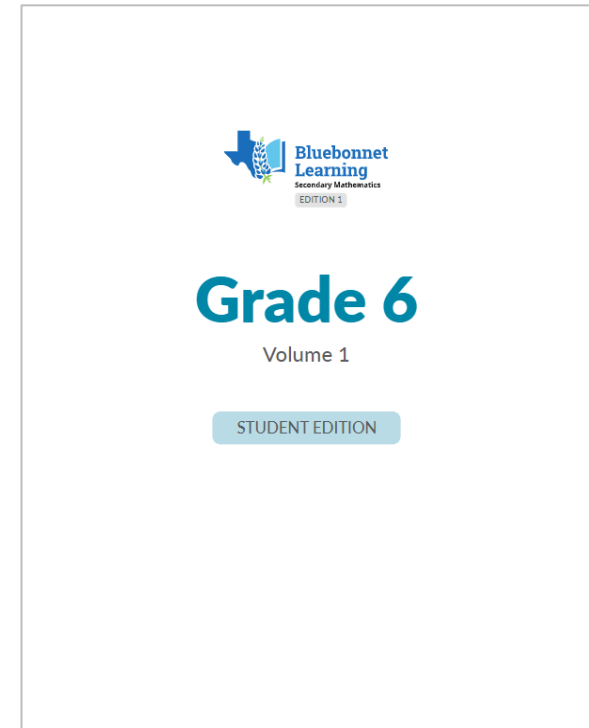
K–3 Foundational Skills



K–5 RLA Knowledge



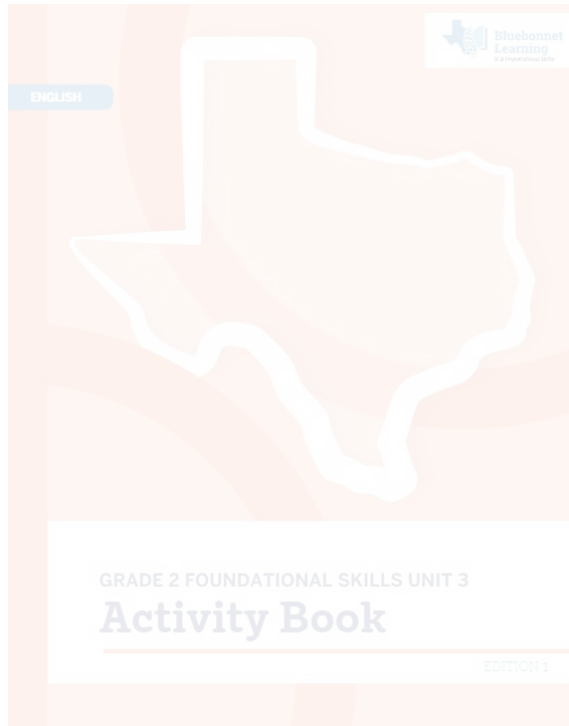
K–5 Math



Secondary Mathematics

Bluebonnet Learning Instructional Materials

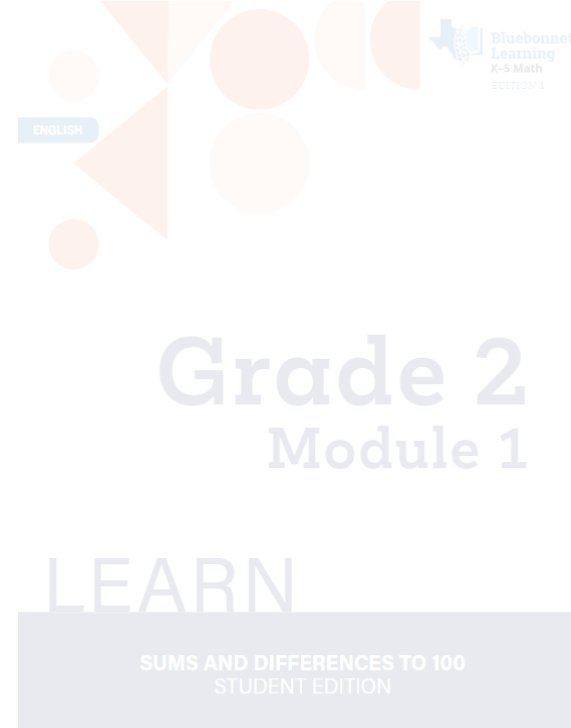
Reading Language Arts (RLA)



K-3 Foundational Skills

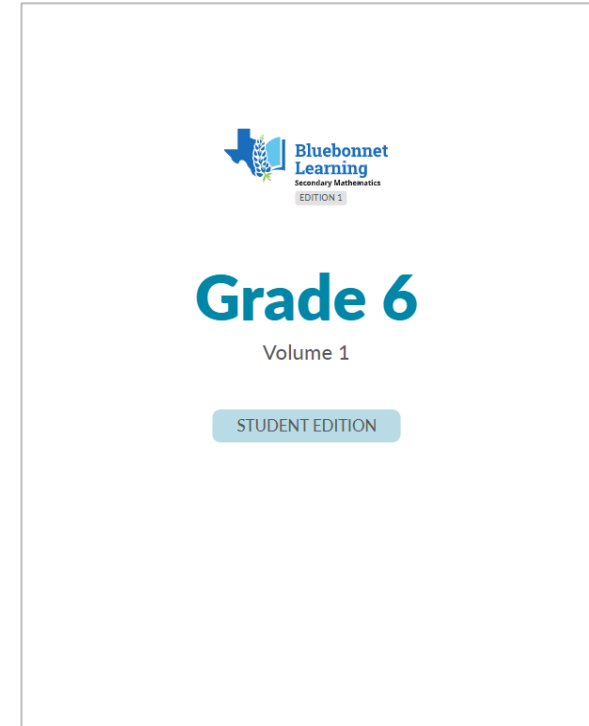


K-5 RLA Knowledge



K-5 Math

Mathematics



Secondary Mathematics

Bluebonnet Learning Secondary Math | Course-Level Documents



| GRADE 6: YEAR-AT-A-GLANCE | | | | 150-Day Pacing |
|---|--|--------|--|----------------------------------|
| TEKS Process Standards are embedded in every module: 6.1A, 6.1B, 6.1C, 6.1D, 6.1E, 6.1F, 6.1G | | | | 1 DAY PACING = 45-MINUTE SESSION |
| Module | Topic | Pacing | TEKS* | |
| 1 Composing and Decomposing | 1: Factors and Multiples | 12 | 6.2D, 6.2E, 6.3A, 6.3B, 6.3E, 6.4F, 6.5C, 6.7A, 6.7D, 6.8D | |
| | 2: Shapes and Solids | 9 | 6.8A, 6.8B, 6.8C, 6.8D | |
| | 3: Decimals | 5 | 6.2C, 6.2D, 6.3E, 6.8D | |
| | | 26 | | |
| 2 Relating Quantities | 1: Ratios and Rates | 18 | 6.4A, 6.4B, 6.4C, 6.4D, 6.4E, 6.5A, 6.5C, 6.6C | |
| | 2: Percents | 8 | 6.2C, 6.2D, 6.3E, 6.4E, 6.4F, 6.4G, 6.5B, 6.5C | |
| | 3: Unit Rates and Conversions | 10 | 6.4B, 6.4D, 6.4H, 6.5A | |
| | | 36 | | |
| 3 Moving Beyond Positive Quantities | 1: Signed Numbers and the Four Quadrants | 9 | 6.2A, 6.2B, 6.2C, 6.2D, 6.11A | |
| | 2: Operating with Integers | 13 | 6.3C, 6.3D | |
| | | 22 | | |
| 4 Determining Unknown Quantities | 1: Expressions | 12 | 6.3D, 6.7A, 6.7B, 6.7C, 6.7D | |
| | 2: Equations and Inequalities | 17 | 6.3D, 6.7B, 6.7D, 6.8C, 6.8D, 6.9A, 6.9B, 6.9C, 6.10A, 6.10B | |
| | 3: Graphing Quantitative Relationships | 11 | 6.5A, 6.6A, 6.6B, 6.6C, 6.11A | |
| | 4: Financial Literacy: Accounts, Credit, and Careers | 8 | 6.14A, 6.14B, 6.14C, 6.14D, 6.14E, 6.14F, 6.14G, 6.14H | |
| | | 48 | | |
| 5 Describing Variability of Quantities | 1: The Statistical Process | 10 | 6.12A, 6.12B, 6.12D, 6.13A, 6.13B | |
| | 2: Numerical Summaries of Data | 8 | 6.12A, 6.12B, 6.12C, 6.12D, 6.13A | |
| | | 17 | | |
| Total Days: 150 | | | | |
| *Bold TEKS = Readiness Standard; Bold Pacing = Reduced Number of Days | | | | |

GRADE 6: SCOPE & SEQUENCE

150-Day Pacing

1 Composing and Decomposing

Module Pacing: 26 Days

TOPIC 1: Factors and Multiples

TEKS Mathematical Process Standards: 6.1A, 6.1B, 6.1C, 6.1D, 6.1E, 6.1F, 6.1G, 6.1H, 6.2C, 6.2D, 6.2E, 6.3A, 6.3B, 6.3E, 6.4F, 6.5C, 6.7A, 6.7D, 6.8D

| Lesson | Lesson Title | Lesson Summary |
|--|--|---|
| Introduction to the Problem-Solving Model and Learning Resources | | Students reflect on learning a new variety of ways they learn. The problem-solving model (TEKS mathematical process) the Academic Glossary help students a problem-solving activity. Students and summarize the problem-solving process. Since the intent of this lesson is to review the problem-solving model and review 1 mathematical process standards, the process, not content. Students will go to the Academic Glossary, Problem Model Graphic Organizer, Problem Questions to Ask, and TEKS Math Standards, which are located in the Guide. These materials should show students throughout the course. |
| 1 | Writing Equivalent Expressions Using the Distributive Property | Students divide area models in thirds to see that the sum of the areas of 2 regions equals the area of the whole then rewrite the product of two fact families the sum of two or more terms, formalization of the distributive property. |
| 2 | Identifying Common Factors and Common Multiples | Students construct rectangles with and relate the numbers to factor families. They create prime factorization determine the greatest common factor least common multiple LCM of two. Students examine the rows and columns to identify multiples and they describe the relationship between product, GCF, and LCM. |
| 3 | Dividing a Whole into Fractional Parts | Students create strip diagrams for $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$. They identify equal fractions by splitting the strip diagrams and then complete a graphic or represent all the equivalent fractions by the strip diagrams. Students compare numerator and denominator of equal multiples of the original unit fraction. |

GRADE 6: SCOPE & SEQUENCE

150-Day Pacing

| Lesson | Lesson Title | Lesson Summary | Essential Ideas | TEKS* Pacing |
|---|-------------------------------|---|--|---------------------------|
| 4 | Benchmark Fractions | Students translate their understanding of strip diagrams to number lines. They use the benchmark fractions $0, \frac{1}{2}$, and 1 to estimate the value of fractions, while fractions that are close to these benchmarks, and estimate sums. Students solve a problem which involves comparing fractions that represent shaded parts of figures. | • Benchmark fractions are common fractions used to estimate the value of fractions such as $0, \frac{1}{2}$, and 1 . • A fraction is close to 0 when the numerator is very small compared to the denominator. • A fraction is close to $\frac{1}{2}$ when the numerator is about half the size of the denominator. • A fraction is close to 1 when the numerator is very close in size to the denominator. | 6.2D 6.4F 1 |
| 5 | Multiplying Fractions | Students review the area model for multiplication and apply it to multiplying mixed numbers. They analyze two methods for multiplying mixed numbers and then use these methods to answer questions in the context of a real-world scenario. | • Area models can be used to illustrate the multiplication of two fractions, which is essentially the same as taking a part of a part. • An area model representing the multiplication of two mixed numbers can be tiled with fractional unit squares to express the product as a fraction greater than 1 . • The product of two fractions represented by an area model is the same as the product of the fractions calculated using the standard algorithm. | 6.3B 6.3E 1 |
| 6 | Fraction by Fraction Division | Students connect multiplication to division by writing fraction fact families for area models. They then use strip diagrams and number line models to investigate the division of fractions by fractions. Students use these models to develop an algorithm for rewriting division sentences as multiplication sentences. They apply the algorithm to solve problems involving fractions and mixed numbers. | • The product of two fractions represented by an area model is the same as the product of the fractions calculated using the standard algorithm. • Area models and fact families can be used to illustrate the quotients of fractions. • The reciprocal or multiplicative inverse of a number $\frac{a}{b}$ is the number $\frac{b}{a}$, where a and b are nonzero numbers. • To calculate the quotient of two fractions, multiply the dividend by the reciprocal of the divisor. • There are other algorithms to divide fractions, such as dividing across in special cases and using complex fractions as a form of 1 . | 6.2E 6.3A 6.3E 2 |
| End of Topic Assessment | | | | 1 |
| Learning Individually with Skills Practice | | | | 3 |
| Schedule these days strategically throughout the topic to support student learning. | | | | |

*Bold TEKS = Readiness Standard; Bold Pacing = Reduced Number of Days

TOPIC 2: Shapes and Solids

TEKS Mathematical Process Standards: 6.1B, 6.1C, 6.1D, 6.1E, 6.1F, 6.1G, 6.1H, 6.2C, 6.2D, 6.2E, 6.3A, 6.3B, 6.3E, 6.4F, 6.5C, 6.7A, 6.7D, 6.8D

| Lesson | Lesson Title | Lesson Summary | Essential Ideas | TEKS* Pacing |
|--------|------------------------------------|--|---|--------------|
| 1 | Constructing Triangles Given Sides | Students use patty paper, pasta, and construction tools to explore the information required to create no triangles, unique triangles, or multiple triangles when given two or three possible side lengths. They learn that an infinite number of triangles can be made from only two side lengths. They also learn that unique triangles are formed when provided with three segments that are sufficiently long in relation to each other. Students should note that when all the measures of a triangle are the same as another triangle, even though they are in different orientations, the provided information creates a unique triangle. Students then summarize their knowledge of the conditions that form 0, 1, or multiple triangles. | • Constructing a triangle given the length of two sides does not result in the construction of a unique triangle. • Constructing a triangle given the length of three segments, such that the sum of two segment lengths is greater than the third length, results in the construction of a unique triangle. | 6.8A 1 |

*Bold TEKS = Readiness Standard; Bold Pacing = Reduced Number of Days

4 GRADE 6 • SCOPE & SEQUENCE

GRADE 6

GRADE 6 STANDARDS OVERVIEW

TEKS covered at the lesson level are shown in **course color**. Additional TEKS covered in Skills Practice are shown in black.

| | | Number and Operations | Proportionality | Expressions, Equations, and Relationships | Measurement and Data | Personal Financial Literacy |
|--|--|---|---|---|--|-----------------------------|
| MODULE 1: Composing and Decomposing | TOPIC 1: Factors and Multiples | 6.2D (E6.2E) 6.3D (E6.3E) 6.3A 6.3B 6.3E | 6.4F 6.5C | 6.7A (P6.7A) 6.7D (E6.7A) 6.8D (P6.7D) E6.7D | | |
| | TOPIC 2: Shapes and Solids | 6.3A 6.3E | | 6.8A 6.8B 6.8C E6.8C E6.8D | 6.7A E6.7A 6.7D E6.8A E6.8C E6.8D | |
| | TOPIC 3: Decimals | 6.2C 6.2D 6.3E | E6.2D | 6.8D | 6.7D 6.8C E6.8D | |
| MODULE 2: Relating Quantities | TOPIC 1: Ratios and Rates | 6.2E E6.3E 6.4A 6.4B 6.4C 6.4D 6.4E 6.5A 6.5C | 6.4A E6.4B E6.4C E6.4D E6.4E E6.5A 6.5C | E6.4B E6.4E E6.5A 6.6C E6.6C E6.6C 6.8D | | |
| | TOPIC 2: Percents | 6.2C 6.2D 6.3E | 6.4E 6.4F 6.4G 6.5A 6.5B 6.5C E6.5C | 6.4B E6.4F E6.4G E6.5A E6.5B E6.5C | | |
| | TOPIC 3: Unit Rates and Conversions | 6.3D E6.3E 6.4D 6.4H 6.5A | E6.4D E6.4H E6.5A 6.5B E6.5B | 6.7D 6.8D E6.8D | | |

Bold TEKS = Readiness Standard (P) = Prerequisite for TEKS (E) = Extension of TEKS

6.000

GRADE 6 • STANDARDS OVERVIEW

3

Year-at-a-Glance

Scope & Sequence

Standards Overview

Bluebonnet Learning Secondary Math | Module and Topic Pacing Guides

MODULE 1, TOPIC 1 PACING GUIDE

150-Day Pacing

1 Composing and Decomposing

TOPIC 1: Factors and Multiples

TEKS Mathematical Process Standards: 6.1A, 6.1B, 6.1C, 6.1D, 6.1E, 6.1F, 6.1G

ELPS: 1.A, 1.C, 1.E, 1.G, 1.H, 2.C, 2.D, 2.I, 3.B, 3.D, 3.E, 3.F, 4.C, 4.E, 4.F, 4.G, 4.H

1 DAY PACING = 45-MINUTE SESSION

Topic Pacing: 12 Days

| Lesson | Lesson Title | Highlights | TEKS* | Pacing* |
|--------|--|---|----------------------|---------|
| OMIT | OMIT | Students reflect on learning a new skill and the variety of ways they learn. The problem-solving model, TEKS mathematical process standards, and the Academic Glossary help students complete a problem-solving activity. Students reflect on and summarize the problem-solving process. Since the intent of this lesson is to introduce the problem-solving model and review the TEKS mathematical process standards, the focus is on process not content. Students will need access to the Academic Glossary, Problem-Solving Model Graphic Organizer, Problem-Solving Questions to Ask, and TEKS mathematical process standards which are located in the Course Guide. These materials should always be available to students throughout the course. | OMIT | OMIT |
| OMIT | Introduction to the Problem-Solving Model and Learning Resources | Materials Needed: (located in the Course Guide) Academic Glossary, Problem-Solving Model Graphic Organizer, Problem-Solving Model Questions to Ask, TEKS Mathematical Process Standards | 6.7D | 0 |
| 1 | Writing Equivalent Expressions Using the Distributive Property | Students use the distributive property to decompose and compose numerical expressions to create equivalent representations. Materials needed: None | 6.7D 6.8D | 1 |
| 2 | Identifying Common Factors and Common Multiples | Students use prime factorization and tables to organize factors and multiples and are introduced to least common multiple (LCM) and greatest common factor (GCF). Materials needed: Scissors | 6.7A 6.7D 6.8D | 2 |
| 3 | Dividing a Whole into Fractional Parts | Students create strip diagrams for unit fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{12}$, and $\frac{1}{16}$. They identify equivalent fractions by aligning the strip diagrams on the fold lines, and then complete a graphic organizer to represent all the equivalent fractions represented by the strip diagrams. Students conclude that the numerator and denominator of equivalent fractions are multiples of the original unit fractions. Materials needed: Strip Diagrams (at the end of the lesson), Scissors | 6.4F 6.5C | 1 |

*Bold TEKS = Readiness Standard; Bold Pacing = Reduced Number of Days



MODULE 1, TOPIC 1 PACING GUIDE

150-Day Pacing

1 DAY PACING = 45-MINUTE SESSION

⚙️ This activity highlights a key term or concept that is essential to the learning goals of the lesson.

| Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|--|---|--|---|---|
| TEKS: 6.7D, 6.8D LESSON 1 Writing Equivalent Expressions Using the Distributive Property GETTING STARTED ⚙️ ACTIVITY 1 ⚙️ TALK THE TALK | TEKS: 6.7A, 6.8D LESSON 2 Identifying Common Factors and Common Multiples GETTING STARTED ACTIVITY 1 ⚙️ ACTIVITY 2 ⚙️ | LESSON 2 continued ACTIVITY 3 ⚙️ ACTIVITY 4 ⚙️ TALK THE TALK | LEARNING INDIVIDUALLY Skills Practice <i>This is a suggested placement. Move based on student data and individual needs.</i> | TEKS: 6.4F, 6.5C LESSON 3 Dividing a Whole into Fractional Parts GETTING STARTED ⚙️ ACTIVITY 1 ⚙️ TALK THE TALK ⚙️ |
| Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
| TEKS: 6.2D, 6.4F LESSON 4 Benchmark Fractions GETTING STARTED ⚙️ ACTIVITY 1 ⚙️ ACTIVITY 2 ⚙️ TALK THE TALK ⚙️ | TEKS: 6.3B, 6.3E LESSON 5 Multiplying Fractions GETTING STARTED ACTIVITY 1 ⚙️ ACTIVITY 2 ⚙️ TALK THE TALK ⚙️ | LEARNING INDIVIDUALLY Skills Practice <i>This is a suggested placement. Move based on student data and individual needs.</i> | TEKS: 6.2E, 6.3A, 6.3E LESSON 6 Fraction by Fraction Division GETTING STARTED ⚙️ ACTIVITY 1 ⚙️ ACTIVITY 2 ⚙️ | LESSON 6 continued ACTIVITY 3 ⚙️ ACTIVITY 4 TALK THE TALK |
| Day 11 | Day 12 | | | |
| LEARNING INDIVIDUALLY Skills Practice <i>This is a suggested placement. Move based on student data and individual needs.</i> | END OF TOPIC ASSESSMENT | | | |

*Bold TEKS = Readiness Standard

Bluebonnet Learning Secondary Mathematics | Program and Implementation Guide

The **Program and Implementation Guide (P&IG)** provides a high-level overview of the Bluebonnet Learning Secondary Mathematics Program.

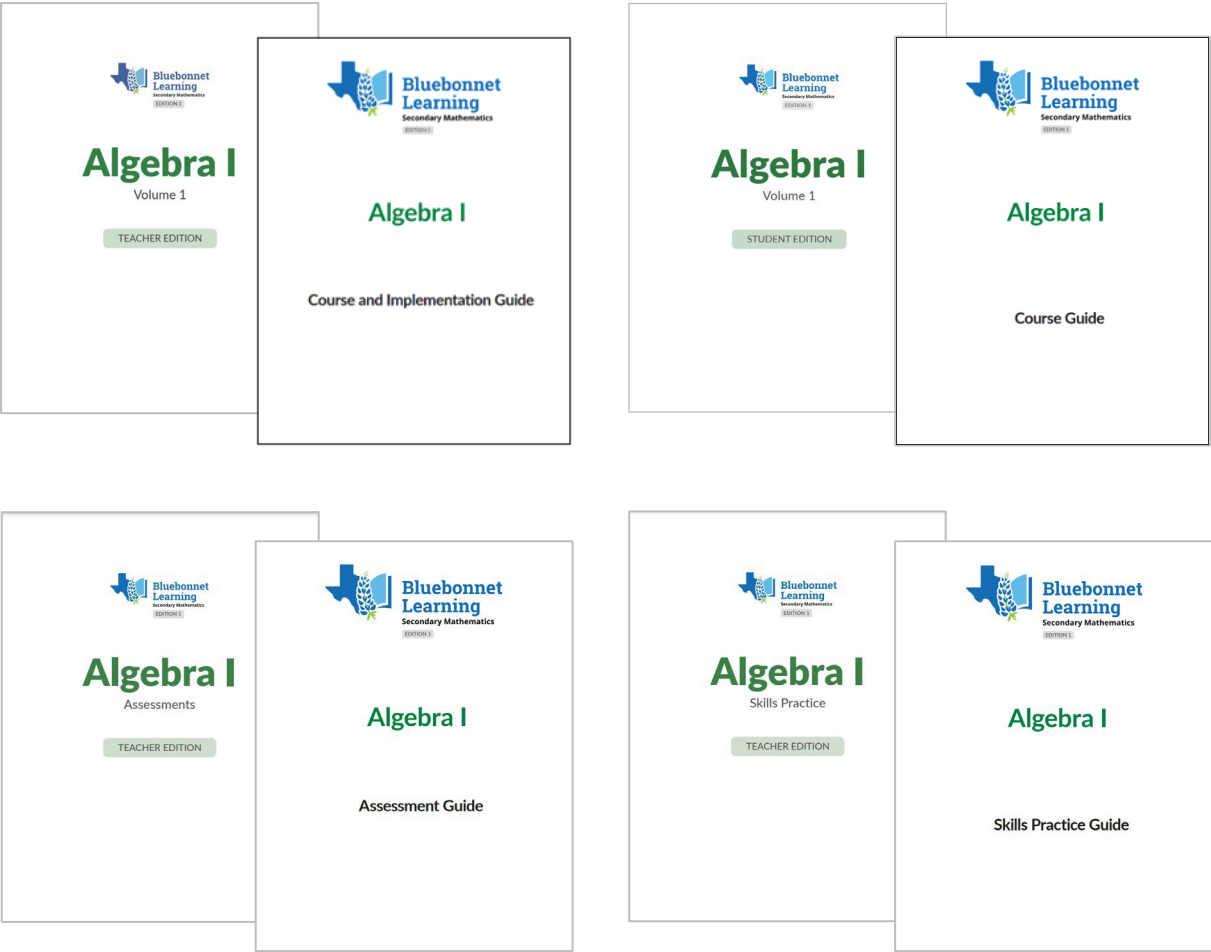
Please note that this is a **new asset** that was not part of the CER Version 3 materials.

Also included and revised at the Program-Level:

- Content Organization Document (**new**)
- Teacher Module and Topic Internalization Protocol
- Coach Module and Topic Internalization Protocol
- Teacher Lesson Internalization Protocol
- Coach Lesson Internalization Protocol
- Teacher Student Work Analysis Protocol
- Coach Student Work Analysis Protocol
- Coach Observation Tool



Bluebonnet Learning Secondary Mathematics | Course Guides



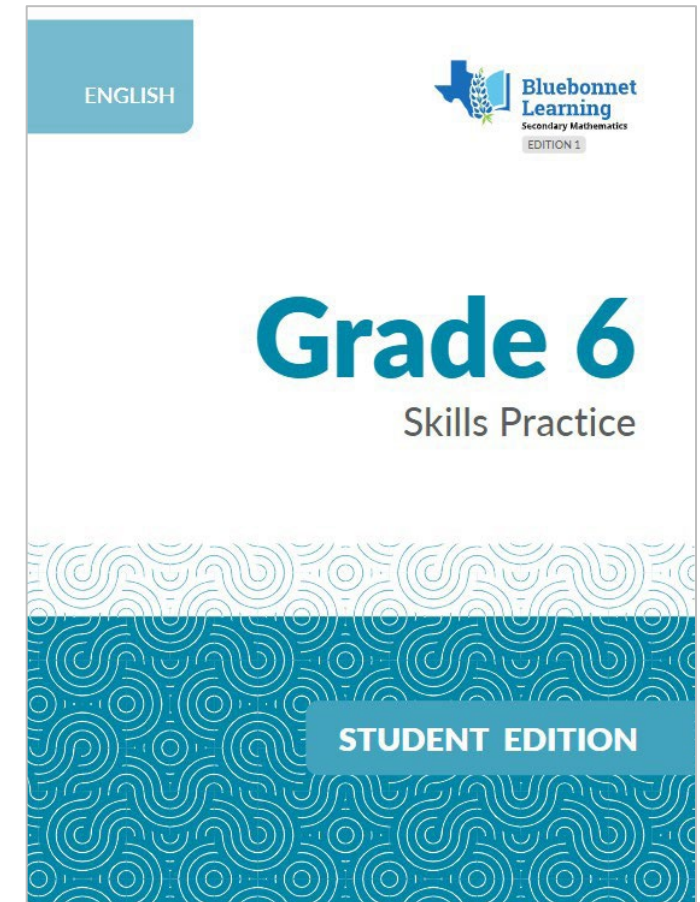
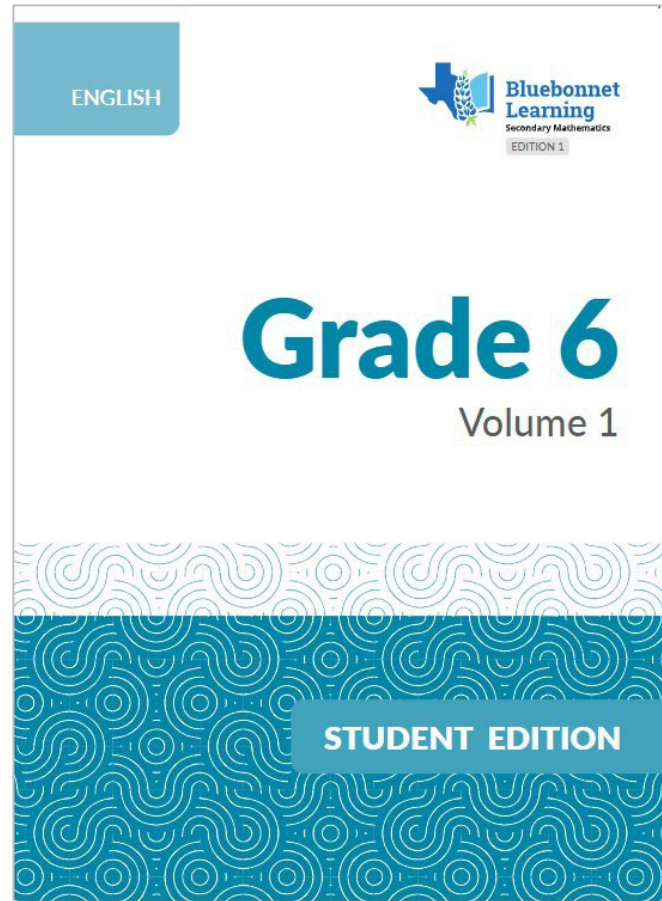
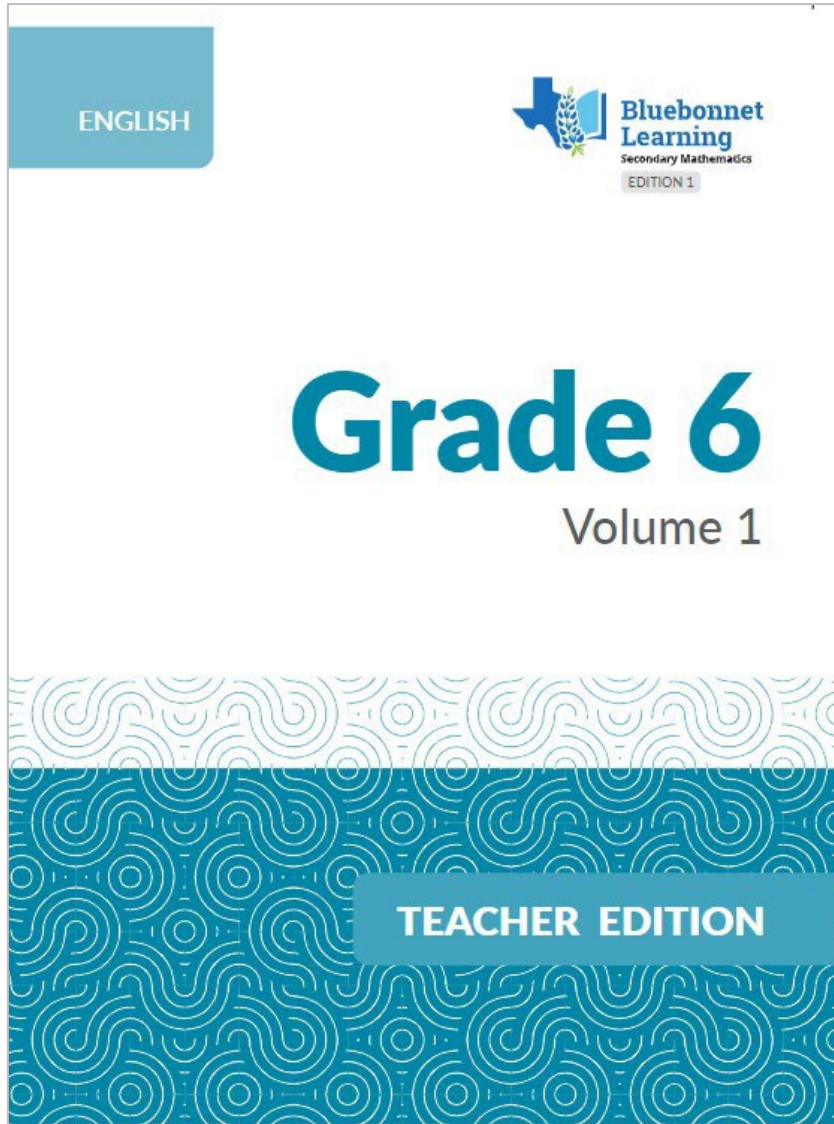
Each Guide provides the teacher and/or student with an overview of the materials.

| ALGEBRA I | |
|--|-------|
| Welcome to the Course Guide for Secondary Mathematics, Algebra I | |
| Instructional Design | FM-6 |
| Lesson Structure | FM-9 |
| Research-Based Strategies | FM-15 |
| The Crew | FM-17 |
| TEKS Mathematical Process Standards | FM-18 |
| Understanding the Problem-Solving Model | FM-21 |
| The Problem-Solving Model Graphic Organizer | FM-22 |
| Academic Glossary | FM-23 |
| What is Productive Struggle? | FM-25 |
| Resources for Students and Families | FM-26 |
| Course Table of Contents | FM-31 |


| ALGEBRA I | |
|---|-------|
| Welcome to the Skills Practice Guide for Secondary Mathematics, Algebra I | |
| Skills Practice Overview | FM-6 |
| Structure and Alignment | FM-7 |
| Best Practices for Implementation of Skills Practice on | |
| Learning Individually Days | FM-11 |
| Preparing for Learning Individually with Skills Practice | FM-12 |
| You Might Be Wondering | FM-13 |
| Skills Practice Outline | FM-14 |

The Course and Implementation Guide, Course Guide, and Skills Practice Guide have each been updated for English Edition 1.

Bluebonnet Learning Secondary Math (1/3)



ENGLISH



Bluebonnet Learning
Secondary Mathematics
EDITION 1

Grade 6
Volume 1

TEACHER EDITION

TOPIC 1 OVERVIEW

Factors and Multiples

How are the key concepts of *Factors and Multiples* organized?

Students begin the topic with an introductory lesson on problem solving. They will use this model throughout the course when solving problems. Students then extend their knowledge of area and numbers to compose and decompose areas that represent numeric expressions. They decompose numbers into factors and apply the distributive property to compute products efficiently. Students use the distributive property to express the sum of two numbers as a product of two factors. They then use their knowledge of factors to determine the greatest common factors and least common multiples.

Students continue to engage in reasoning as they create and use physical models to represent and compare fractions as well as to determine equivalent fractions. They begin moving from concrete models to abstract thinking when they connect strip diagrams to number lines to represent and compare fractions. Students reason about the relative size of a fraction by comparing it to a benchmark fraction and investigating the relationship between the numerator and denominator. Students then consider how to decompose area models that represent fraction multiplication. They relate multiplication and division before investigating strategies for dividing fractions. Learning multiple division strategies and using visual models focuses students on reasoning and conceptual understanding as they increase fluency with dividing fractions.

Math Representation
The model shows $\frac{2}{3} + \frac{1}{3}$.
The division expression asks, "How many $\frac{2}{3}$ s are in $\frac{5}{3}$?"

Although algorithms for fraction in this topic, students may not achieve this topic. Fluency requires time to develop fluency with fraction operations.

1

Writing Equivalent Expressions Using the Distributive Property

LESSON OVERVIEW

Students divide area models in different ways to see that the sum of the areas of the smaller regions equals the area of the whole model. They then rewrite the product of two factors as a factor times the sum of two or more terms, leading to the formalization of the distributive property.

MATERIALS

None

GRADE 6 TEKS

Mathematical Process Standards
(1) The student uses mathematical processes to acquire and demonstrate mathematical understanding.
The student is expected to:
6.1A apply mathematics to problems arising in everyday life, society, and the workplace;
6.1C select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems;
6.1D communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate.

Expressions, Equations, and Relationships
(7) The student applies mathematical process standards to develop concepts of expressions and equations.
The student is expected to:
6.7D generate equivalent expressions using the properties of operations; inverse, identity, commutative, associative, and distributive properties;
(8) The student applies mathematical process standards to use geometry to represent relationships and solve problems.
The student is expected to:
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.

ELPS

(1) Learning Strategies
The student is expected to:
(2) internalize new basic and academic language by using and meaning it in meaningful ways in speaking and writing activities that build concept and language attainment.
(3) Speaking
The student is expected to:
(8) extend and building on prior knowledge for identifying by reading on or supported by language used;
(9) oral use of language to communicate to the language profile.

ESSENTIAL IDEAS

- The area of a rectangle is the product of its length and width.
- You can illustrate the distributive property using an area model of a rectangle with side lengths a and $(b + c)$.
- The distributive property states that for any numbers a , b , and c , $a(b + c) = ab + ac$.
- You can rewrite equivalent expressions using properties.

MODULE 1 • TOPIC 1 • LESSON 1

MODULE 1, TOPIC 1 PACING GUIDE

165-Day Pacing

1 DAY PACING = 45-MINUTE SESSION

| Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---|--|---|---|---|
| TEKS: 6.7D Introduction to the Problem-Solving Model and Lesson Resources GETTING STARTED ACTIVITY 1 TALK THE TALK | TEKS: 6.7D, 6.8D LESSON 1 Writing Equivalent Expressions Using the Distributive Property GETTING STARTED ACTIVITY 1 TALK THE TALK | TEKS: 6.7A, 6.8D LESSON 2 Identifying Common Factors and Common Multiples GETTING STARTED ACTIVITY 1 TALK THE TALK | LESSON 2 continued ACTIVITY 4 TALK THE TALK | LEARNING INDIVIDUALLY Skills Practice This is a suggested placement. Move based on student data and individual needs. |
| Day 6 TEKS: 6.8E, 6.9C LESSON 3 Dividing a Whole into Fractional Parts GETTING STARTED ACTIVITY 1 TALK THE TALK | Day 7 TEKS: 6.9D, 6.9F LESSON 4 Benchmark Fractions GETTING STARTED ACTIVITY 1 TALK THE TALK | Day 8 TEKS: 6.9B, 6.9E LESSON 5 Multiplying Fractions GETTING STARTED ACTIVITY 1 | LESSON 5 continued ACTIVITY 2 TALK THE TALK | LEARNING INDIVIDUALLY Skills Practice This is a suggested placement. Move based on student data and individual needs. |
| Day 11 TEKS: 6.2E, 6.3A, 6.3E LESSON 6 Fraction by Fraction Division GETTING STARTED TALK THE TALK | Day 12 LESSON 6 continued | Day 13 LESSON 6 continued | Day 14 LEARNING INDIVIDUALLY | Day 15 END OF TOPIC ASSESSMENT |

Lesson 1 Assignment

Write

Explain the distributive property in terms of composing and decomposing numbers.

Remember

There are many ways to rewrite equivalent expressions using properties. The distributive property of multiplication over addition states that for any numbers a , b , and c , $ab + ac = a(b + c)$.

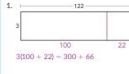
Write


Sample explanation: When you have a rectangle that is composed of two smaller rectangles, the area of the rectangle is equal to the sum of the two smaller rectangles, $a \cdot b + a \cdot c = a \cdot (b + c)$, where a and b are the dimensions of one rectangle and a and c are the dimensions of the other rectangle.


Practice

Decompose each rectangle into two or three smaller rectangles to demonstrate the distributive property. Then, write each area in the form $ab + c = a(b + c)$.

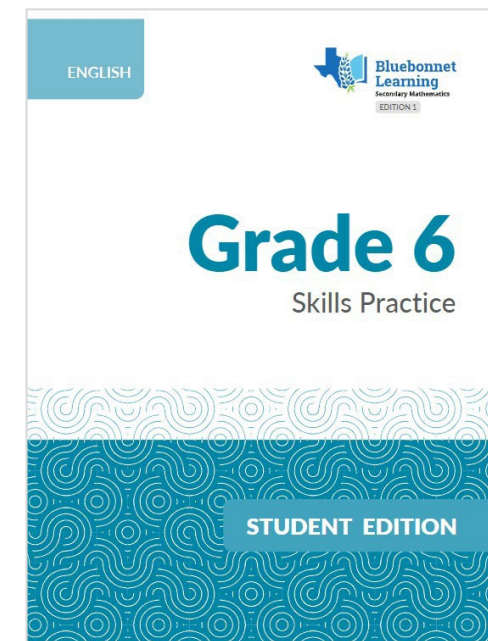
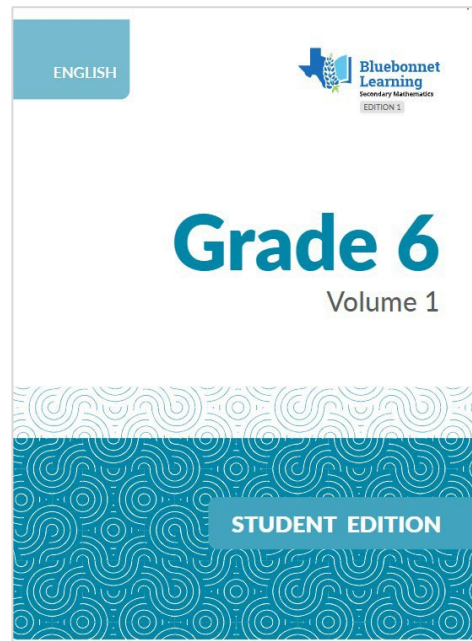
Sample answers:

1. 
 $3000 + 22 = 300 + 66$

2. 
 $6120 + 24 = 720 + 12$

3. 
 $6200 + 40 + 4 = 1200 + 240 + 24$

Bluebonnet Learning Secondary Math (3/3)



Worked Examples

WORKED EXAMPLE
Use a factor tree to write the prime factorization for 30.
a. Begin with the number 30.
b. Pick any whole number factor pair of 30, other than 1 and 30.
c. Draw a branch from 30 to each factor, 2 and 15.
d. Since one of the factors is not prime, you are not finished.
e. Because 2, 3, and 5 are all prime, this factor tree is complete.

Ask Yourself...
• What is the main idea?
• How would this work if I changed the numbers?
• Have I used these strategies before?

THINK UP
When you are a Thinker:
• Take your time to read through the correct solution.
• Think about the connections between steps.

THINK DOWN
When you are a Thinker:
• Take your time to read through the correct solution.
• Think about what error you made.

Ask Yourself...
• Why is this method correct?
• Where is the error?
• Why is it an error?
• How can I correct it?

GRADE 6 COURSE GUIDE

Family Guides

Resources for Students and Families

Course Family Guide
The Course Family Guide provides you and your family with an overview of the course design. The guide details the resources available to support your learning, such as the Math Glossary, the Topic Family Guide, the Topic Self-Reflection, and the Topic Summaries.

Engaging with Grade-Level Content
The purpose of the Course Family Guide is to foster your learning in the classroom to your learning at home. The goal is to empower you and your family to understand the concepts and skills learned in the classroom so that you can review, discuss, and solidify the understanding of those key concepts together.

Course Family Guide
This guide provides you and your family with an overview of the course design. The guide details the resources available to support your learning, such as the Math Glossary, the Topic Family Guide, the Topic Self-Reflection, and the Topic Summaries.

GRADE 6 COURSE GUIDE

Lessons

1 Writing Equivalent Expressions Using the Distributive Property

OBJECTIVES

- Write, read, and evaluate equivalent numeric expressions.
- Identify the adjacent side lengths of a rectangle as factors of the area value.
- Identify parts of an expression, such as the product and the factors.
- Write equivalent numeric expressions for the area of a rectangle by decomposing one side length into the sum of two or more numbers.
- Apply the distributive property to rewrite the product of two factors.

NEW KEY TERMS

- numeric expression
- equation
- distributive property

You know how to add, subtract, multiply, and divide numbers using different operations. Taking apart numbers before you perform a mathematical operation can highlight important information or make calculations easier.

How can taking apart numbers help you to express number sentences in different ways?

MODULE 1 • TOPIC 1 • LESSON 1

Application

Lesson 1 Assignment

Write
Explain the distributive property in terms of composing and decomposing numbers.

Remember
There are many ways to rewrite equivalent expressions using properties. The distributive property of multiplication over addition states that for any numbers a , b , and c , $ab + ac = a(b + c)$.

Practice
Decompose each rectangle into two or three smaller rectangles to demonstrate the distributive property. Then, write each area in the form $ab + ac = a(b + c)$.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335.



Learning Together

On **learning together** days, you spend time facilitating active learning so that students build their mathematical understanding and confidence in sharing ideas, listening to one another, and learning together.



Learning Individually

On **learning individually** days, you spend time on targeted instruction to meet the needs of each student. Skills Practice offers students the opportunity to engage with problems aligned to each lesson's essential ideas. It also provides opportunities for interleaved practice, which encourages students to flexibly move between individual skills, enhancing connections between concepts to promote long-term learning.

Bluebonnet Learning Secondary Math: Three Phases of the Instructional Approach

1

Engage

Activate student thinking by tapping into prior knowledge and real-world experience.

Provide an introduction that generates curiosity and plants the seeds for deeper learning.

2

Develop

Build a deep understanding of mathematics through a variety of activities.

Students encounter real-world problems, sorting activities, Worked Examples, and peer work analysis—in an environment where collaboration, conversations, and questioning are routine practices.

3

Demonstrate

Reflect on and evaluate what was learned.

Ongoing formative assessment underlies the entire learning experiences, driving real-time adjustments, next steps, insights, and measurements.

Bluebonnet Learning Secondary Math Phase 1: Engage

1

Engage

Activate student thinking by tapping into prior knowledge and real-world experience.

Provide an introduction that generates curiosity and plants the seeds for deeper learning.

Connecting Content and Practice

1

Writing Equivalent Expressions Using the Distributive Property

LESSON STRUCTURE
Each lesson of the course has the same structure. This consistency allows both you and your students to internalize the lesson progression. Key features of each lesson are noted.

1 Objectives
Objectives are stated for each lesson to help you take ownership of the objectives.

2 Essential Question
Each lesson begins with a statement connecting what you have learned with a question to ponder. Return to this question at the end of this lesson to gauge your understanding.

3 New Key Terms
The new key terms for each lesson are identified to help you connect your everyday and mathematical language.

1 OBJECTIVES

- Write, read, and evaluate equivalent numeric expressions.
- Identify the adjacent side lengths of a rectangle as factors of the area value.
- Identify parts of an expression, such as the product and the factors.
- Write equivalent numeric expressions for the area of a rectangle by decomposing one side length into the sum of two or more numbers.
- Apply the distributive property to rewrite the product of two factors.

2 You know how to add, subtract, multiply, and divide numbers using different strategies. Taking apart numbers before you perform a mathematical operation can highlight important information or make calculations easier.

How can taking apart numbers help you to express number sentences in different ways?

3 NEW KEY TERMS

- numeric expression
- equation
- distributive property

MODULE 1 • TOPIC 1 • LESSON 1

Engage
Establishing Mathematical Goals to Focus Learning
Create a classroom climate of collaboration and establish the learning process as a partnership between you and students.
Communicate continuously with students about the objectives of the lesson to encourage self-monitoring of their learning.

FM-16 GRADE 6 COURSE AND IMPLEMENTATION GUIDE

Getting Started

Break It Down to Build It Up

4 **Getting Started**
Each lesson begins with a Getting Started. When working on the Getting Started, use what you know about the world, what you have learned previously, or your intuition. The goal is just to get you thinking and ready for what's to come.

Ask Yourself ...
How can you use the area of rectangles in everyday life?

Sofia is building a rectangular walkway up to her house. The width of the walkway is 5 feet, and the length is 27 feet. She needs to calculate the area of the walkway to determine the amount of materials needed to build it.

1. Mark and label two different ways you could divide an area model to determine the area of the walkway.

Ask Yourself ...
How does representing mathematics in multiple ways help to communicate reasoning?

2. Determine the areas of each of the subdivided parts of your models.

3. What is the total area of the walkway?

Activating Student Thinking
Your students enter each class with varying degrees of experience and mathematical success. The focus of the Getting Started is to tap into prior knowledge and real-world experiences, to generate curiosity, and to plant seeds for deeper learning. Pay particular attention to the strategies students use, for these strategies reveal underlying thought processes and present opportunities for connections as students proceed through the lesson.

MODULE 1 • TOPIC 1 • LESSON 1

GRADE 6 COURSE AND IMPLEMENTATION GUIDE FM-17

Bluebonnet Learning Secondary Math Phase 2: Develop

2

Develop

Build a deep understanding of mathematics through a variety of activities.

Students encounter real-world problems, sorting activities, Worked Examples, and peer work analysis—in an environment where collaboration, conversations, and questioning are routine practices.

ACTIVITY 2.1 Prime Factors

DEVELOP

Facilitation Notes

In this activity, students create factor trees to write prime factorizations; they use exponents to express repeated factors.

Have a student read the introduction aloud. Discuss the Worked Example as a class.

QUESTION TO SUPPORT DISCOURSE

Gathering • What is meant by prime factorization?

Have students work with a partner or in small groups to complete Questions 1 through 3. Share responses as a class.

AS STUDENTS WORK, LOOK FOR

Confusion between listing all factors and writing the prime factorization of two numbers.

DIFFERENTIATION STRATEGIES

Access for All

- To help students see when their factor trees are complete, have them circle the prime factors at each branch's end.

Optimizing Learning

This differentiation strategy optimizes access to tools and assistive technology.

Just in Time Support

Materials Needed: Calculator

- To help students get started making a factor tree, show them how to use the calculator and the concept of remainders to determine whether a number is a factor of another number.

QUESTIONS TO SUPPORT DISCOURSE

| | |
|----------------------------------|--|
| Probing | • What is another factor pair you can use to start your factor tree? |
| Reflecting and justifying | • How can you check that your prime factorization is correct? |

Have a student read the text and definitions about exponents aloud. Discuss as a class. Have students work with a partner or in groups to complete Questions 4 and 5. Share responses as a class.

QUESTION TO SUPPORT DISCOURSE

Probing • What is the benefit of using powers?

Summary

You can use a factor tree to write the prime factorization of a number. You can use exponential notation to express a factor that is listed more than once.

5 Activities

You are going to build a deep understanding of mathematics through a variety of activities in an environment where collaboration and conversations are important and expected.

You will learn how to solve new problems, but you will also learn why those strategies work and how they are connected to other strategies you already know.

Remember

- It's not just about answer-getting. The process is important.
- Making mistakes is a critical part of learning, so take risks.
- There is often more than one way to solve a problem.

Activities may include real-world problems, sorting activities, Worked Examples, or analyzing sample student work.

Be prepared to share your solutions and methods with your classmates.

5 ACTIVITY 2.1 Prime Factors

You just determined the factors for a given number as well as the common factors that two numbers share.

In this activity, you will learn to determine the prime factors of a given number.

A factor tree is a way to organize the prime factors of a number. Choose any factor pair to get started.

WORKED EXAMPLE

Use a factor tree to write the prime factorization for 30.

- Begin with the number 30.
- Pick any whole number factor pair of 30, other than 1 and 30.
- Draw a branch from 30 to each factor, 2 and 15.
- Since one of the factors is not prime, you are not finished.
- Use branches to write a factor pair for 15.
- Because 2, 3, and 5 are all prime, this factor tree is complete.

1. Use the factor tree to write the prime factorization of 30.

The factor tree in the Worked Example is not the only factor tree you can create for 30.

2. How many different factor trees are there for 30?



16 MODULE 1 • TOPIC 1 • LESSON 2

Develop

Aligning Teaching to Learning

Students learn when they are actively engaged in a task: reasoning about the math, writing their solutions, justifying their strategies, and sharing their knowledge with peers.

Support productive struggle by allowing students time to engage with and persevere through the mathematics.

Support student-to-student discourse as well as whole-class conversations that elicit and use evidence of student thinking.

3

Demonstrate

Reflect on and evaluate what was learned.

Ongoing formative assessment underlies the entire learning experiences, driving real-time adjustments, next steps, insights, and measurements.

6 Talk the Talk

The Floor Is Yours

You can apply the distributive property to solve real-world problems. Consider the situation.

Diego is setting up the gym floor for an after-school program. He wants to include a rectangular area for playing volleyball and another for dodgeball. He also wants to have an area for kids who like to play board games or just sit and read. The gym floor is already 50 feet by 84 feet, or 4200 square feet.

1. Create a diagram to show how you would split up the gym floor. Represent your diagram using the distributive property and write an explanation for the areas assigned to each activity.

Sample answer:



$$\begin{aligned} 50(40 + 34 + 10) &= 50 \cdot 40 + 50 \cdot 34 + 50 \cdot 10 \\ &= 2000 + 1700 + 500 \\ &= 4200 \end{aligned}$$

I divided the length of the gym into three parts to create three areas of different sizes for each activity.

- I made the area for playing volleyball the largest, 50 feet by 40 feet.
- I made the area for playing dodgeball, 50 feet by 34 feet, close to the same size as the volleyball area but a bit smaller.
- I made the smallest area of the gym, 50 feet by 10 feet, for playing board games or reading since those are activities that require less movement.

6 Talk the Talk

Talk the Talk gives you an opportunity to reflect on the main ideas of the lesson.

- Be honest with yourself.
- Ask questions to clarify anything you don't understand.

Show what you know!

Don't forget to revisit the question posed on the lesson opening page to gauge your understanding.

10 MODULE 1 • TOPIC 1 • LESSON 1

Demonstrate

Ongoing Formative Assessment Drives Instruction

For students to take responsibility for their own learning, they need to be encouraged to self-assess. Students can use the Talk the Talk to monitor their own progress toward demonstrating proficiency of the objectives.

Listen and review their answers and explanations and provide feedback to help them improve their understanding.

As you plan the next lesson, consider the connections you can make to build off the strengths or fill any gaps identified from this formative assessment.



GRADE 6 COURSE AND IMPLEMENTATION GUIDE FM-19

Lesson 1 Assignment

ASSIGNMENT

An intentionally designed assignment follows each lesson. The assignment is an additional component that is useful for Tier 1 instruction.

7 Write

Reflect on your work and clarify your thinking.

8 Remember

Take note of the key concepts from the lesson.

9 Practice

Use the concepts learned in the lesson to solve problems.

There is one assignment per lesson. Lessons often span multiple days. Be thoughtful about which portion of the assignment students can complete based on that day's progress.

Use the assignment as homework throughout or after a lesson, as additional practice before students leave class, or as a review tool before assessments.

7 Write

Explain the distributive property in terms of composing and decomposing numbers.

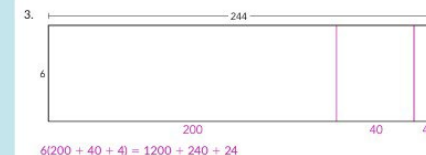
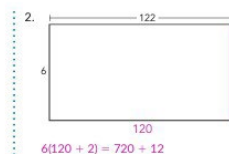
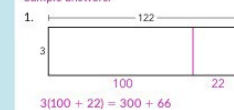
Remember 8

There are many ways to rewrite equivalent expressions using properties. The distributive property of multiplication over addition states that for any numbers a , b , and c , $a(b + c) = ab + ac$.

9 Practice

Decompose each rectangle into two or three smaller rectangles to demonstrate the distributive property. Then, write each area in the form $a(b + c) = ab + ac$.

Sample answers:



MODULE 1 • TOPIC 1 • LESSON 1 ASSIGNMENT 11

FM-20 GRADE 6 COURSE AND IMPLEMENTATION GUIDE



Post-Test

- What are the **two types of instructional days** in the Bluebonnet Learning Secondary Mathematics materials?
- What are the **three components** of a Bluebonnet Learning Secondary Mathematics lesson?
- What is **spaced practice** and how is it built into the Bluebonnet Learning Secondary Mathematics materials?

Reflection

- What do you want to remember about Bluebonnet Learning Secondary Mathematics?
- What do you want to learn more about?

Bluebonnet Learning Portal

Access Digital Versions of SBOE-Approved Bluebonnet Learning Instructional Materials, Implementation Resources, and Order Printed Materials

Changes to TEA-Available Instructional Materials

Bluebonnet Learning

In November 2024, Bluebonnet Learning Edition 1 instructional materials were approved through the Instructional Materials Review and Approval (IMRA) process by the State Board of Education (SBOE):

- K–3 Foundational Skills
- K–5 Reading Language Arts
- K–5 Math
- Secondary Mathematics (Grades 6–8, Algebra I)

In May 2025, the Bluebonnet Learning Portal will be launched.

All Bluebonnet Learning instructional materials, implementation supports, and Bluebonnet Learning pilot programs will be available on the portal.

COVID Emergency Release (CER) Versions

On July 31, 2025, the CER pilot instructional materials that align with SBOE-approved Bluebonnet Learning materials **will be removed from all TEA platforms** [e.g., TEA Instructional materials website, Texas Gateway, Test Delivery System (TDS), OER-Assessment Viewing Application (AVA)].

The following CER pilot instructional materials **will remain** available until submitted for the IMRA process and approved by the SBOE:

- Pilot Accelerated Math (Grade 6 and 7)
- Pilot Geometry
- Pilot Algebra II

Statutory Requirement for Removal of CER Versions

TEC 31.0721(c) states that open education resources instructional materials made available under this section may not remain available once amended or modified unless the material as amended or modified is reviewed under Section 31.023 and included on the list of approved materials maintained by the State Board of Education (SBOE) under section 31.022.

Bluebonnet Learning Portal

The Bluebonnet Learning Portal provides access to all State Board of Education (SBOE)-approved Bluebonnet Learning instructional materials, TEA-created implementation supports, and pathways to order print materials.

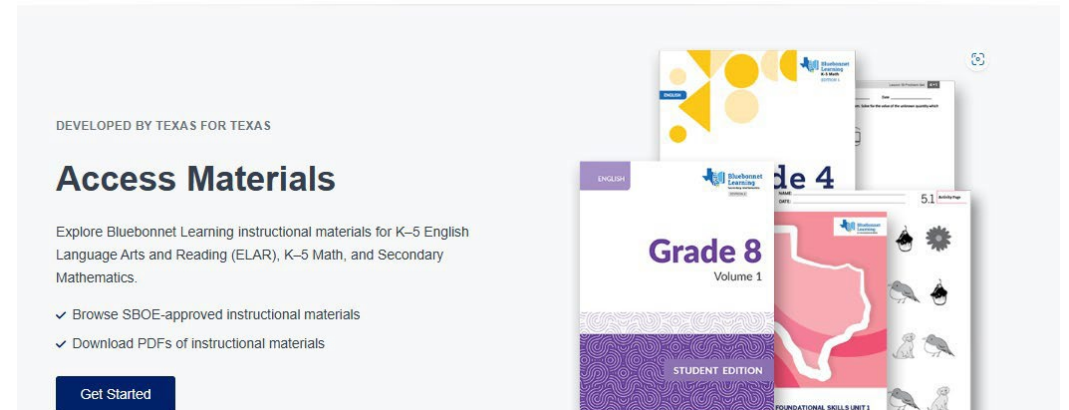
The portal provides open access to all Bluebonnet Learning instructional materials, for any Texan, with no login necessary.

Districts interested in making the materials available in their own Learning Management System (LMS) or Content Management System (CMS) should reach out to the [Instructional Materials Help Desk](#).



Bluebonnet Learning Portal

Access State Board of Education (SBOE)-Approved Bluebonnet Learning instructional materials and TEA-created implementation resources.



Bluebonnet.TEA.Texas.gov

Legislative Updates



Log In & Learn District Toolkit

Communication Tools for STAAR Results

- District Log in & Learn More Toolkit
 - Released on April 14th
 - Earlier than ever based on feedback from our colleagues
- Tools included in English & Spanish
 - Log In & Learn More One-Pagers
 - Parent-Teacher Conference Planning Tools
 - Sample Email(s)
 - Sample Social Media Posts & Assets

Popular Applications AAITD ECOS for Educators Grant Opportunities Secure Applications TEA Login TSDS

TEA Texas Education Agency

A-Z Index Contact Employment State Board of Education Sign Up for Updates TEA Correspondence

About TEA Texas Schools Academics Finance & Grants Reports & Data Student Assessment Texas Educators

Home Student Assessment STAAR

Log In & Learn More Tool Kit
District resources for communicating STAAR results to families

TEA ASSESSMENT

LOG IN & LEARN MORE

Beginning June 10 (end-of-course) and June 17 (grades 3-8), visit TexasAssessment.gov to Log In & Learn More about your child's STAAR results and how you can provide additional support at home.

The purpose of this Log In & Learn More district communication tool kit is to provide local educational agencies with resources for communicating with families about getting their child's STAAR scores. District testing personnel may also refer to the Family Portal information webpage for information on helping families access the Family Portal.

Log In & Learn More One-Pagers

Spring STAAR EOC assessment results will be available to families on **Tuesday, June 10, 2025**. Grades 3-8 Assessment results will be available to families on **Tuesday, June 17, 2025**.

The easiest way for parents and guardians to access the Family Portal is through a district's local family portal, where district personnel can set up an auto-log-in link provided by the district's Student Information System (SIS) vendor. The auto-log-in link provides parents and guardians quick access to the Family Portal via single sign-on (SSO). This process also allows parents and guardians to bypass the Family Portal log-in screen and the unique access code.

TEA Texas Education Agency

★ STAR

LOG IN & LEARN MORE

Beginning June 10 (end-of-course) and June 17 (grades 3-8), visit TexasAssessment.gov to Log In & Learn More about your child's STAAR results and how you can provide additional support at home.

FOLLOW 4 EASY STEPS!

STEP 1
You will receive a secure email with your child's unique student access code. Write your child's unique student access code here for easy reference this summer: _____

STEP 2
Log in beginning June 10 for STAAR end-of-course assessments on June 17 for STAAR grades 3-8 assessments by visiting TexasAssessment.gov to Log In with your child's unique student access code.

PARENTS AND FAMILIES ARE CRITICAL
The Texas Education Agency is committed to having an accurate picture of your child's progress and learning needs.

BACK TO SCHOOL Parent-Teacher Conference Tool

Parents and teachers are strong partners in your child's success in the classroom especially when working together. Teachers are the experts in classroom learning, and parents are the experts on their children. Share what you know about your child with the teacher so they can best connect with your child in class.

BEFORE THE CONFERENCE

1. HELP THE TEACHER GET TO KNOW YOUR CHILD
Think about what's most important for the teacher to know about your child.

2. PINPOINT ACADEMIC PROGRESS
Log in and view your child's STAAR results from this year. You can find the link in your district's parent portal, or visit TexasAssessment.gov.

3. PARTNER UP ON A PLAN
Find out what is expected of your child this year and make a plan for how to help at home.

Share with your child's teacher:
My child is doing well in...
My child needs help in...
Take notes on your child's scores in each subject:
Where did your child do well?
Where does your child need help?

Ask your child's teacher and take notes on the following:
How will you help my child make progress in the skills my child needs help with?
What are the most important skills my child needs to learn this year?
How can I support these skills at home?

Log In & Learn More

Paying attention to your child's progress and learning needs prepares your child for this year and the following milestones: moving into the next grade, middle school, and high school. Your child is taking on new challenges—and your support makes all the difference. You are your child's greatest advocate so **Log In & Learn More!**

Intervention Follow Up

UA 2+ letters outline next steps for districts

| Consecutive Unacceptable Count | Turnaround Plan Implications |
|--------------------------------|--|
| 2 | Develop a turnaround plan; due June 30, 2025 OR Modify an approved turnaround plan <ul style="list-style-type: none">Some campuses got a 2nd unacceptable rating in 2019 and developed a TAP (approved in May or July 2020), then got a D in 2023 → held at UA 2 |
| 3 | Implement an approved turnaround plan (can/should submit modification) |
| 4 | Continue TAP implementation <ul style="list-style-type: none">Can still submit plan modification, but the work is essentially done; consider implications with Governance team |

In the email with the letter attachment, all districts with a UA2 campus will be notified that if they have internally calculated a 2024 overall scale score of 70 or above, they should first have Performance Reporting confirm their calculation and then send the SI Division an email letting us know they improved (no TAP development required).

College Prep Courses

Awarding progress of 436 total SFI applications

