



Diagnostic Guide

Grade 4

What this document covers

Section 1 Diagnostic Assessment Interface.

Section 2 Guide to Diagnostic Skill Entry Points (Tables 1–3).

Overview and Purpose

The Beginning-of-Year (BOY) Screener is a targeted diagnostic assessment consisting of 20 questions designed to evaluate student mastery of prerequisite standards from the prior grade level. For Grade 4, the screener specifically assesses Grade 3 TEKS to determine each student's readiness for on-grade-level instruction.

This diagnostic tool serves three primary functions:

1. **Snapshot of Readiness:** Measures student mastery of the previous grade's standards to establish a baseline for instruction.
2. **Actionable Insights:** Highlights specific strengths and areas of growth for both whole-class planning and individual student intervention.
3. **Automated Recommendations:** Assessment data automatically generates initial Practice Mode recommendations, assigning the specific skill entry points and interventions detailed in this guide.

How to Use This Guide

Based on the actionable insights generated by the screener, educators should use the following tables to identify and assign the appropriate skill entry points and interventions:

- **For Targeted Practice (Table 1):** Assign these Practice Cards for students who need a focused refresher on specific discrete skills (e.g., below 70% proficiency on individual questions). These can be used for independent work, station activities, or homework.
- **For Comprehensive Reteaching (Table 2):** Use these Grade 3 instructional chapters and sections for students demonstrating significant gaps across an entire domain (e.g., below 50% proficiency). These resources provide the conceptual foundation and guided instruction necessary to rebuild understanding before attempting Grade 4 content.
- **For Vertical Alignment (Table 3):** Refer to this matrix to see how each prerequisite skill connects to upcoming Grade 4 TEKS and chapters. Use this to prioritize interventions that are most critical for the specific Grade 4 content currently being taught.

Section 1: Diagnostic Assessment Interface

The figure below demonstrates the teacher's view of the Grade 4 BOY Screener. This digital interface captures the student response data necessary to generate the recommended skill entry points and interventions detailed in Tables 1, 2, and 3.

Figure 1. Grade 4 Beginning-of-Year Diagnostic Screener — Teacher View

Texas Screeners > Grade 4 > ☐ Grade 4 - BOY - TX

☐ Mild

1. Which number does the expanded notation represent?
 $40,000 + 3,000 + 70 + 5$

☐ 43075

2. Compare using <, >, or =.
 $31,234$ $9,885$

< ☐ > ☐

= ☐

3. Color the empty tape diagram to find the missing number.
 $\frac{4}{6} = \frac{2}{3}$
 What number should replace the question mark?

☐ 2

4. Compare using <, >, or =.
 $\frac{2}{6}$ $\frac{2}{8}$

< ☐ > ☐

= ☐

5. Add.
 $722 + 49 =$

☐ 771

8. A room has 5 rows of chairs, and each row has 8 chairs.
 How many chairs are in the room?

☐ 40

9. A zoo has 63 fish to share equally between 7 seals.
 How many fish does each seal get?

☐ 9

10. Andrea is walking to the bus stop from her house. She has already walked 18 meters to the end of her block. She then walks 17 meters to reach a trashcan, throws out her morning coffee, and walks 6 more meters to the bus stop.
 Which number line shows Andrea's movement from the end of her block correctly?

A

B

C

D

☐ A ☐ B ☐ C ☐ D

15. Select the square.

A C B D

A ☐ B ☐ C ☐ D ☐

16. What shape is the given figure?

Sphere ☐ Cone ☐ Cylinder ☐ Cube ☐

17. Each small square has a length of 1 centimeter.
 Find the area of the entire rectangle.

☐ 30 cm²

6. Subtract.

$285 - 236 =$

49

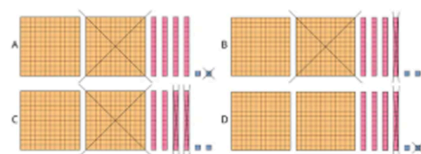
7. A frog lays 345 eggs on Monday and 78 eggs on Tuesday. On Wednesday, 92 eggs hatch. How many eggs are left on Wednesday?



331

11. Select the correct model that represents the subtraction.

$242 - 101$



A

B

C

D

12. Solve the multiplication by creating an array.

$7 \times 6 =$

42

13. There are 18 apples. They are packed into bags with 3 apples in each.

How many bags are made? Solve using a strip diagram.

6

14. An amusement park charges the same amount for each ticket. The table shows the relationship between the number of tickets and the total cost. Fill in the entire table.

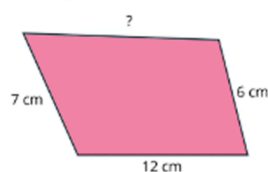
How much do 5 tickets cost?

Number of Tickets	Total Cost (\$)
1	8
2	
3	
4	
5	

\$40

18. The perimeter of the figure is 38 cm.

What is the length of the missing side?



13 cm

19. Ms. Rivera asked each student in her class how many sandwiches they ate during a week. The result is represented in the dot plot.

How many students ate more than 3 sandwiches?

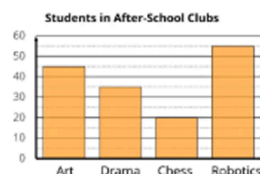
Number of sandwiches eaten



5

20. The bar graph shows how many students are in each after-school club at a school.

How many more students are in the club with the most students than the club with the least students?



45

Section 2: Guide to Diagnostic Skill Entry Points

Table 1: Diagnostic Intervention Guide — Recommended Practice Cards

This table maps each diagnostic question to targeted Practice Cards within the curriculum. These resources are designed for immediate, focused intervention—allowing students to practice the specific discrete skills identified as gaps (e.g., below 70% proficiency) without pausing the entire class for a full reteach. Teachers can assign these cards as independent work, station activities, or homework to efficiently close skill gaps.

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 3)	Recommended Practice Cards
Number System and Place Value	Q1	3.2.A	• Write numbers in expanded form up to 1,000
	Q2	3.2.D	• Compare multi-digit whole numbers
Fractions and Rational Numbers	Q3	3.3.F	• Identify simple equivalent fractions visually
	Q4	3.3.H	• Compare fractions with same numerator
Operations	Q5, Q6, Q7	3.4.A	• Add 3-digit numbers (up to 1,000) • Subtract 3-digit numbers (up to 1,000)
	Q8, Q9	3.4.K	• Solve multiplication word problems within 100 • Solve division word problems within 100
Algebraic Reasoning	Q10, Q11	3.5.A	• Solve addition word problems up to 20 • Subtract 3-digit numbers (up to 1,000)
	Q12, Q13	3.5.B	• Multiply whole numbers with 10, 100, or 1,000 • Solve 2-step word problems using mult. and div.
	Q14	3.5.E	• Compare functions in different representations
Geometry and Measurement	Q15, Q16	3.6.A	• Identify and describe 2-D shape attributes • Identify and describe 3-D shape attributes
	Q17	3.6.C	• Calculate rectangle area with whole number sides
	Q18	3.7.B	• Calculate polygon perimeters
Data Analysis	Q19, Q20	3.8.A	• Interpret data in line plots • Draw and interpret scaled bar graphs

Table 2: Prerequisite Reteach Guide — Grade 3 Instructional Alignment

For students demonstrating significant gaps (e.g., below 50% proficiency) across an entire domain, targeted practice alone may not be sufficient. This table directs educators to the full Grade 3 instructional chapters and sections required for deep reteaching. These resources provide the conceptual foundation and guided instruction necessary to rebuild prerequisite understanding before students attempt Grade 4 content.

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 3)	Recommended Chapter	Recommended Sections
Number System and Place Value	Q1	3.2.A	Understanding Whole Numbers and Place Value	• Reading and writing 4-digit numbers • Reading and writing 5-digit numbers
	Q2	3.2.D	Understanding Whole Numbers and Place Value	• Compare 4-digit whole numbers • Compare 5-digit whole numbers
	Q3	3.3.F	Representing and Explaining Fractional Units	• Equivalent fractions
	Q4	3.3.H	Representing and Explaining Fractional Units	• Comparing fractions (same num. or den.)
Operations	Q5, Q6, Q7	3.4.A	Addition and Subtraction of Whole Numbers	• Add and subtract within 1,000 • Adding 2-digit numbers • Adding 2-digit to 3-digit numbers • Adding 3-digit numbers, sum < 1,000 • Adding up to four 2-digit numbers • Multi-step word problems: add and subtract • Subtracting 2-digit from 3-digit numbers • Subtracting 3-digit numbers
	Q8, Q9	3.4.K	Solving Problems Involving Whole Numbers	• Division word problems • Multiplication word problems • Two-step word problems
Algebraic Reasoning	Q10, Q11	3.5.A	Addition and Subtraction of Whole Numbers	• Add and subtract within 1,000 • Adding 2-digit numbers • Adding 2-digit to 3-digit numbers • Adding 3-digit numbers, sum < 1,000 • Adding up to four 2-digit numbers • Multi-step word problems: add and subtract • Subtracting 2-digit from 3-digit numbers • Subtracting 3-digit numbers
	Q12, Q13	3.5.B	Multiplication	• Division word problems • Multiplication word problems • Two-step word problems

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 3)	Recommended Chapter	Recommended Sections
	Q14	3.5.E	Solving Problems Involving Whole Numbers	Real-world relationships
Geometry and Measurement	Q15, Q16	3.6.A	2D and 3D Figures	2D figures: square, rectangle, triangle, circle - Identify 3D figures: sphere, pyramid, cube, rectangular prism, cylinder
	Q17	3.6.C	Area and Perimeter	Area of rectangles
	Q18	3.7.B	Area and Perimeter	Perimeter of polygons
Data Analysis	Q19, Q20	3.8.A	Displaying and Interpreting Data	- Bar graphs with multi-unit scale - Line plots - Pictographs: 2, 5, or 10 unit scale - Tables and frequency tables

Table 3: Vertical Alignment Matrix — Connecting Prerequisites to Grade 4 Content

This matrix illustrates the instructional bridge between the Grade 3 prerequisite skills assessed in the diagnostic and the upcoming Grade 4 Target TEKS. It provides the rationale for intervention by showing exactly which Grade 4 chapters and units rely on these prerequisites. Educators should use this table to prioritize interventions that are most critical for the specific Grade 4 content currently being taught.

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 3)	Aligned Target TEKS (Grade 4)	Chapters Addressed
Number System and Place Value	Q1	3.2.A	4.2	- Understanding Decimals - Understanding Place Value of Whole Numbers
	Q2	3.2.D	4.2	- Understanding Decimals - Understanding Place Value of Whole Numbers
	Q3	3.3.F	4.3	- Fractions - Understanding Decimals
	Q4	3.3.H	4.3	- Fractions - Understanding Decimals
Operations	Q5, Q6, Q7	3.4.A	4.4	- Multistep Problems - Adding and Subtracting - Multiplication and Division of Whole Numbers
	Q8, Q9	3.4.K	4.4	- Multistep Problems - Adding and Subtracting - Multiplication and Division of Whole Numbers
Algebraic Reasoning	Q10, Q11	3.5.A	4.5	- Multistep Problems - Patterns, Perimeter, and Area
	Q12, Q13	3.5.B	4.4	- Multistep Problems - Adding and Subtracting - Multiplication and Division of Whole Numbers
	Q14	3.5.E	4.5	- Multistep Problems - Patterns, Perimeter, and Area
Geometry and Measurement	Q15, Q16	3.6.A	4.6	2D Shapes
	Q17	3.6.C	4.5	- Multistep Problems - Patterns, Perimeter, and Area
	Q18	3.7.B	4.5	- Multistep Problems - Patterns, Perimeter, and Area

Diagnostic Strand	Question(s)	Prerequisite TEKS (Grade 3)	Aligned Target TEKS (Grade 4)	Chapters Addressed
Data Analysis	Q19, Q20	3.8.A	4.9	• Data Analysis