Proficiency Scales

Mathematics
Grade 3
2020

SOUTHWESTERN UNION
EDUCATION

PROFICIENCY SCALES

Proficiency scales serve as a starting point for unit planning, creating assessments, delivering instruction, grading, and reporting progress, as well as making teaching visible to students and guiding their growth on the standards. Specifically, a proficiency scale is a continuum or learning progression that articulates distinct levels of knowledge and skills relative to specific standards. It shows teachers and students what proficiency looks like, what knowledge and skills students need to achieve proficiency, and how students might go beyond proficiency.

A proficiency scale is composed of a series of levels as follows:

Score 3.0—Heart of the proficiency scale; it defines the target content that teachers expect all students to know and be able to do. I CAN statements are provided for this level.

Score 2.0—Simpler content; it describes the foundational knowledge and skills that students will need to master before progressing to proficiency.

Score 4.0—Challenging content; it provides students the opportunity to go above and beyond expectations by applying their knowledge in new situations or demonstrating understanding beyond what the teacher teaches in class. A generic statement is provided for this level.

Scores 1.0 and 0.0—No specific content; 1.0 indicates that a student can demonstrate some knowledge or skill with help from the teacher, but not independently; 0.0 means that, even with help, a student cannot show any understanding. Generic statements are provided for these levels.

Half-point Scores—More precise measurement of knowledge and skills that is between two levels. Generic statements are provided for these levels.

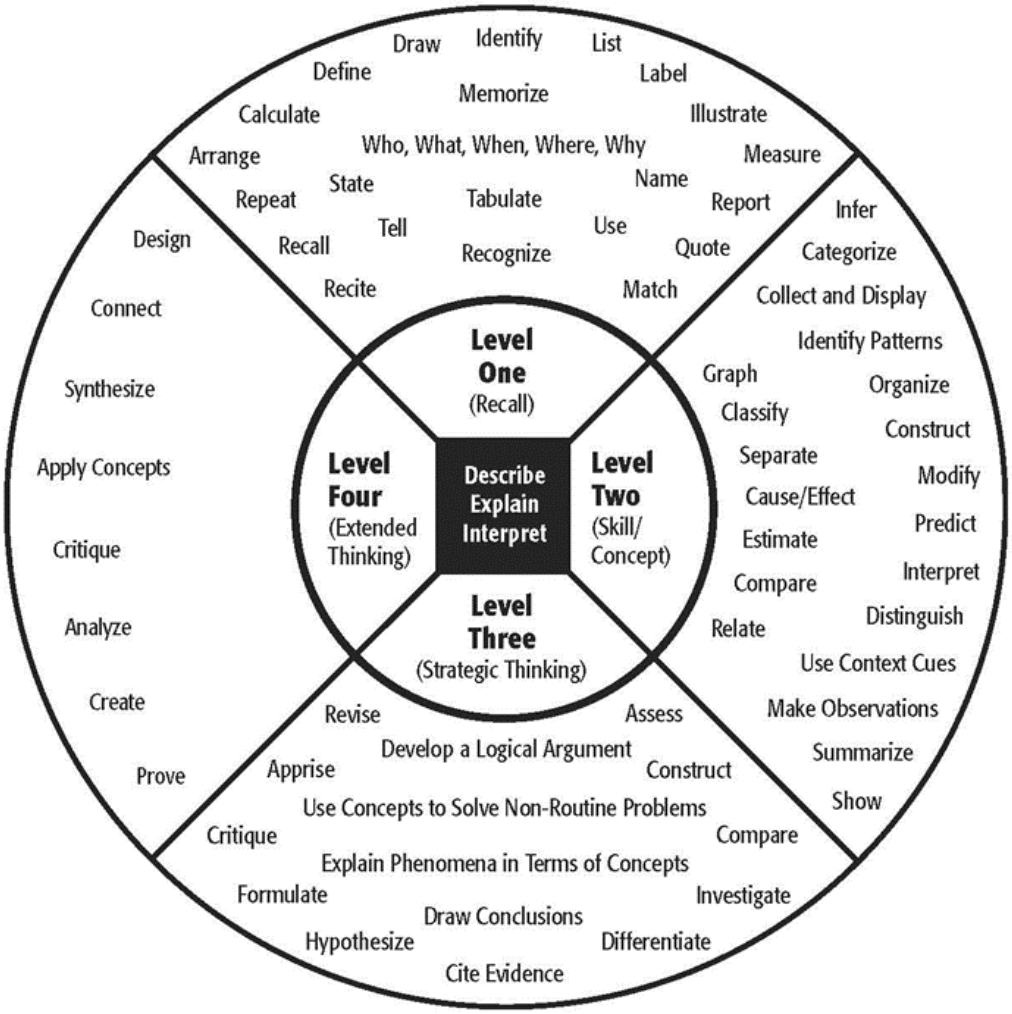
Proficiency scales become the centerpiece of communication and understanding in the classroom, as well as the common language for discussing learning between teacher and student.

The proficiency scales are organized according to the domains and strands in the NAD standards.

The cognitive rigor or complexity of the 3.0 learning targets has also been included, for it impacts the selection of instructional activities as well as assessment tasks. The Depth of Knowledge (DOK) model is generally used for this purpose, which is a taxonomy of four levels of cognitive demand. The levels are:

- **Level 1**—Recall
- **Level 2**—Skill/Concept
- **Level 3**—Strategic Thinking
- **Level 4**—Extended Thinking

Depth of Knowledge (DOK) Levels



Level One Activities	Level Two Activities	Level Three Activities	Level Four Activities
Recall elements and details of story structure, such as sequence of events, character, plot and setting.	Identify and summarize the major events in a narrative.	Support ideas with details and examples.	Conduct a project that requires specifying a problem, designing and conducting an experiment, analyzing its data, and reporting results/ solutions.
Conduct basic mathematical calculations.	Use context cues to identify the meaning of unfamiliar words.	Use voice appropriate to the purpose and audience.	Apply mathematical model to illuminate a problem or situation.
Label locations on a map.	Solve routine multiple-step problems.	Identify research questions and design investigations for a scientific problem.	Analyze and synthesize information from multiple sources.
Represent in words or diagrams a scientific concept or relationship.	Describe the cause/effect of a particular event.	Develop a scientific model for a complex situation.	Describe and illustrate how common themes are found across texts from different cultures.
Perform routine procedures like measuring length or using punctuation marks correctly.	Identify patterns in events or behavior.	Determine the author's purpose and describe how it affects the interpretation of a reading selection.	Design a mathematical model to inform and solve a practical or abstract situation.
Describe the features of a place or people.	Formulate a routine problem given data and conditions.	Apply a concept in other contexts.	
	Organize, represent and interpret data.		

Webb, Norman L. and others. "Web Alignment Tool" 24 July 2005. Wisconsin Center of Educational Research. University of Wisconsin-Madison. 2 Feb. 2006. <http://www.wcer.wisc.edu/WAT/index.aspx>.

DISCIPLINARY TRANSFER GOALS

There are a small number of overarching, long-term transfer goals in each subject area. They are meant to be integrated within and across grade-level instruction. Below are the transfer goals for math.

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

ESSENTIAL QUESTIONS AND BIG IDEAS for MATH DOMAINS

Numbers and Operations

Essential Question: What does numerical reasoning involve and what does it demonstrate about God's world?

Big Idea: Numerical reasoning with whole numbers and fractions demonstrates dependability and order in God's world.

Operations and Algebraic Thinking

Essential Question: How do mathematical operations connect us to an infinite God?

Big Idea: Solving problems through mathematical operations reveals numerical patterns that demonstrate God's unchanging order and constancy.

Measurement

Essential Question: What do the systems of measurement reveal about God's creation?

Big Idea: Accurately measuring and quantifying objects in God's creation demonstrates His dependability and precision.

Geometry

Essential Question: What does geometry reveal about God?

Big Idea: God is revealed as the Master Designer when geometry is used as a means of describing the attributes of the physical world.

Data Analysis, Statistics, and Probability

Essential Question: How can we collect and use information in a way that reflects God's orderly creation?

Big Idea: Information from God's vast creation can be measured, recorded, and displayed to assist in understanding and decision making.

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Place Value**	Grade: **3**

Standard: 3.NO.1 Use place value understanding of up to five-digit whole numbers to round to the nearest 10, 100, and 1,000 (3.NBT.1)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Use place value understanding to round whole numbers within 1,000 to the nearest 10 and 100 *(e.g., round the numbers 23, 50, 95, 447, 283, 509, and 962 to the nearest 10 and the nearest 100)* **DOK 2** **I can round whole numbers up to 1,000 to the nearest 10 and 100.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Estimate, nearest, place value, round, whole number* The student will perform basic processes, such as: • Explain that rounding helps to estimate • Use place value understanding to round whole numbers within 1,000 to the nearest 10 and 100 with visual support *(e.g. use a number line to answer the questions, What multiples of 10 are immediately above and below the number 66? Which ten is closer?)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Addition/Subtraction**	Grade: **3**

Standard: 3.NO.2 Add and subtract up to four digits with and without regrouping (3.NBT.2)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Add and subtract within 1,000, with and without regrouping, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction *(e.g., calculate the sums of 705 + 180, 254 + 336, and 492 + 209; calculate the differences of 947-306, 738-519, and 804-175)* **DOK 2** **I can add and subtract numbers up to 1,000 with and without regrouping.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Add, addend, addition, algorithm, calculate, decompose, difference, model, operation, place value, property, regrouping, relationship, strategy, subtract, subtraction, sum* The student will perform basic processes, such as: • Add and subtract within 1000 without regrouping using concrete models or drawings *(e.g., calculate the sum of 483 + 314; calculate the difference of 945 – 423 using concrete models or drawings)* • Explain why addition and subtraction strategies work, using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction *(e.g., when adding 346 + 252, decompose each addend and add place values, such as 300 + 40 + 6 + 200 + 50 + 2; a subtraction problem can be thought of as a "missing addend" addition problem, such as 27 – 13 = ?, 27 = 13 + ?)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content

Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Fractions**	Grade: **3**

Standard: 3.NO.3 Understand, express, and order fractions between zero and one, simple mixed numbers, and whole numbers as fractions (3.NF.1,2)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Represent fractions 1/*b* and *a/b* on a number line *(e.g., locate the fractions 1/3, 3/4, 3/3, and 8/6 on a number line by counting the appropriate number of unit fractions from 0)* **DOK 2** **I can locate fractions on a number line.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Divided, equal, fraction, number line, part, quantity, size, unit, whole* The student will perform basic processes, such as: • Explain that a fraction is a number on the number line • Describe zero to one on a number line as one whole • Describe a fraction 1/*b* as the quantity formed by 1 part when a whole is divided into *b* equal parts *(e.g., 1/3 is the quantity formed by 1 part when the whole is divided into 3 equal parts)* • Describe a fraction *a/b* as the quantity formed by *a* parts of size 1/*b (e.g., 3/4 is the quantity formed by 3 parts of size 1/4)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Numbers and Operations** Strand: **Fractions**	Grade: **3**

Standard: 3.NO.4 Understand and create equivalent fractions with denominators 2, 3, 4, 6, 8 using fraction models (3.NF.3)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Generate simple equivalent fractions *(e.g., 1/2 = 2/4, 4/6 = 2/3)* and explain why they are equivalent *(e.g., by using a visual fraction model)* **DOK 2** **I can create equivalent fractions and tell why they are equivalent.** • Express whole numbers as fractions (e.g., *express 3 in the form 3 = 3/1)* **DOK 2** **I can write whole numbers as fractions.** • Compare two fractions with the same numerator or denominator using the symbols >, =, < and justify the comparison *(e.g., compare the fractions 1/3 and 1/6, 2/4 and 3/4, and 3/6 and 3/8 using the symbols >, =, <; justify the comparisons by using a visual fraction model)* **DOK 3** **I can show how fractions compare using >, =, or <.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Compare, comparison, denominator, equivalent, express, fraction, generate, justify, model, number line, numerator, recognize, simple fraction, visual, whole number* The student will perform basic processes, such as: • Explain that two fractions are equivalent if they are the same size, or the same point on a number line *(e.g., by using a visual model)* • Recognize simple equivalent fractions with a visual model *(e.g., locate 1/2 and 2/4 at the same point on a given number line)* • Recognize fractions that are equivalent to whole numbers with a visual model *(e.g., locate 4/4 and 1 at the same point on a given number line)* • Compare two fractions with the same numerator or same denominator using visual fraction models *(e.g., given pictures of cookies with 1/3 of the parts shaded in one cookie and 1/4 of the parts shaded in the other cookie, tell whether the shaded parts are equivalent)*	

	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Operations and Algebraic Thinking** Strand: **Multiplication/Division**	Grade: **3**

Standards: 3.OAT.1 Understand the meaning and relationship of multiplication and division (3.OA.1,2,6)
3.OAT.2 Memorize and fluently multiply and divide using the multiplication facts through 10 (3.OA.3,7); mentally multiply by 10 and 100 (3.NBT.3)
3.OAT.3 Represent and determine the unknown whole number in an equation (3.OA.4)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Use multiplication and division within 100 to solve word problems involving equal groups, arrays, and measurement quantities *(e.g., If 24 plums are shared equally into 4 bags, then how many plums will be in each bag? Use drawings and equations with a symbol for the unknown number to represent the problem.)* **DOK 3** **I can use multiplication and division to solve word problems.** • Determine the unknown whole number in a multiplication or division equation relating three whole numbers *(e.g., 8 x ? = 48, 5 = ___ ÷ 3, 6 x 6 = ?)* **DOK 2** **I can find the missing number in a multiplication or division equation.** • Multiply one-digit whole numbers by multiples of 10 in the range of 10 to 90 using strategies based on place value and properties of whole numbers *(e.g., 9 x 80, 5 x 60)* **DOK 2** **I can multiply one-digit whole numbers by 10.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Addition, array, digit, divide, division, equation, interpret, multiplication, multiple, multiply, number, operation, order, partition, place value, product, property, quotient, relate, represent, share, strategy, symbol, unknown, unknown-factor problem, whole number, word problem* The student will perform basic processes, such as: • Interpret products of whole numbers *(e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each; describe a context in which a total number of objects can be expressed as 5 x 7)* • Interpret whole-number quotients of whole numbers *(e.g., interpret 56 ÷ 8 as*	

<table>
<tr><td></td><td colspan="2">the number of objects in each share when 56 objects are partitioned into equal shares of 8 objects each; describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8)
• Explain that multiplication is repeated addition (e.g., 3 x 4 = 4 + 4 + 4) and since multiplication is related to addition, order doesn’t matter when you multiply (e.g., 3 x 4 is the same as 4 x 3)
• Explain that division is an unknown-factor problem (e.g., find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8)
• Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations
• Know from memory all products of two one-digit numbers</td></tr>
<tr><td></td><td>Score 1.5</td><td>Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content</td></tr>
<tr><td>Score 1.0</td><td colspan="2">With help, partial success at score 2.0 content and score 3.0 content</td></tr>
<tr><td></td><td>Score 0.5</td><td>With help, partial success at score 2.0 content but not at score 3.0 content</td></tr>
<tr><td>Score 0.0</td><td colspan="2">Even with help, no success</td></tr>
</table>

Subject: **Math**	Domain: **Operations and Algebraic Thinking** Strand: **Problem Solving**	Grade: **3**

Standards: 3.OAT.5 Solve two-step word problems using the four basic operations and estimate to check (3.OA.8)
3.OAT.6 Begin to understand and apply the standard order of operations (3.OA.8)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Solve two-step word problems using the four operations with a letter standing for the unknown quantity in the equation *(e.g., when given that a boy bought a 27-ounce bag of dog treats for his dogs, and when given that he gave 6 ounces to each dog with 3 ounces left over, determine how many dogs the boy has)* **DOK 3** **I can solve two-step word problems using addition, subtraction, multiplication, and division.** • Assess the reasonableness of answers using mental computation and estimation strategies including rounding *(e.g., if the equation is 78 – 39 = 39, reason this makes sense because 78 rounds to 80 and 39 rounds to 40; 80 – 40 = 40; 39 is about 40)* **DOK 2** **I can use mental math and rounding to check if answers are reasonable.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Addition, computation, division, equation, estimation, mental, multiplication, operation, quantity, reasonableness, represent, rounding, solution, strategy, subtraction, symbol, unknown, word problem* The student will perform basic processes, such as: • Explain that an unknown in a problem can be represented with a symbol *(e.g., 13 – 7 = n)* • Explain that problems may have more than one step needed in order to find a solution • Represent two-step word problems using equations with a letter standing for the unknown quantity *(e.g., when given that over the course of a week a girl ran a total of 7 miles more than her friend who ran 14 miles, and when given that the girl ran the same number of miles every day, write one or more equations to represent how far the girl ran each day)*	

	• Explain that rounding can be used to assess reasonableness of answers	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Operations and Algebraic Thinking** Strands: **Multiplication/Division, Patterns**	Grade: **3**

Standards: 3.OAT.4 Apply properties of operations (commutative, associative, distributive) to multiply and divide (3.OA.5)
3.OAT.7 Identify arithmetic patterns using properties of operations (3.OA.9)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Apply properties of operations (commutative, associative, distributive) as strategies to multiply and divide *(e.g., when given the expression 6 x 8, rewrite the expression as (6 x 4) + (6 x 4) or as 6 x (2 x 4))* **DOK 2** **I can use properties of operations to multiply and divide.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Addition table, arithmetic patterns, divide, expression, multiplication table, multiply, operation, property, strategy* The student will perform basic processes, such as: • Recognize and recall the properties of multiplication (commutative, associative, distributive) *(e.g., commutative property—the order of numbers in multiplication does not change the product; associative property—numbers can be regrouped in a multiplication problem without changing the product; distributive property—one factor can be decomposed into parts, each part is multiplied separately by the other factor, then the results are added)* • Identify arithmetic patterns in the addition and multiplication tables and explain them using properties of operations *(e.g., explain why multiples of six are always even and divisible by three)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content

Score 0.0	Even with help, no success

Subject: **Math**	Domain: **Measurement** Strand: **Measurement**	Grade: **3**

Standard: 3.M.1 Solve problems involving measurement and estimation of intervals of time (nearest minute), liquid volume (liter), and masses of objects (gram, kilogram) (3.MD.1,2)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Solve word problems involving addition and subtraction of time intervals in minutes *(e.g., At 7:00 a.m. Candace wakes up to go to school. It takes her 8 minutes to shower, 9 minutes to get dressed, and 17 minutes to eat breakfast. How many minutes does she have until the bus comes at 8:00 a.m.? Use a number line to help solve the problem.)* **DOK 3** **I can add and subtract time intervals in word problems.** • Solve one-step word problems involving masses or volumes that are given in the same units *(e.g., One of two beakers holds100 ml of liquid and the second beaker holds 60 ml of liquid. How many milliliters are there when you combine the two beakers? Use a drawing to represent the problem.)* **DOK 2** **I can solve word problems using mass or volume.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Addition, elapsed, estimate, gram, interval, kilogram, liquid, liter, mass, measure, minute, nearest, number line, standard, subtraction, time, time interval, unit, volume, word problem* The student will perform basic processes, such as: • Tell and write time to the nearest minute (e.g., *given a set of clock faces with the minute hand on different one-minute intervals, tell and write time to the nearest minute)* • Measure time intervals in minutes (elapsed time) *(e.g., find the elapsed time between 4:10 p.m. and 4:53 p.m.)* • Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l) *(e.g., use a balance scale to find the weight of a pencil and then estimate the approximate weight of a pencil)*	

	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Operations and Algebraic Thinking** Strand: **Measurement**	Grade: **3**

Standard: 3.M.2 Read and understand a calendar using day, week, month, and year

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Read a calendar using day, week, month, and year *(e.g., locate holidays on a calendar and identify the day, week, month, and year)* **DOK 2** **I can read a calendar using day, week, month, and year.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Calendar, day, month, week, year* The student will perform basic processes, such as: • Explain that: 1 week = 7 days 1 month = about 30 days = about 4 weeks 1 year = 12 months = 52 weeks = 365 (or 366) days	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Measurement** Strand: **Measurement**	Grade: **3**

Standard: 3.M.3 Explain and measure temperature using Celsius and Fahrenheit scales

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Measure temperature using Celsius and Fahrenheit scales *(e.g., given several thermometers with both Celsius and Fahrenheit scales registering different temperatures, write the temperature indicated on each thermometer)* **DOK 2** **I can measure temperature with Celsius and Fahrenheit thermometers.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Celsius, Fahrenheit, measure, register, scale, temperature, thermometer* The student will perform basic processes, such as: • Explain that there are two ways to measure temperature—Celsius (˚C) and Fahrenheit (˚F) • Recall the temperatures of common things *(e.g., water boils—212˚C, 100˚F; water freezes—0˚C, 32˚F)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Measurement** Strand: **Geometric Measurement**	Grade: **3**

Standard: 3.M.4 Understand concepts of area and its measurement by counting unit squares (cm^2, m^2, in^2, ft^2); apply multiplication and addition to area (3.MD.5,6,7)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Multiply side lengths to solve real-world problems involving rectangular and rectilinear area *(e.g., A postcard is 5 inches tall and 7 inches wide. What is its area? Express in square inches.)* **DOK 2** **I can find the area of a rectangle using multiplication.** • Use tiling to demonstrate the distributive property by showing that the area of a rectangle with side lengths *a* and *b + c* is the sum of *a x b* and *a x c (e.g., Jack needed to find the area of a rectangle that was 5 square units by 13 square units. He decided to use the distributive property to break the rectangle into smaller rectangles, and add the area of each smaller rectangle to find the total area. Use tiling to find the solution, and show your multiplication and addition equations.)* **DOK 3** **I can show the area of a rectangle using the distributive property.** • Calculate areas of rectilinear figures by decomposing them into nonoverlapping rectangles and adding the areas *(e.g., given the dimensions of a storage shed, decompose the figure into rectangles, find the area for each rectangle, and add the areas to find the total area)* **DOK 3** **I can find the areas of figures by breaking them down into rectangles and adding the areas.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Add, area, calculate, concept, count, decompose, distributive property, equation, figure, length, measure, measurement, multiply, overlap, plane figure, real world, rectangle, rectangular, rectilinear, side, square unit, sum, tiling* The student will perform basic processes, such as: • Explain concepts of area measurement *(e.g., area is an attribute of plane figures; a square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area; a plane figure*	

	which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units) • Determine area is additive *(e.g., measure areas by counting unit squares—square cm, square m, square in, square ft, or improvised units)* • Demonstrate that area can be found by tiling a rectangular area and that it is the same as multiplying the side lengths *(e.g., use square tiles to cover a rectangle and count the tiles to determine area; multiply the side lengths to determine area; compare answers)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Measurement** Strand: **Geometric Measurement**	Grade: **3**

Standard: 3.M.5 Solve real-world and mathematical problems recognizing area and perimeter of plane figures; distinguish between linear and area measurements (3.MD.8)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Solve for an unknown side length given the perimeter of a polygon *(e.g., given the perimeter of a polygon is 13 units and three of four side lengths are 3 units, 2 units, and 3 units, find the unknown side length)* **DOK 3** **I can find a missing side length of a polygon when I know the perimeter.** • Create rectangles with the same area and different perimeters or rectangles with the same perimeter and different areas *(e.g., use grid paper or unit square cutouts to create two or more rectangles with perimeters of 24 and different areas)* **DOK 3** **I can make rectangles with the same area and different perimeters or rectangles with the same perimeter and different areas.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Area, compare, different, formula, length, perimeter, polygon, rectangle, same, side, sum, unknown* The student will perform basic processes, such as: • Explain that the formula for the perimeter of a regular polygon is the sum of the length of its sides or $p = n \times l$ • Find the perimeters of polygons given the side lengths *(e.g., given the side length of 51 cm, determine the perimeter of the polygon)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	

	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Measurement** Strand: **Money**	Grade: **3**

Standard: 3.M.6 Construct various equivalent combinations of money; add and subtract money amounts

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Add and subtract money amounts *(e.g., John has 4 nickels and gets 4 more. How many cents does he have?)* **DOK 2** **I can add and subtract money amounts.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Add, combinations, construct, equivalent, money, subtract* The student will perform basic processes, such as: • Construct various equivalent combinations of money *(e.g., given an amount of money, come up with as many ways to make that amount as possible, using different combinations of bills and coins)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Geometry** Strand: **Shapes**	Grade: **3**

Standard: 3.GEO.1 Sort and classify shapes to compare and contrast attributes (3.G.1)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Classify quadrilaterals into categories based on their attributes *(e.g., when given a set of shapes, identify which shapes are quadrilaterals, rhombuses, rectangles, or squares, and explain why some shapes belong to more than one category)* **DOK 3** **I can sort shapes into categories based on their attributes.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Angle, attribute, category, classify, equal, parallelogram, quadrilateral, rectangle, rhombus, shape, side, subcategory, square, trapezoid* The student will perform basic processes, such as: • Identify the attributes of various quadrilaterals *(e.g., when given a square, identify the attributes of equal sides and equal angles)* • Explain that shapes in different categories *(e.g., rhombuses, rectangles, and others)* may share attributes *(e.g., having four sides)*, and that the shared attributes can define a larger category *(e.g., quadrilaterals)* • Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories *(e.g., parallelogram and trapezoid)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content

Score 0.0	Even with help, no success

Subject: **Math**	Domain: **Geometry** Strand: **Fractions**	Grade: **3**

Standard: 3.GEO.2 Partition shapes into equal areas and express as a fraction (3.G.2)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Express the area of each part of a partitioned shape as a unit fraction of the whole *(e.g., partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape)* **DOK 2** **I can divide shapes into parts with equal areas and describe those areas as fractions.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Area, equal, express, part, partition, shape, unit fraction, whole* The student will perform basic processes, such as: • Explain that when shapes are partitioned into equal areas, the area of each part is the unit fraction of the whole • Partition shapes into parts with equal areas *(e.g., partition circles, squares, and rectangles into parts with equal areas)*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Data Analysis, Statistics, and Probability** Strand: **Data**	**Grade**: **3**

Standard: 3.DSP.1 Draw and interpret scaled picture and bar graphs to represent a data set (3.MD.3)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories *(e.g., draw a bar graph in which each square in the bar graph might represent 5 pets)* **DOK 3** **I can draw and label a picture graph and a bar graph to show data.** • Solve two-step problems ("how many more" and "how many less") using information from scaled bar graphs *(e.g., when given a scaled bar graph depicting the number of giraffes, lions, elephants, impalas, and zebras sighted on a recent safari, determine the difference between the number of elephants and the number of impalas sighted)* **DOK 3** **I can solve two-step problems using information from bar graphs.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Bar graph, category, data, data set, interpret, less, more, picture graph, represent, scaled* The student will perform basic processes, such as: • Interpret a scaled picture graph and bar graph *(e.g., given a picture graph and a bar graph, describe the data represented in each graph)* • Solve one-step problems using information from scaled bar graphs *(e.g., given a bar graph with the average temperatures for the years 2005-2009, answer questions such as "What was the average temperature in 2006?")*	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	

	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content
Score 0.0	Even with help, no success	

Subject: **Math**	Domain: **Data Analysis, Statistics, and Probability** Strand: **Data**	Grade: **3**

Standard: 3.DSP.2 Measure length using rulers marked with halves and fourths of an inch and centimeter; show data by making a line plot (3.MD.4)

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught	
	Score 3.5	In addition to score 3.0 performance, partial success at score 4.0 content
Score 3.0	The student will: • Represent measurement data in halves and fourths of an inch on a line plot *(e.g., Measure the lengths of all the pencils belonging to the students in your classroom to the nearest fourth of an inch. Create a line plot to display the data.)* **DOK 3** **I can show measurement data in halves and fourths of an inch on a line plot.**	
	Score 2.5	No major errors or omissions regarding score 2.0 content and partial success at score 3.0 content
Score 2.0	The student will recognize or recall vocabulary such as: • *Data, fourth, generate, half, inch, length, line plot, measure, measurement, nearest, quarter, record, represent, ruler, scale, whole number* The student will perform basic processes, such as: • Generate data by measuring lengths to the half and fourth of an inch *(e.g., use a ruler to measure and record the width of a hand to the nearest fourth of an inch)* • Explain that the scale of a line plot can be whole numbers, halves, or quarters of an inch	
	Score 1.5	Partial success at score 2.0 content and major errors or omissions regarding score 3.0 content
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content	
	Score 0.5	With help, partial success at score 2.0 content but not at score 3.0 content

Score 0.0	Even with help, no success