# Nebraska



# Nebraska Student-Centered Assessment System (NSCAS) Alternate Assessment

# Mathematics–Grade 3

# Table of Specifications

for
Students with Significant Disabilities
who take the
Statewide Alternate Assessment

## Mathematics Grade 3 Alternate Assessment
## Table of Specifications

| | DOK Stage 2 | DOK Stage 3 | DOK Stage 4 | Item Total |
|---|---|---|---|---|
| **Number** | | | | |
| **Numeric Relationships: Students will demonstrate and represent multi-digit numbers using place value understanding.** | | | | |
| **3.N.1.a** Read, write, and demonstrate multiple equivalent representations for numbers up to 10,000 using objects or visual representations including standard form and expanded form. | | | | |
| **3.N.1.a  Read, write, and demonstrate whole numbers 1–20 that are equivalent representations, including visual models, standard forms, and word forms.** | 0-2 | 0-4 | 0-2 | 0-4 |
| **3.N.1.b** Represent and justify comparisons of whole numbers up to 10,000 using number lines and reasoning strategies. | | | | |
| **3.N.1.b Compare and order whole numbers 1–20 using number lines or quantities of objects.** | 0-2 | 0-4 | 0-2 | 0-4 |
| **Fractions: Students will develop understanding of fractions as numbers.** | | | | |
| **3.N.2.a** Partition two-dimensional figures into equal areas and express the area of each part as a unit fraction of the whole. | | | | |
| **3.N.2.a Partition two-dimensional figures (circles, triangles, rectangles, and squares) into two, three, or four equal shares, and express the area of each part as a unit fraction of the whole using 1/2, 1/3, or 1/4.** | 0-2 | 0-4 | 0-2 | 0-4 |
| **3.N.2.b** Find parts of a whole using visual fraction models. | | | | |
| **3.N.2.b Partition two-dimensional figures (circles, triangles, rectangles, and squares) into three, four, or five equal shares, and express the area of each part as a fraction of the whole using 2/3, 3/4, 2/5, 3/5, or 4/5 .** | 0-2 | 0-4 | 0-2 | 0-4 |
| **3.N.2.c** Represent and understand a fraction as a number on a number line. | | | | |
| **3.N.2.c Represent halves and wholes on a number line.** | 0-2 | 0-4 | 0-2 | 0-4 |
| **3.N.2.e** Justify whole numbers as fractions and identify fractions that are equivalent to whole numbers. | | | | |
| **3.N.2.e Given a model, represent a whole number (1, 2, or 3) as a fraction with a denominator of 2, 3, or 4.** | 0-2 | 0-4 | 0-2 | 0-4 |
| **3.N.2.f** Compare and order fractions having the same numerators or denominators by reasoning about their size. | | | | |
| **3.N.2.f Use a model to compare unit fractions 1/2, 1/3, and 1/4.** | 0-2 | 0-4 | 0-2 | 0-4 |
| **Algebra** | | | | |
| **Operations and Algebraic Thinking: Students will extend understanding of multiplication and apply operational properties to solve problems.** | | | | |
| **3.A.1.a** Add and subtract up to four-digit whole numbers with or without regrouping using strategies based on place value and algorithms. | | | | |
| **3.A.1.a Add and subtract without regrouping, limited to maximum sum and minuend of 20.** | 0-1 | 0-2 | 0-1 | 0-3 |

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| **3.A.1.b** Determine the reasonableness of whole number sums and differences using estimations and number sense. | | | | |
| **3.A.1.b Round one- and two-digit whole numbers to the nearest ten, and estimate two-digit sums and differences to the nearest ten.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.A.1.c** Solve and write one-step whole number equations to represent authentic problems using the four operations including equations with an unknown start, unknown change, or unknown result. | | | | |
| **3.A.1.c Solve one-step addition and subtraction equations using the digits 0–9, limited to equations with an unknown change or unknown result.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.A.1.d** Interpret and solve two-step authentic problems involving whole numbers and the four operations. | | | | |
| **3.A.1.d Solve one-step authentic addition and subtraction problems using the digits 0–9, limited to problems with an unknown change or unknown result.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.A.1.f** Use drawings, words, arrays, symbols, repeated addition, equal groups, and number lines to interpret and explain the meaning of multiplication and division and their relationship. | | | | |
| **3.A.1.f Identify multiplication equations, and use models (e.g., number lines, repeated addition, equal groups, arrays) to represent multiplication, limited to groups up to 20.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.A.1.h** 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 operations. | | | | |
| **3.A.1.h Multiply 1 and 2 by multiples of 10 with a maximum product of 100.** | 0-1 | 0-2 | 0-1 | 0-3 |

## Geometry

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| **Shapes and Their Attributes: Students will recognize and represent the attributes of two-dimensional shapes.** | | | | |
| **3.G.1.a** Sort quadrilaterals into categories according to their attributes. | | | | |
| **3.G.1.a Identify two-dimensional shapes, circles, triangles, rectangles, or squares.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **Area and Perimeter**: Students will recognize perimeter and area as attributes of plane figures and understand concepts of area measurement. | | | | |
| **3.G.2.a** Solve authentic problems involving perimeters of polygons when given the side lengths or when given the perimeter and unknown side length(s). | | | | |
| **3.G.2.a Find the perimeter of a square or rectangle given the side lengths and a visual model.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.G.2.b** Use concrete and pictorial models to measure areas in square units by counting square units. | | | | |
| **3.G.2.b Find the area of a square or rectangle by counting whole-number unit squares.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.G.2.c** Find the area of a rectangle with whole-number side lengths by modeling with unit squares; show that area can be additive and is the same as it would be found by multiplying the side lengths. | | | | |
| **3.G.2.c Find the area of a square or rectangle with whole-number side lengths by counting unit squares and showing that repeated addition is the same as multiplying the side lengths.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **Measurement: Students will use tools to solve measurement problems.** | | | | |
| **3.G.3.a** Identify and use the appropriate tools and units of measurement, both customary and metric, to solve authentic problems involving length, weight, mass, liquid volume, and capacity (within the same system and unit). | | | | |
| **3.G.3.a Identify the appropriate tool to use to solve authentic problems involving length, weight, and liquid volume.** | 0-1 | 0-2 | 0-1 | 0-3 |

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| **3.G.3.b** Estimate and measure length to the nearest half inch, fourth inch, and centimeter. | | | | |
| **3.G.3.b Measure the length of an object to the nearest inch.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **Time: Students will tell time to the nearest minute and find elapsed time.** | | | | |
| **3.G.4.a** Tell and write time to the minute using both analog and digital clocks. | | | | |
| **3.G.4.a Tell time to the hour using both analog and digital clocks.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.G.4.b** Solve authentic problems involving addition and subtraction of time intervals and find elapsed time. | | | | |
| **3.G.4.b Solve authentic problems involving addition and subtraction of time intervals to find elapsed time, limited to whole- number hours.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **Data** | | | | |
| **Data Collection: Students will formulate questions to collect, organize, and represent data.** | | | | |
| **3.D.1.a** Create scaled picture graphs and scaled bar graphs to represent a data set with more than four categories, including data collected through observations, surveys, and experiments. | | | | |
| **3.D.1.a Identify characteristics (e.g., title, labels, key, scale, quantities, categories) on a bar graph, pictograph, and circle graph.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **3.D.1.b** Generate and represent data using line plots where the horizontal scale is marked off in halves and whole number units. | | | | |
| **3.D.1.b Identify characteristics (e.g., title, labels, horizontal axis, quantities) on a line plot.** | 0-1 | 0-2 | 0-1 | 0-3 |
| **Analyze Data and Interpret Results: Students will analyze the data and interpret the results.** | | | | |
| **3.D.2.a** Analyze data and make simple statements using information represented in picture graphs, line plots, and bar graphs. | | | | |
| **3.D.2.a Identify and compare quantities in pictographs and bar graphs.** | 0-1 | 0-2 | 0-1 | 0-3 |