

The North Dakota Standards and Benchmarks

Content Standards – DRAFT

Mathematics Grade K – Content Only

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North Dakota Department of Public Instruction

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Standard 1: Number and Operation

Standard 1: Students understand and use basic and advanced concepts of number and number systems

BENCHMARK EXPECTATION

Kindergarten

NUMBERS, NUMBER RELATIONSHIPS, AND NUMBER SYSTEMS

- K.1.1. Count to 20
- K.1.2. Count backward from 10 to 1
- K.1.3. Demonstrate one-to-one correspondence by counting up to 10 objects
- K.1.4. Identify ordinal numbers to order objects, 1st – 5th
- K.1.5. Identify and write numerals to 10
- K.1.6. Determine the relationship between two sets with 10 or fewer objects; i.e., less than, greater than, or equal to
- K.1.7. Use concrete materials to represent wholes and halves

OPERATIONS AND THEIR PROPERTIES

No expectations at this level

COMPUTATIONAL FLUENCY AND ESTIMATION

No expectations at this level

Standard 2: Geometry and Spatial Sense

Standard 2: Student understands and applies geometric concepts and spatial relationships to represent and solve problems in mathematical and nonmathematical situations

BENCHMARK EXPECTATION

Kindergarten

TWO- AND THREE-DIMENSIONAL SHAPES, GEOMETRIC PROPERTIES AND RELATIONSHIPS

K.2.1. Identify and reproduce two-dimensional figures; i.e., circle, triangle, rectangle, and square

K.2.2. Match a three-dimensional object with its stated name; i.e., cone, sphere, cube, cylinder (e.g., which of these is a cone?)

COORDINATE GEOMETRY

No expectations at this level

TRANSFORMATION AND SYMMETRY

No expectations at this level

VISUALIZATION, SPATIAL REASONING, AND GEOMETRIC MODELING

K.2.3. Identify position and direction; i.e., inside, outside, between, above, below, behind, left, and right

Standard 3: Data Analysis, Statistics, and Probability

Standard 3: Students use data collection and analysis techniques, statistical methods, and probability to solve problems

BENCHMARK EXPECTATION

Kindergarten

DATA COLLECTION, DISPLAY, AND INTERPRETATION

K.3.1. Sort objects according to a given attribute; e.g., use, size, color, shape

K.3.2. Use picture graphs as sources of information

PROBABILITY

No expectations at this level

STATISTICAL METHODS

No expectations at this level

PREDICTIONS, DATA ANALYSIS AND INFERENCES

No expectations at this level

Standard 4: Measurement

Standard 4: Students use concepts and tools of measurement to describe and quantify the world

BENCHMARK EXPECTATION

Kindergarten

MEASURABLE ATTRIBUTES, MEASUREMENT SYSTEMS AND UNITS

- K.4.1. Name the days of the week in order
- K.4.2. Tell time to the hour using digital and analog clocks
- K.4.3. Order pictures first, next, last based on time
- K.4.4. Compare and order objects according to their length or weight
- K.4.5. Identify a penny, nickel, and dime and state its value

MEASUREMENT TOOLS, TECHNIQUES, AND FORMULAS

- K.4.6. Measure length with non-standard units; e.g., paper clips, cubes

Standard 5: Algebra, Functions, and Patterns

Standard 5: Students use algebraic concepts, functions, patterns, and relationships to solve problems

BENCHMARK EXPECTATION

Kindergarten

PATTERNS, RELATIONS, AND FUNCTIONS

K.5.1. Identify, sort, and classify objects by attributes

K.5.2. Recognize, extend, and describe simple patterns

NUMERIC AND ALGEBRAIC REPRESENTATIONS

No expectations at this level

MATHEMATICAL MODELING

K.5.3. Use tools and strategies (e.g., manipulatives) to model problems

RATES OF CHANGE

No expectations at this level