Nebraska Mathematics

Grade K

Adopted 2022

Nebraska Mathematical Processes

1. **Make sense of problems and persevere in solving them.** MP.1
2. **Reason quantitatively and abstractly and consider the reasoning of others.** MP.2
3. **Create and use representations to organize, record, and communicate mathematical ideas.** MP.3
4. **Analyze mathematical relationships to connect mathematical ideas.** MP.4
5. **Explain and justify mathematical ideas using precise mathematical language in written or oral communication.** MP.5

Kindergarten **Number**

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1. Solve problems and reason with number concepts using multiple representations, make connections within math and across disciplines, and communicate their ideas. K.CS.1
    1. Subitizing: Students will quantify briefly shown collections and verbally label the arrangements without counting. K.N.1
        a. Without counting, recognize and verbally label arrangements for briefly shown collections up to 10 (e.g., "I saw 5." "How did you know?" "I saw 3 and 2, that is 5." K.N.1.A
    2. Counting and Cardinality: Students will understand the relationship between numbers and quantities. K.N.2
        a. Use one-to-one correspondence when counting objects to show the relationship between numbers and quantities and understand the last number counted is a direct representation of the total objects in a given set. K.N.2.A
        b. Understand that each successive number name refers to a quantity that is one larger. K.N.2.B
        c. Count out the number of objects given a number from 1 to 20. K.N.2.C
        d. Count up to 20 objects arranged in a line, a rectangular array, or a circle, and count up to 10 objects in a scattered configuration. K.N.2.D
        e. Count verbally forward and backward from any given number within 20. K.N.2.E
        f. Count verbally in sequential order by ones and by tens to 100, making accurate decade transitions (e.g., 89 to 90). K.N.2.F
        g. Write and name numbers 0 to 20. Represent a number of objects with a written numeral 0 to 20. K.N.2.G
        h. Compare the number of objects in two groups, up to 20, using the words fewer than, more than, the same as. K.N.2.H
    3. Base Ten: Students will work with numbers 11 to 19 to gain a foundation for place value. K.N.3
        a. Compose and decompose numbers from 11 to 19 into a group of ten ones and some more ones using a model, drawing, or equation. K.N.3.A

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4. Number and Algebraic Relationships: Students will understand and demonstrate the meaning of addition and subtraction. K.N.4

    a. Represent and explain addition and subtraction as part-whole relationships, with addition as putting together and/or adding to and subtraction as taking apart and/or taking from, using objects, drawings, numbers, and equations. K.N.4.A

    b. Compose and decompose numbers less than or equal to 10 into pairs in more than one way using verbal explanations, objects, or drawings. K.N.4.B

    c. For any number from 1 to 9, find the number that makes 10 when added to the given number, sharing the answer with a model, drawing, or equation. K.N.4.C

    d. Efficiently, flexibly, and accurately add and subtract within 5. K.N.4.D

    e. Solve authentic problems that involve addition and subtraction within 10 (e.g., by using objects, drawings, and equations to represent the problem). K.N.4.E

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Geometry

2. Solve problems and reason with geometry using multiple representations, make connections within math and across disciplines, and communicate their ideas. K.CS.2
    1. Shapes and Their Attributes: Students will identify and represent the attributes of two-dimensional shapes and three-dimensional solids. K.G.1
        a. Identify and name two-dimensional shapes including circles, triangles, squares, and rectangles regardless of orientation or size. K.G.1.A
        b. Identify and name three-dimensional shapes including spheres, cubes, cylinders, and cones regardless of orientation or size. K.G.1.B
        c. Describe the relative positions of shapes in relation to other objects or shapes using terms such as above, below, in front of, behind, and next to. K.G.1.C
        d. Create shapes using given materials and describe one or more of the attributes such as number of sides/corners. K.G.1.D
        e. Combine simple shapes to compose larger shapes. K.G.1.E
    2. Measurement: Students will describe and compare measurable attributes. K.G.2
        a. Describe measurable attributes of authentic objects including length, capacity, and weight. K.G.2.A
        b. Directly compare two objects with a measurable attribute in common to describe which object is longer/shorter, heavier/lighter, and has more/less-capacity. K.G.2.B
    3. Time and Money: Students will know coin names and values and tell time to the hour. K.G.3
        a. Identify the name and value of pennies, nickels, and dimes. K.G.3.A
        b. Identify the parts of digital and analog clocks. Tell and write time to the hour using digital clocks and analog clocks using only the hour hand. K.G.3.B

Data

3. Solve problems and reason with data/probability using multiple representations, make connections within math and across disciplines, and communicate their ideas. K.CS.3
    1. Classification: Students will sort and classify objects using one or more attributes. K.D.1
        a. Identify, sort, and classify objects by size, shape, color, and other attributes. K.D.1.A
        b. Identify objects that do not belong to a particular group and explain the reasoning used. K.D.1.B