



Archdiocese of Washington Catholic Schools

Academic Standards

Mathematics



KINDERGARTEN

Standard 1 – Number Sense

Students understand the relationship between numbers and quantities up to 10, and that a set of objects has the same number in all situations regardless of the position or arrangement of the objects.*

K.1.1 Match sets of objects one-to-one.

Example: Take crayons from the box and give one to each student in the group. Explain what you are doing.

K.1.2 Compare sets of up to ten objects and identify whether one set is equal to, more than, or less than another.

Example: Compare the blocks in two boxes. Tell which box contains more blocks and explain the way in which you decided on your answer.

K.1.3 Know that larger numbers describe sets with more objects in them than sets described by smaller numbers.

Example: Understand that a set of 7 apples contains more apples than a set of 3 apples.

K.1.4 Divide sets of ten or fewer objects into equal groups.

Example: Take 6 blocks and give the same number to each of 3 children.

K.1.5 Divide shapes into equal parts.

Example: Divide a piece of paper into 4 equal parts.

K.1.6 Count, recognize, represent, name, and order a number of objects (up to 10).

Example: Count a group of seven pennies, Recognize that 7 is the number for this set.

K.1.7 Find the number that is one more than or one less than any whole number* up to 10.

Example: you have a bag of 7 apples. How many apples are in a box that holds one less than your bag of apples?

K.1.8 Use correctly the words one/many, none/some/all, more/less, and most/least.

Example: Take some of the blocks out of the box, but not all of them.

K.1.9 Record and organize information using objects and pictures.

Example: Ask some of your friends what pets they have. Use pictures of animals to show the number of pets your friends have.

*set: collection of objects, numbers, etc.

*whole numbers: 0, 1, 2, 3, etc.



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Standard 2 – Computation

Students understand and describe simple additions and subtractions.

K.2.1 Model addition by joining sets of objects (for any two sets with fewer than 10 objects when joined).

Example: Put together 3 pencils and 2 pencils. Count the total number of pencils.

K.2.2 Model subtraction by removing objects from sets (for numbers less than 10).

Example: From a pile of 9 crayons, take away 6 crayons. Count the number of crayons left in the pile.

K.2.3 Describe addition and subtraction situations (for numbers less than 10).

Example: In the last example, explain what operation you were using when you took away crayons from the pile.

Standard 3 – Algebra and Functions

Students sort and classify objects.

K.3.1 Identify, sort, and classify objects by size, number, and other attributes. Identify objects that do not belong to a particular group.

Example: Find the squares in a collection of shapes. Sort these squares into large ones and small ones and explain how you decided which squares went in each pile.

K.3.2 Identify, copy, and make simple patterns with numbers and shapes.

Example: Make a pattern of squares and circles with one square, one circle, one square, one circle, etc.

Standard 4 – Geometry

Students identify common objects around them and describe their geometric features and position.

K.4.1 Identify and describe common geometric objects: circle, triangle, square, rectangle, and cube.

Example: Look for cubes and circles at home and at school.

K.4.2 Compare and sort common objects by position, shape, size, roundness, and number of corners.

Example: Compare the numbers of corners of triangles, squares, and rectangles.

K.4.3 Identify and use the terms: inside, outside, between, above, and below.

Example: Tell when a block is inside or outside a box.



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Standard 5 – Measurement

Students understand the concept of time and units to measure it. They understand that objects have length, capacity, weight, and temperature, and that they can compare objects using these qualities.

- K.5.1 Make direct comparisons of the length, capacity, weight, and temperature of objects and recognize which object is shorter, longer, taller, lighter, heavier, warmer, cooler or holds more.

Example: Hold two blocks side by side to see which is shorter. Hold one in each hand to see which is heavier.

- K.5.2 Understand concepts of time: morning, afternoon, evening, today, yesterday, tomorrow, week, month, and year. Understand that clocks and calendars are tools that measure time.

Example: Use a calendar to find the number of days in the month of your birthday.

Standard 6 – Problem Solving

Students make decisions about how to set up a problem.

- K.6.1 Choose the approach, materials, and strategies to use in solving problems.

Example: Solve the problem: “There are four blocks on the table and a box of blocks that is closed. The teacher says that there are five blocks in the box. Find the number of blocks in all, without opening the box”. Decide to draw a picture.

- K.6.2 Use tools such as objects or drawings to model problems.

Example: In the first example, draw a picture of the four blocks that you can see, and then draw five more blocks for the ones that you cannot see.

Students solve problems in reasonable ways and justify their reasoning.

- K.6.3 Explain the reasoning used with concrete objects and pictures.

Example: In the first example, count the number of blocks that you have drawn and write the number that represents the total.

- K.6.4 Make precise calculations and check the validity of the results in the context of the problem.

Example: In the first example, open the box of blocks and place them on the table. Count the total number of blocks on the table to see whether your drawing was correct.