

Pocantico Hills School District
Grade 1 Math Curriculum Draft

Patterns /Number Sense/Statistics

Content Strands: Performance Indicators

1.A.1 Determine and discuss patterns in arithmetic (what comes next in a repeating pattern, using numbers or objects)

1.S.1 Pose questions about themselves and their surroundings

1.S.2 Collect and record data related to a question

1.M.7 Recognize specific times (morning, noon, afternoon, evening)

1.M.9 Know the days of the week and months of the year in sequence

1.M.10 Classify months and connect to seasons and other events

1.N.12 Arrange objects in size order (increasing and decreasing)

1.N.3 Quickly see and label with a number, collections of 1 to 10

1.N.11 Identify that spacing of the same number of objects does not affect the quantity (conservation)

1.N.22 Use the words *higher*, *lower*, *greater*, and *less* to compare two numbers

1.N.10 Draw pictures or other informal symbols to represent a spoken number up to 20 (beginning with 10)

1.S.3 Display data in simple pictographs for quantities up to 20 with units of one

1.S.4 Display data in bar graphs using concrete objects with intervals of one

1.S.7 Answer simple questions related to data displayed in pictographs (e.g., category with most, how many more in a category compared to another, how many all together in two categories)

1.S.6 Interpret data in terms of the words *most*, *least*, *greater than*, *less than*, or *equal to*

1.S.9 Construct a question that can be answered by using information from a graph

1.N.18 Use a variety of strategies to compose and decompose one-digit numbers

1.N.19 Understand the commutative property of addition

1.N.29 Understand that different parts can be added to get the same whole

1.N.26 Create problem situations that represent a given number sentence

1.N.4 Count by ones to 100

1.N.1 Count the items in a collection and know the last counting word tells how many items are in the collection (1 to 100)

1.N.8 Verbally count from a number other than one by ones

1.N.14 Read the number words *one, two, three...ten*

1.N.23 Use and understand verbal ordinal terms, first to twentieth

1.N.13 Write numbers to 100

1.N.9 Count backwards from 20 by ones

1.N.21 Use *before, after, or between* to order numbers to 100 (with or without the use of a number line)

1.N.20 Name the number before and the number after a given number, and name the number(s) between two given numbers up to 100 (with and without the use of a number line or a hundred chart)

1.N.16 Compare and order whole numbers up to 100

1.N.2 Count out (produce) a collection of a specified size (10 to 100 items), using groups of ten

1.N.5 Skip count by tens to 100

1.N.6 Skip count by fives to 50

1.N.7 Skip count by twos to 20

1.N.28 Demonstrate fluency and apply addition and subtraction facts up to and including 10

1.N.24 Develop and use strategies to solve addition and subtraction word problems

1.N.25 Represent addition and subtraction word problems and their solutions as number sentences

1.N.15 Explore and use place value

1.N.17 Develop an initial understanding of the base ten system:
10 ones = 1 ten
10 tens = 1 hundred

1.N.27 Use a variety of strategies to solve addition and subtraction problems with one- and two-digit numbers without regrouping

1.M.4 Know vocabulary and recognize coins (penny, nickel, dime, quarter)

1.M.5 Recognize the cent notation as ¢

1.M.6 Use different combinations of coins to make money amounts up to 25 cents

1.N.30 Estimate the number in a collection to 50 and then compare by counting the actual items in the collection

Process Strands: Performance Indicators

1.PS.4 Formulate problems and solutions from everyday situations (e.g., counting the number of children in the class or using the calendar to teach counting)

1.PS.6 Experience teacher-directed questioning process to understand problems

1.PS.8 Use manipulatives (e.g., tiles, blocks) to model the action in problems

1.PS.9 Use drawings/pictures to model the action in problems

1.PS.3 Act out or model with manipulatives activities involving mathematical content from literature and/or story telling

1.PS.5 Use informal counting strategies to find solutions

1.RP.5 Justify general claims, using manipulatives

1.RP.1 Understand that mathematical statements can be true or false

1.RP.4 Explore guesses, using a variety of objects and manipulatives

1.CM.1 Understand how to organize their thought processes with teacher guidance

1.CM.6 Use appropriate mathematical terms, vocabulary, and language

1.CN.1 Recognize the connections of patterns in their everyday experiences to mathematical ideas

1.CN.6 Understand how mathematical models represent quantitative relationships

1.CN.5 Understand meanings of operations and how they relate to one another

1.CN.2 Understand the connections between numbers and the quantities they represent

1.CN.8 Recognize and apply mathematics to solve problems

1.R.4 Connect mathematical representations with problem solving
1.R.7 Use mathematics to show and understand mathematical phenomena (e.g., draw pictures to show a story problem, show number value using fingers on your hand)
1.R.5 Use mathematics to show and understand physical phenomena (e.g., estimate and represent the number of apples in a tree)
1.CM.2 Verbally support their reasoning and answers
1.CM.4 Listen to solutions shared by other students
1.CM.5 Formulate mathematically relevant questions
1.CN.4 Understand how models of situations involving objects, pictures, and symbols relate to mathematical ideas
1.CN.7 Recognize the presence of mathematics in their daily lives
1.R.1 Use multiple representations including verbal and written language, acting out or modeling a situation, drawings, and/or symbols as representations
1.R.2 Share mental images of mathematical ideas and understandings
1.R.6 Use mathematics to show and understand social phenomena (e.g., count and represent sharing cookies between friends)

Vocabulary

Addend, addition, addition sentence, addition sign, after, arrange, bar graphs, before, base ten number system, cardinal numbers, commutative property of addition, decompose, compose, count, count backwards, count on, decrease, difference, eight, equal to, estimate, five, four, greater, greatest, higher, hundred chart, increase, least, less than, lower, minus, minus sign, more than, nine, number in words, number line, number sentence, one, one digit number, ones place, order, ordinal numbers, part, place value, plus, plus sign, seven, six, skip count, subtract, subtraction, subtraction fact, subtraction sentence, subtraction sign, sum, ten, tens place, three, two, two digit number, whole, zero, next, patterns, compare, explain, explore, formulate, make observations, explore guesses, use trial and error, formulate questions, organize, share ideas, use the language of mathematics, compare similarities and differences, recognize patterns, understand meaning of operations, understand relationships.

Measurement and Geometry

Content Strands: Performance Indicators

- 1.M.1 Recognize length as an attribute that can be measured
- 1.M.2 Use non-standard units (including finger lengths, paper clips, students' feet and paces) to measure both vertical and horizontal lengths
- 1.M.11 Select and use non-standard units to estimate measurements
- 1.M.3 Informally explore the standard unit of measure, *inch*

- 1.G.5 Recognize geometric shapes and structures in the environment
- 1.G.1 Match shapes and parts of shapes to justify congruency
- 1.G.2 Recognize, name, describe, create, sort, and compare two-dimensional and three-dimensional shapes
- 1.G.4 Identify symmetry in two-dimensional shapes
- 1.G.3 Experiment with slides, flips, and turns of two-dimensional shapes
- 1.S.5 Use Venn diagrams to sort and describe data
- 1.M.8 Tell time to the hour, using both digital and analog clocks
- 1.S.8 Discuss conclusions and make predictions in terms of the words *likely* and *unlikely*

Process Strands: Performance Indicators

- 1.PS.7 Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking
- 1.PS.10 Explain to others how a problem was solved, giving strategies and justifications
- 1.PS.2 Interpret information correctly, identify the problem, and generate possible solutions
- 1.PS.1 Explore, examine, and make observations about a social problem or mathematical situation
- 1.RP.2 Recognize that mathematical ideas need to be supported by evidence
- 1.RP.3 Investigate the use of knowledgeable guessing as a mathematical tool

1.RP.6 Develop and explain an argument verbally or with objects
1.RP.8 Use trial and error strategies to verify claims
1.PS.7 Compare and discuss ideas for solving a problem with teacher and/or students to justify their thinking
1.CM.3 Share mathematical ideas through the manipulation of objects, drawings, pictures, charts, and symbols in both written and verbal explanations
1.CN.9 Recognize and apply mathematics to objects, pictures, and symbols
1.R.3 Use standard and nonstandard representations
1.CN.3 Compare the similarities and differences of mathematical ideas

Vocabulary:

Between, circle, cone, corner, cube, cylinder, flip (reflection), horizontal, rectangle, same, side, similar, slide (translation), square, symmetry, triangle, turn (rotation), vertical, afternoon, amount, analog clock, autumn (fall), between, calendar, cent, coin, digital clock, dime, estimation, evening, hour, hour hand, inch, length, long, measure, minute hand, money, months of the year, morning, nickel, night, nonstandard units, penny, quarter, ruler, seasons in relation to the months, spring, standard units, summer, time, week, width, winter, year, examine, justify, model using manipulatives, develop an argument, investigate, justify claims, apply mathematics, multiple representations, nonstandard representations, standard representations