

USD 312

Grade 2 Mathematics

Standard 1: Students will use number sense in a variety of situations.

Indicators of Performance:

Students will -

- S 1. represent whole numbers from 0 through 1000 with manipulatives
- 2. write symbols for whole numbers from 0 through 1000
- 3. read words for whole numbers from 0 through 100
- 4. write words for whole numbers from 0 through 20
- 5. compare and order whole numbers from 0 through 1000
- S 6. identify place value of whole numbers through the one thousands place
- S 7. count and compare collections of coins and currency with values less than or equal to \$5.00 (including pennies, nickels, dimes, quarters, half dollars, and dollar bills)
- 8. count a collection of like bills to \$100 including ones, fives, tens and twenties
- 9. identify and make change (in any combination) to \$1 (ex. if a purchase costs 87¢ and you give the clerk \$1, tell how much change you should receive)
- 10. compare halves, thirds and fourths from a pictorial representation
- 11. identify proper fractions for parts of a whole or group (halves, thirds, fourths, fifths, sixths, sevenths, eighths, ninths, tenths) from a pictorial representation
- 12. represent proper fractions (as listed above) by shading in a picture
- 13. identify a circle, square or rectangle divided into equal parts
- 14. use manipulatives to demonstrate the associative and commutative properties of addition
- 15. use estimation to check if an answer is reasonable for whole numbers from 0 to 1000, simple fractions and money
- 16. adjust whole number estimates when given additional information
- 17. form and solve real-world problems, reason and communicate about mathematics using the previous indicators of performance for number sense in combination with indicators from other standards

Standard 2: Students will use computation in a variety of situations.

Indicators of Performance:

Students will -

- 1. recall 30 addition facts (up to 18) in 90 seconds; recall 30 subtraction facts (up to 18) in 90 seconds
- SN2. add and subtract 2-digit & 3-digit whole numbers, with and without regrouping (vertical format only)

S preceding an indicator means it is a state assessed item.

SN preceding an indicator means it is a noncalculator state assessed item.

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3. add three 1-digit addends
- S 4. state addition and subtraction fact families through 20
4. Use manipulatives to multiply up to a product of 20
5. use manipulatives to divide up to 20 objects into equal groups with remainders
6. add money with sums through \$1.95
7. form and solve real-world problems, reason and communicate about mathematics using the previous indicators of performance for computation in combination with indicators from other standards

Standard 3: Students will use algebraic concepts in a variety of situations.

Indicators of Performance:

Students will -

- S 1. identify, state or continue a pattern (number patterns, picture patterns, oral patterns, kinesthetic patterns, written descriptions of patterns, or patterns in graphs, tables, or lists)
2. recognize the same general pattern presented in different ways (ex. red, yellow, red, yellow, red, yellow . . . is the same as ABABAB. . . is the same as clap, stomp, clap, stomp, clap, stomp . . .)
3. generalize a pattern using a written description
 - Consider the following patterns:
 - whole number patterns such as 11, 22, 33. . . or 2, 4, 6. . .
 - measurement and geometric patterns
 - calendar patterns
 - money and time patterns such as 1:45, 1:30, 1:15. . . or \$5, \$10, \$15. . .
 - patterns occurring in nature such as seasons, temperature or weather
 - odds, evens and skip counting
 - simple kinesthetic patterns
 - visual patterns including shape or color
4. analyze why objects are grouped together
5. fill in the missing number in a sequence using whole numbers from 1 through 1000
6. complete number sentences with missing whole number addends and subtrahends with facts up to 18
7. skip count, in writing, by twos, fives and tens through 200
8. recognize evens and odds from 1 through 1000
9. use the appropriate symbol $<$, $>$, $=$ and the words less than, greater than, equal to to compare two whole numbers from 1 through 1000

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10. use manipulatives, symbols, pictures or an oral description to represent relationships or situations with unknowns

Consider the following models:

graphs and tables using real objects to display data

place value models such as place value mats, hundreds charts and base ten blocks

objects such as the number line or the hundreds chart to model addition/subtraction

Venn diagrams to sort data with up to two attributes

diagrams and pictures

function table (T-tables) to find relationships between numbers

ex.

Δ	$\Delta + 3$
5	8
2	?

11. find values or give a written description of the rule from an addition or subtraction pattern or from a t-table

(ex. the rule for

Δ	?
5	8
7	10
2	5

)

would be add 3 to the Δ , or add 3 to the left number)

12. use manipulatives, symbols, pictures or an oral description to represent relationships or situations with unknowns
13. recognize that the same situation can be represented more than one way
14. use a symbol to represent an unknown (ex. $\Delta + 3 = 7$ or $7 + _ = 8$)
15. form and solve real-world problems, reason and communicate about mathematics using the previous indicators of performance for algebraic concepts in combination with indicators from other standards

Standard 4: Students will use geometry in a variety of situations.

Indicators of Performance:

Students will -

- S 1. use manipulatives to identify the component parts of a figure that is composed of rectangles, squares, triangles, circles and ellipses or ovals (ex.. recognize that three equilateral pattern block triangles can be laid on top of the pattern blocks trapezoid)
- S 2. determine the number of corners and sides on a given polygon
3. draw a line of symmetry in a 2-dimensional figure, if it exists
4. determine if two 2-dimensional shapes appear identical
5. use manipulatives to identify flips, slides, and turns in a pictorial representation
6. identify a rectangular prism and pyramid

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7. find the locations of points on a grid when written in the form (A, 5)
8. give or follow directions to move objects from one location to another
- S 9. measure to the nearest one-half inch, one inch, one foot, and one centimeter
10. identify one yard and one meter
11. use a balance to compare weights of two or more objects
12. write and tell time to nearest five minutes using digital and analog clocks
13. use AM or PM to denote the proper time of day
14. state elapsed time to the nearest hour
15. read a Fahrenheit or Centigrade thermometer in whole numbers, including subzero temperatures
16. form and solve real-world problems, reason and communicate about mathematics using the previous indicators of performance for geometry in combination with indicators from other standards

Standard 5: Students will use statistics in a variety of situations.

Indicators of Performance:

Students will -

1. list the possible outcomes of a simple experiment (ex. if you roll a pair of dice, some of the possible outcomes are a sum of 6, a sum of 7 and a sum of 12)
2. can determine if the probability of an event as impossible, less likely, more likely or certain
- S 3. conduct a simple experiment and organize and record data from the experiment using frequency tables (tally marks)
4. create a questionnaire and conduct a survey
- S 5. construct bar graphs, pictographs, or circle graphs divided into halves, fourths, or eighths
6. use the maximum and minimum of a set of data to calculate the range
- S 7. determine information from a bar graph or pictograph
8. form and solve real-world problems, reason and communicate about mathematics using the previous indicators of performance for statistics in combination with indicators from other standards