

Second Grade

Second Grade Instructional Objectives

Students will be able to:

A. Number Sense/Numeration

VIS 1

1. Count numbers by grouping in 2's, 3's, 5's, 10's in ascending and descending order.
2. Expand numbers of two- and three-digit numbers.
3. Identify place values of each digit in two- and three-digit numbers.
4. Read and write numerals from 0-1000.
5. Identify odd and even numbers.
6. Understand comparison between whole numbers using the symbols and words of greater than, less than and equal to.
7. Round whole numbers to the nearest ten.
8. Identify and write ordinals to twentieth.
9. Determine the value of a group of coins and dollar bills and write the value in decimal.
 - a. Show different combinations of coins that yield a special number of cents.

B. Number Facts-Addition & Subtraction

VIS 2

1. Demonstrate addition and subtraction of two- and three-digit numbers vertically and horizontally.
2. Add and subtract two- and three-digit numbers with renaming.
3. Write number families.
4. Demonstrate that subtraction is the inverse operation of addition by checking subtraction problems by using addition.
5. Solve simple word problems using addition and subtraction.
6. Understand the commutative and associative properties in addition.

7. Recognize and use the vocabulary associated with addition and subtraction.
8. Recognize the identity property of addition.
9. Estimate sum and difference

C. Number Facts-Multiplication

1. Know the terms factor and product associated with multiplication
2. Demonstrate multiplication as repeated addition.
3. Multiply single digit numbers by 0,1,2.
 3. Recognize the associative, commutative and identity properties of multiplication.
5. Understand that division is repeated subtraction.

D. Fractions Concept

1. Identify whether or not the parts of a shape are equal.
2. Identify the parts of a set of objects in halves, thirds, fourths, fifths and sixths and write the fraction it represents.
3. Draw a figure representing halves, thirds, and quarters of a unit.
4. Identify and write fractions of a set.
5. Solve problems involving fractions.

E. Measurement

1. Use a ruler to identify linear measurement-inch, centimeter, feet.
2. Identify and find the perimeter of squares, rectangles and triangles using a unit of measure.
3. Measure temperature in degrees Fahrenheit and degrees Celsius.
4. Know the basic measurement equivalencies for length, weight and time.
5. A. Estimate and measure weight in pounds and kilograms.
B. Estimate and measure length in feet and meters.
6. Compare two lengths in different units and indicate by selecting one of the

symbols - $<$, $>$ or $=$.

F. Time & Money

1. Tell and write time to the five minute intervals and quarter hour using analog and digital clock.
2. Use a calendar and identify the date, day of the week, month and year.
3. Write the date using words and numbers and only numbers.
4. Count and make change using a combination of coins and one dollar bill.
5. Recognize the value of penny, nickel, dime, quarter and dollar.
6. Read and write money amount using the dollar and cent sign and decimal point.
7. Demonstrate varying combination of coins representing the same amount.

G. Patterns/Geometry

1. Identify solid figures: cube, cylinder, sphere, cone, pyramid and their association with planar figures: cube(square), sphere(circle), and pyramid(triangle).
2. Make distinction between square and rectangle in accordance with length of sides.
3. Identify solid figures based on the number of faces and shapes, edges, based and corners.
4. Identify lines: Horizontal, vertical, parallel and perpendicular.
5. Use names for lines and line segments.
6. Design congruent shapes.
7. Measure perimeters of squares and rectangles in inches and centimeters.
8. Count and estimate number of squares.

H. Probability/Statistics

1. Create and interpret simple bar graph with concrete objects and realia.
2. Identify whether an event is sure to happen, may happen or is impossible

Learning Outcomes for Second Grade

A. Number Sense/Numeration

VIS 1

1. Count numbers by grouping in 2's, 3's, 5's, 10's in ascending and descending order.

Ex. Count from 2 to 100 by 2's 2, 4 6..... .

2. Expand numbers of two- and three-digit numbers.

Ex: 245 is expanded too $200 + 40 + 5$

3. Identify place values of each digit in two- and three-digit numbers.
4. Read and write numerals from 0-1000.
5. Identify odd and even numbers.
6. Understand comparison between whole numbers using the symbols and words of greater than, less than and equal to.
7. Round whole numbers to the nearest ten.

Ex. 67 rounded to the nearest ten is 70.

4. Identify and write ordinals to twentieth.

Ex. Indicate the position of the *.

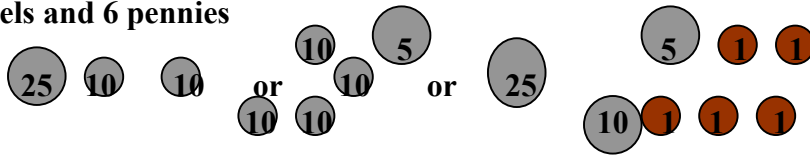
O X L * : * is the fourth symbol in the row.

9. Determine the value of a group of coins and dollar bills and write the value in decimal.

Ex. How much money would you have if you have 1 dollar, 1 quarter, 2 dimes and 1 nickel? Express value in decimal form.

10. Show different combinations of coins that yield a special number of cents.

Ex. Show varying combinations of 45¢ using 2 quarters, 4 dimes, 3 nickels and 6 pennies



B. Number Facts-Addition & Subtraction

VIS 1 & 2

1. Demonstrate addition and subtraction of two- and three-digit numbers vertically and horizontally.

Ex. $18 - 10 = 8$ or

$$\begin{array}{r} 18 \\ -10 \\ \hline 8 \end{array}$$

or

$$\begin{array}{r} 20 \\ 17 \\ +31 \\ \hline 68 \end{array}$$

2. Add and subtract two- and three-digit numbers with renaming.

Ex. $46 + 27 = 73$

$$\begin{array}{r} 46 \\ +27 \\ \hline 73 \end{array}$$

$52 - 27 = 25$

$$\begin{array}{r} 52 \\ -27 \\ \hline 25 \end{array}$$

3. Write number families.
4. Demonstrate that subtraction is the inverse operation of addition by checking subtraction problems by using addition.

Ex. $54 - 33 = 21$

CHECK $21 + 33 = 54$

5. Solve simple word problems using addition and subtraction.

Ex. a. Vanessa has five candy and Janet has six. How much candy do they have altogether?

b. Robert had six marbles and lost 4. How many marbles does he have left?

6. Understand the commutative and associative properties in addition.

Ex. Commutative $5 + 2 = 2 + 5$
Associative $(3+2) + 4 = 3 + (2+4)$

7. Recognize and use the vocabulary associated with addition and subtraction.

Ex. Subtrahend, minuend, difference
Addend, sum

8. Recognize the identity property of addition.

Ex. $2+0 = 0 +2$

9. Estimate sum and difference

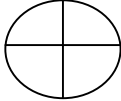
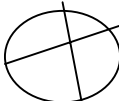
	Estimate		Estimate
Ex. 28	30	16	20
+14	+10	-11	-10
<u>42</u>	<u>40</u>	<u>5</u>	<u>10</u>

C. Number Facts-Multiplication


1. Know the terms factor and product associated with multiplication.
2. Demonstrate multiplication as repeated addition.
3. Multiply single digit numbers by 0,1,2.
4. Recognize the associative, commutative and identity properties of multiplication.
5. Understand that division is repeated subtraction.

D. Fractions Concept

1. Identify whether or not the parts of a shape are equal.


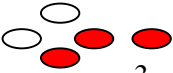
 <p>Equal parts</p>	 <p>parts are not equal</p>
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2. Identify the parts of a set of objects in halves, thirds, fourths, fifths and sixths and write the fraction it represents.

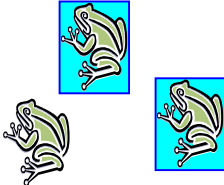
Ex.		$\frac{3}{4}$ shaded parts 4 equal parts	3 fourths of this shape is shaded.
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3. Draw a figure representing halves, thirds, and quarters of a unit.

4. Identify and write fractions of a set.

Ex.			$\frac{4}{5}$ yellow parts 5 equal parts	$\frac{3}{5}$ of the beans are red.
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5. Solve problems involving fractions.

Ex. Write a fraction to represent the picture.	
	<p>Shaded frogs _____</p> <p>Total number of frogs _____</p>

E. Measurement

1. Use a ruler to identify linear measurement-inch, centimeter, feet.

**Ex. Brett needs to cut a piece of string into four equal pieces without using a ruler or other measuring instrument.(Indicate measurements in inches, centimeters, feet)
Write directions to tell Brett how to do this.**

2. Identify and find the perimeter of squares, rectangles and triangles using a unit of measure.
3. Measure temperature in degrees Fahrenheit and degrees Celsius.
4. Know the basic measurement equivalencies for length, weight and time.

Ex:	12 Inches = 1 Foot	100 Centimeters = 1 Meter
	60 Seconds=1 Minute	1000 Meters = 1 Kilometer
	16 Ounces=1 Pound	1000 Grams= 1 Kilogram

5. A. Estimate and measure weight in pounds and kilograms.
B. Estimate and measure length in feet and meters.
6. Compare two lengths in different units and indicate by selecting one of the symbols $<$, $>$ or $=$.

Ex. Indicate $>$, $<$, $=$ for the measurements.

6 inches $>$ **6 centimeter**

F. Time & Money

1. Tell and write time to the five minute intervals and quarter hour using analog and digital clocks.
2. Use a calendar and identify the date, day of the week, month and year.
3. Write the date using words and numbers and only numbers.

Ex. June 12, 2000 or 6-12-2000


4. Count and make change using a combination of coins and one dollar bill.
5. Recognize the value of penny, nickel, dime, quarter and dollar.
6. Read and write money amount using the dollar and cent sign and decimal point.

Ex. 1 quarter, 1 nickel and 2 pennies. How much money do you have in all?

7. Demonstrate varying combination of coins representing the same amount.

G. Patterns/Geometry

1. Identify solid figures: cube, cylinder, sphere, cone, pyramid and their association with planar figures: cube(square), sphere(circle), and pyramid(triangle).
2. Make distinction between square and rectangle in accordance with length of sides.
3. Identify solid figures based on the number of faces, shapes, edges, bases and corners.
4. Identify lines: Horizontal, vertical, parallel and perpendicular.
5. Use names for lines and line segments.
6. Design congruent shapes.
7. Measure perimeters of squares and rectangles in inches and centimeters.
8. Count and estimate number of squares.

Ex. 6 in  6 in Find the perimeter of the square.
 $6 + 6 + 6 + 6 = 24 \text{ in}$
 6 in

H. Probability/Statistics

1. Create and interpret simple bar graph with concrete objects and realia.

2. Identify whether an event is sure to happen, may happen or is impossible

Ex. What do you think will happen at a beach picnic?

Will there be mosquitoes at the beach?

*Sure to happen

*May happen

*Impossible

Second Grade Checklist	M-Mastered NI-Needs Improvement
1. Count numbers by grouping in 2's, 3's, 5's, 10's in ascending and descending order.	
2. Expand numbers of two- and three-digit numbers.	
3. Identify place values of each digit in two- and three-digit numbers.	
4. Read and write numerals from 0-1000.	
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6. Understand comparison between whole numbers using the symbols and words of greater than, less than and equal to.	
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8. Identify and write ordinals to twentieth.	
9. Determine the value of a group of coins and dollar bills and write the value in decimal.	
10. Show different combinations of coins that yield a special number of cents.	
11. Demonstrate addition and subtraction of two- and three-digit numbers vertically and horizontally.	
12. Add and subtract two- and three-digit numbers with renaming.	
13. Write number families.	
14. Demonstrate that subtraction is the inverse operation of addition by checking subtraction problems by using addition.	
15. Solve simple word problems using addition and subtraction.	
16. Understand the commutative and associative properties in addition.	
17. Recognize and use the vocabulary associated with addition and subtraction.	
18. Recognize the identity property of addition.	
19. Estimate sum and difference	
20. Know the terms factor and product associated with multiplication	
21. Demonstrate multiplication as repeated addition.	
22. Multiply single digit numbers by 0,1,2	
23. Recognize the associative, commutative and identity properties of multiplication.	
24. Understand that division is repeated subtraction.	
25. Identify whether or not the parts of a shape are equal.	
26. Identify the parts of a set of objects in halves, thirds, fourths, fifths and sixths and write the fraction it represents.	
27. Draw a figure representing halves, thirds, and quarters of a unit.	
28. Identify and write fractions of a set.	
29. Solve problems involving fractions.	
30. Use the ruler and identify linear measurement- inch, centimeter, feet.	
31. Identify and find the perimeter of squares, rectangles and triangles using a unit of measure.	

Second Grade Checklist	M-Mastered NI-Needs Improvement
32. Measure temperature in degrees Fahrenheit and degrees Celsius.	
33. Know the basic measurement equivalencies for length, weight and time.	
34. A. Estimate and measure weight in pounds and kilograms.	
35. Estimate and measure length in feet and meters.	
36. Compare two lengths in different units and indicate by selecting one of the symbols - <, > or =.	
37. Tell and write time to the five minute intervals and quarter hour using analog and digital clock.	
38. Use a calendar and identify the date, day of the week, month and year.	
39. Write the date using words and numbers and only numbers.	
40. Count and make change using a combination of coins and one dollar bill.	
41. Recognize the value of penny, nickel, dime, quarter and dollar.	
42. Read and write money amount using the dollar and cent sign and decimal point.	
43. Demonstrate varying combination of coins representing the same amount.	
44. Identify solid figures: cube, cylinder, sphere, cone, pyramid and their association with planar figures: cube(square), sphere(circle), and pyramid(triangle).	
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