



SOUTHWEST REGION SCHOOLS MATHEMATICS CURRICULUM

Course ID: MTH00K

Course: Math - Kindergarten

Grade Level: K

COURSE DESCRIPTION

Kindergarten Mathematics to include the following units: Readiness, Patterns and Numbers, Shapes and Graphing, and Getting Ready for First Grade.

SOUTHWEST REGION SCHOOLS STUDENT OUTCOMES

- Outcome 4 Students use a variety of ways to think and to reason when solving problems, and making thoughtful decision.
- Outcome 6 Students demonstrate awareness of their strengths & skills and have self-confidence to take risks that will realize their potential as lifelong learners.
- Outcome 8 Students exhibit positive attitudes and self initiative.
- Outcome 9 Students use technology for adapting to and initiating productive change.
- Outcome 10 Students demonstrate leisure, vocational and life skills.

STANDARDS AND OBJECTIVES

Alaska Geography Content Standard A: Key Element 1– Use maps and globes to locate places and regions.

OBJECTIVES

1. Draw and use simple maps.

Alaska Mathematics Content Standard A: Key Element 1– Understand and use numeration, including numbers, number systems, counting numbers, whole numbers, integers, fractions, decimals, and percents; and irrationals and complex numbers.

OBJECTIVES

2. Understand concepts of more and fewer and of same, too many, and too few, in terms of one-to-one correspondence.
3. Use one-to-one correspondence to identify more or fewer objects.
4. Understand concept of more or fewer in terms of numbers of objects that cannot be counted directly.
5. Count with non-routine counting operations.
6. Count to a given number and stop.
7. Count objects that are not in order.
8. Count subsets of objects.
9. Recognize and write numbers through 39.
10. Identify ordinal position from first through tenth.
11. Use tally marks to keep a count.



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Alaska Mathematics Content Standard A: Key Element 2– Select and use appropriate systems, units, and tools of measurement, including estimation.

OBJECTIVES

12. Estimate height and length in nonstandard units.
13. Measure in nonstandard units.

Alaska Mathematics Content Standard A: Key Element 3– Perform basic arithmetic functions, make reasoned estimates, and select and use appropriate methods or tools for computation or estimation including mental arithmetic, paper and pencil, a calculator, and a computer.

OBJECTIVES

14. Understand and determine one more and one less than a given number.
15. Solve simple addition and subtraction problems.
16. Determine combinations that make the same number.

Alaska Mathematics Content Standard A: Key Element 4– Represent, analyze, and use mathematical patterns, relations, and functions using methods such as tables, equations, and graphs.

OBJECTIVES

17. Recognize and create simple patterns.
18. Understand and construct a bar graph.
19. Organize and interpret data in bar graph form.
20. Understand and determine events in correct and incorrect sequences.
21. Interpret simple picture graphs.

Alaska Mathematics Content Standard A: Key Element 5– Construct, draw, measure, transform, compare, visualize, classify, and analyze the relationships among geometric figures.

OBJECTIVES

22. Understand properties of common solid figures.
23. Identify and draw triangles, circles and squares.

Alaska Mathematics Content Standard A: Key Element 6– Collect, organize, analyze, interpret, represent, and formulate questions about data and make reasonable and useful predictions about the certainty, uncertainty, or impossibility of an event.

OBJECTIVES

24. Understand probability by making simple predictions.
25. Collect, organize, record, and interpret data in bar graph form.



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Alaska Mathematics Content Standard B: Key Element 4– Develop and apply strategies to solve a variety of problems.

OBJECTIVES

26. Solve simple word problems.
27. Solve problems where the answer can be inferred but cannot be answered directly.

Alaska Mathematics Content Standard C: Key Element 1– Express and represent mathematical ideas using oral and written presentations, physical materials, pictures, graphs, charts, and algebraic expressions.

OBJECTIVES

28. Understand the concept of one half.

Alaska Mathematics Content Standard C: Key Element 2– Relate mathematical terms to everyday language.

OBJECTIVES

29. Use the following terms correctly: taller, longer, shorter, wider, narrower, thicker, heavier and lighter.

Alaska Mathematics Content Standard E: Key Element 1– Explore problems and describe results using graphical, numerical, physical, algebraic, and verbal mathematical models or representations.

OBJECTIVES

30. Make and interpret models.

Alaska Mathematics Content Standard E: Key Element 2– Use mathematics in daily life.

OBJECTIVES

31. Relate counting to objects and events in daily life.
32. Understand concept of money as something with which to buy things.
33. Identify pennies, nickles, and dimes.
34. Know that one nickel is equivalent to five pennies.
35. Use a monthly calendar (month, days of the week).
36. Compare, estimate, and measure duration of time.
37. Know difference between daytime and nighttime.
38. Begin to tell time to the hour.



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Alaska Science Content Standard B: Key Element 1– Use the processes of science; these processes include observing, classifying, measuring, interpreting data, inferring, communicating, controlling variables, developing models and theories, hypothesizing, predicting, and experimenting.

OBJECTIVES

39. Classify objects.

SUGGESTED INSTRUCTIONAL UNITS/THEMES

Unit/Theme 01 - Readiness

1. Preparing students for patterns and numbers by teaching basic positional and comparison words.

Unit/Theme 02 - Patterns and Numbers

1. Comparing objects and numbers
2. Classifying objects
3. Counting and writing numbers
4. Recognizing and creating patterns
5. Finding one more or one less
6. Counting pennies and nickels
7. Estimating measures in nonstandard units
8. Introducing probability.

Unit/Theme 03 - Shapes and Graphing

1. Counting dimes
2. Estimating duration
3. Telling time
4. Reading and creating graphs
5. Making and reading maps
6. Adding and subtracting
7. Solving word problems
8. Division readiness
9. Multiplication readiness.

Unit/Theme 04 - Getting Ready for First Grade

1. Explore and compare timers
2. Estimate length of various activities
3. Exploring objects of different weights
4. Introduction to geometry
5. Counting money



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6. Mental math
7. Problem solving
8. Making predictions.

SUGGESTED ACTIVITIES

See District approved Mathematics Text Series: McGraw-Hill SRA Math Explorations and Applications, Level K.

RESOURCES

Manipulatives and games included with the SRA Math Explorations and Applications Text.

Media Center