

**Correlations
between
Specifications of
Sunshine State Standards for Mathematics
and
Topics and Activities of
Goldenrod's YouthTouch Technology Integration System**

**Samples of 2 Math Strands
Grades 3-5
Prepared May 1999**

Sunshine State Standards.

Mathematics Grades3-5

- 5 Strands: A. Number Sense, Concepts, and Operations
B. Measurement
C. Geometry and Spatial Sense
D. Algebraic Thinking
E. Data Analysis and Probability

Sunshine State Standards

Mathematics Grades3-5

- 5 Strands: A. Number Sense, Concepts, and Operations
B. Measurement
C. Geometry and Spatial Sense
D. Algebraic Thinking
E. Data Analysis and Probability

D. Algebraic Thinking

Standard 1:

The student describes, analyzes, and generalizes a wide variety of patterns, relations, and functions. (MA.D.1.3)

1. describes a wide variety of patterns, relationships, and functions through models, such as manipulatives, tables, graphs, expressions, equations, and inequalities.

YouthTouch Topics:

Visualizing Angles: Activity 1

Pattern Recognition: Activities 1, 2, 3, 4, and Extra for Experts

Modeling: Activities 2, 4, and 5

Friction: Activity 2

Adding Algebraically: Activities 1, 3, 5, and Extra for Experts I and II

Creating Data Tables: Activities 1, 2, 3, and 4

Graphing Results: Activities 1, 2 and Extra for Experts

2. creates and interprets tables, graphs, equations, and verbal descriptions to explain cause-and-effect relationships.

YouthTouch Topics: Activities

Creating Data Tables: Activities 3, 4, and 5

Graphing Results: Activity 2

Problem Solving Strategies: Activity 1

Standard 2:

The student uses expressions, equations, inequalities, graphs, and formulas to represent and interpret situations. (MA.D.2.3)

1. represents and solves real-world problems graphically, with algebraic expressions, equations, and inequalities.

YouthTouch Topics:

Friction: Activity 2

Creating Data Tables: Activity 4

Graphing Results: Activity 2

2. uses algebraic problem-solving strategies to solve real-world problems involving linear equations and inequalities.

Adding Algebraically: Activity 5

A. NUMBER SENSE, CONCEPTS AND OPERATIONS.

Standard 1:

The student understands the different ways numbers are represented and used in the real world. (MA.A.1.2)

1. "names whole numbers combining three digit numeration (hundreds, tens and ones) and the use of number periods, such as ones, thousands, and millions and associates verbal names, written word names, and standard numerals with whole numbers, commonly used fractions, decimals, and percents."

YouthTouch Topics: NA

2. "understands the relative size of whole numbers, commonly used fractions, decimals and percents. "

YouthTouch Topics: NA

3. "understands concrete and symbolic representations of whole numbers, fractions, decimals, and percents in real world situations.

YouthTouch Topics:

4. "understands that numbers can be represented in a variety of equivalent forms using whole numbers, decimals, fractions, and percents."

YouthTouch Topics:

Standard 2:

The student understands number systems. (MA.A.2.2)

1. "uses place value concepts of grouping based upon powers of ten (thousandths, hundredths, tenths, ones, tens, hundreds, thousands) within the decimal numbering system."

YouthTouch Topics:

2. "recognizes and compares the decimal numbering system to the structure of the other number systems such as the Roman numeral system or bases other than ten."

YouthTouch Topics

Standard 3:

The student understands the effects of operations on numbers and the relationship among these operations, selects appropriate operations, and computes for problem solving. (MA.A.3.2)

1. "understands and explains the effects of addition, subtraction, and multiplication on whole numbers, decimals, and fractions, including mixed numbers, and the effects of

division on whole numbers, including the inverse relationship of multiplication and division.

YouthTouch Topics:

2. selects the appropriate operation to solve specific problems involving addition, subtraction, and multiplication, of whole numbers, decimals, and fractions, and division of whole numbers.

YouthTouch Topics:

3. adds, subtracts, and multiplies whole numbers, decimals, and fractions, including mixed numbers, and divides whole numbers to solve real world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.

YouthTouch Topics:

Standard 4:

The student uses estimation in problem solving and computation. (MA.A.4.2)

1. uses and justifies different estimation strategies in a real world problem situation and determines the reasonableness of results of calculations in a given problem situation.

YouthTouch Topics:

Standard 5:

The student understands and applies theories related to numbers. (MA.A.5.2)

1. understands and applies basic number theory concepts, including primes, composites, factors and multiples.

YouthTouch Topics:

B. Measurement

Standard 1:

The student measures quantities in the real world and uses the measures to solve problems. (MA.B.1.2)

1. uses concrete and graphic models to develop procedures for solving problems related to measurement including length, weight, time, temperature, perimeter, area, volume, and angles.

YouthTouch Topics:

2. solves real-world problems, involving length, weight, perimeter, area, capacity, volume, time, temperature, and angles.

YouthTouch Topics:

Standard 2:

The student compares, contrasts, and converts, within systems of measurement (both standard/nonstandard and metric/customary). (MA.B.2.2)

1. uses direct (measured) and indirect (not measured) measures to calculate and compare measurable characteristics.

Standard 3:

The student estimates measurements in real-world problem situations. (MA.B.3.3)

1. solves real-world and mathematical problems involving estimates of measurements including length, time, weight/mass, temperature, money, perimeter, area, and volume, in either customary or metric units.

Standard 4:

The student selects and uses appropriate units and instruments for measurement to achieve the degree of precision and accuracy required in real-world situations. (MA.B.4.3)

1. selects appropriate units of measurement and determines and applies significant digits in a real-world context. (Significant digits should relate to both instrument precision and to the least precise unit of measurement.)

2. selects and uses appropriate instruments, technology, and techniques to measure quantities in order to achieve specified degrees of accuracy in a problem situation.

C. Geometry and Spatial Sense

Standard 1:

The student describes, draws, identifies, and analyzes two- and three-dimensional shapes. (MA.C.1.3)

1. understands the basic properties of , and relationships pertaining to, regular and irregular geometric shapes in two and three dimensions.

Standard 2:

The student visualizes and illustrates ways in which shapes can be combined, subdivided, and changed. (MA.C.2.3)

1. understands the geometric concepts of symmetry, reflections, congruency, similarity, perpendicularity, parallelism, and transformations, including flips, slides, turns, and enlargements.

2. predicts and verifies patterns involving tessellations (a covering of a plane with congruent copies of the same pattern with no holes and no overlaps, like floor tiles).

Standard 3:

The student uses coordinate geometry to locate objects in both two and three dimensions and to describe objects algebraically. (MA.C.3.3)

1. represents and applies geometric properties and relationships to solve real-world and mathematical problems

2. identifies and plots ordered pairs in all four quadrants of a rectangular coordinate system (graph) and applies simple properties of lines.

D. Algebraic Thinking

Standard 1:

The student describes, analyzes, and generalizes a wide variety of patterns, relations, and functions. (MA.D.1.3)

1. describes a wide variety of patterns, relationships, and functions through models, such as manipulatives, tables, graphs, expressions, equations, and inequalities.

YouthTouch Topics:

Pattern Recognition: Activities

Modeling: Activities

Graphing Results: Activities

Adding Algebraically: Activities

Creating Data Tables: Activities

2. creates and interprets tables, graphs, equations, and verbal descriptions to explain cause-and-effect relationships.

YouthTouch Topics: Activities

Creating Data Tables: Activities

Graphing Results: Activities

Problem Solving Strategies: Activities

Standard 2:

The student uses expressions, equations, inequalities, graphs, and formulas to represent and interpret situations. (MA.D.2.3)

1. represents and solves real-world problems graphically, with algebraic expressions, equations, and inequalities.

YouthTouch Topics:

Friction: Activities

**Creating Data Tables:
Graphing Results:**

2. uses algebraic problem-solving strategies to solve real-world problems involving linear equations and inequalities.

Adding Algebraically: Activity

E. Data Analysis and Probability

Standard 1:

The student understands and uses the tools of data analysis for managing information. (MA.E.1.3)

1. collects, organizes, and displays data in a variety of forms, including tables, line graphs, charts, bar graphs, to determine how different ways of presenting data can lead to different interpretations.

2. understands and applies the concepts of range and central tendency (mean, median, and mode).

3. analyzes real-world data by applying appropriate formulas for measures of central tendency and organizing data in a quality display, using appropriate technology, including calculators and computers.

Standard 2:

The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics. (MA.E.2.3)

1. compares experimental results with mathematical expectations of probabilities.

2. determines the odds for and odds against a given situation.

Standard 3:

The student uses statistical methods to make inferences and valid arguments about real-world situations. (MA.E.3.3)

1. formulates hypotheses, designs experiments, collects and interprets data, and evaluates hypotheses by making inferences and drawing conclusions based on statistics (range, mean, median, and mode) and tables, graphs, and charts.

2. identifies the common uses and misuses of probability and statistical analysis in the everyday world.