Commonwealth of The Bahamas

Ministry of Education

Scope and Sequence

Primary School Mathematics
Grades K-7

Department of Education
September 2010

SCOPE AND SEQUENCE
PRIMARY SCHOOL MATHEMATICS CURRICULUM

NUMBER AND NUMBER SENSE

Sub-Goal 1: Demonstrate and apply knowledge of numbers, including multiple ways of representing numbers, relationships among numbers, and number systems.

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
1. Identify and count "how many" in sets of objects.	I	D	D	M	A	A	M	A
2. Identify, count, write, and associate numerals and number words.	I	D	D	M	A	A	M	A
3. Connect number words and numerals to the quantities they represent (using various physical models).	I	D	D	M	A	A	M	D
4. Identify, write, and count using Roman Numerals.				I	D	D	D	M
5. Develop a sense of the position and magnitude of whole numbers and differentiate between the various classes of numbers e.g. cardinal and ordinal numbers, odd and even numbers, prime and composite, and triangular numbers etc.			I	D	D	D	D	M
6. Identify various representations of the same number /quantity and generate them by composing, and decomposing numbers.		I	D	D	M	M	M	A
7. Identify and use number value and place values within the base-ten number system.	I	D	D	A	A	D	M	M
8. Represent and compare whole numbers, decimals, and percents.				I	D	D	D	M
9. Identify and represent commonly used fractions such as 1/ 4, 1/3, and ½. and use models, benchmarks, and equivalent forms to judge the size of fractions.		I	D	D	M	M	A	M
10. Relate/name fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers.			I	D	A	D	M	D
11. Identify, name/write equivalent forms of commonly used fractions, and decimals, and find percentages of different amounts.				I	D	D	A	M
12. Compare and order fractions, decimals, and percents and find their approximate locations on a number line.				I	D	D	A	M

SCOPE AND SEQUENCE
PRIMARY SCHOOL MATHEMATICS CURRICULUM

NUMBER AND NUMBER SENSE

Sub-goal 1: Demonstrate and apply knowledge and sense of numbers, including numeration, patterns, ratios, and proportions **(Continued)**

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
13. Simplify and convert fractions, decimals, and percents.				I	D	A	A	M
14. Identify, write, and convert improper fractions to mixed numbers.				I	D	D	A	M
15. Compare and order fractions, decimals, and percents.				I	D	D	M	M
16. Explain the meaning of addition, subtraction, multiplication, and division and identify them with the specific vocabulary of each rule of number.	I	D	D	A	A	D	M	M
17. Use multiplication arrays to differentiate between various multiplication problems.			I	D	D	A	M	M
18. Explore positive and negative integers on a number line.							I	D
19. Identify and differentiate between prime and composite numbers.						I	D	D
20. Find the LCM and HCF of numbers.						I	D	D
21. Identify and use ratios and proportions to represent quantitative relationships.				I	D	A	A	D
22. Use appropriately exponential notations.						I	D	D
23. Describe integers, represent, and compare quantities with them.						I	D	D
24. Identify squares and square roots of numbers.						I	D	D
25. Use factors, multiples, prime factorization to solve problems.				I	D	A	M	M

SCOPE AND SEQUENCE
PRIMARY SCHOOL MATHEMATICS CURRICULUM

PATTERNS, FUNCTIONS, AND ALGEBRA

Sub-goal 2: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
1. Sort, classify, and order objects by size, amount, and other properties.	I	D	A	A	M	D	D	A
2. Identify, describe, and extend various patterns such as sequences of sounds, shapes, or simple numeric patterns, and analyze how both repeating and growing patterns are generated.	I	A	A	A	M	D	D	A
3. Use concrete, pictorial, and verbal representations to develop an understanding of invented and conventional symbolic notations.				I	D	D	M	A
4. Model situations that involve addition and subtraction of whole numbers, using objects, pictures, and symbols.				I	D	D	M	A
5. Identify and construct rectangular, triangular, oblong, and L-shaped numbers.					I	D	D	M
6. Describe qualitative change using various attributes	I	D	D	M	A	A	D	D
7. Describe, extend, and generalize about geometric and numeric patterns.		I	D	M	A	A	D	D
8. Represent and analyze patterns and functions using words, tables, and graphs.			I	D	M	A	A	D
9. Identify and illustrate general principles and properties as commutative, associative and distributive, and use them to compute with whole numbers.				I	D	D	M	M

SCOPE AND SEQUENCE
PRIMARY SCHOOL MATHEMATICS CURRICULUM

PATTERNS, FUNCTIONS, AND ALGEBRA

Sub-goal 2: Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results **(Continued)**

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
10. Represent a variable as an unknown quantity using a letter or a symbol.						I	D	D
11. Express Mathematical relationships using equations						I	D	D
12. Model problem situations with objects and use representations such as graphs, tables, and equations to draw conclusions		I	D	D	M	A	A	D
13. Represent, analyze, and generalize a variety of patterns with tables, graphs, and words.		I	D	D	A	A	D	M
14. Use symbolic algebraic notations to represent situations and solve problems.							I	D

SCOPE AND SEQUENCE
PRIMARY SCHOOL MATHEMATICS CURRICULUM

COMPUTATION AND ESTIMATION

Sub-goal 3: Estimate and understand the meaning, use and connection between the four (4) basic operations; addition, subtraction, division and multiplication.

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
1. Add and subtract whole numbers, decimals, and money, and explain their effects.		I	D	A	A	A	M	M
2. Estimate and round numbers and use the strategies to add, subtract, multiply, and divide whole numbers, decimals, and money.				I	D	A	M	M
3. Explain and demonstrate situations that entail multiplication and division, such as sharing equally and equal groupings of objects. .				I	D	D	M	A
4. Develop and use strategies for whole–number computations, with focus on addition and subtraction.		I	D	M	A	M	M	M
5. Use a variety of methods and tools to compute, including objects, mental computation, estimation, paper, pencil, and calculators.		I	D	M	A	M	M	A
6. Use the divisibility rule for division.						I	D	M
7. Explain how to multiply and divide whole numbers.			I	D	D	M	A	M
8. Describe and create relationships between operations, using division as the inverse of multiplication, to solve problems.			I	D	D	M	A	M
9. Explain and use properties of operations, such as the distributives of multiplication over addition.						I	D	D
10. Develop fluency with basic number combinations for multiplication and division, and use these combinations to compute mentally related problems such as 30 X 50.				I	D	M	A	A
11. Develop fluency in adding, subtracting, multiplying and dividing whole numbers.				I	D	M	M	A
12. Choose and use appropriate strategies to estimate the results of whole number computations and judge the reasonableness of each result.					I	D	M	A

SCOPE AND SEQUENCE
PRIMARY SCHOOL MATHEMATICS CURRICULUM

COMPUTATION AND ESTIMATION

Sub-goal 3: Estimate and understand the meaning, use and connection between the four (4) basic operations; addition, subtraction, division and multiplication **(Continued).**

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
13. Apply and use strategies to estimate computations involving fractions and decimals in situations relevant to students' experience.				I	D	A	D	M
14. Use visual models, benchmarks, and equivalent forms to add and subtract commonly used fractions and decimals.				I	D	M	M	A
15. Select appropriate methods and tools for computing whole numbers: mental computation, estimation, use of calculators, paper, and pencil regarding the context and nature of the computation.			I	D	M	A	A	M

SCOPE AND SEQUENCE
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MEASUREMENT

Goal 4: Make and use measurements of objects, quantities, and relationships and determine acceptable levels of accuracy.

Key: I = Introduce, D = Develop, M = Maintain, A = Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
1. Explain and model attributes of length, area, weight, volume, and size of angle and select the appropriate type of unit for measuring.	I	D	D	A	A	D	M	M
2. Identify the attributes of length, volume, weight, area, perimeter and time, and compare and order objects according to these attributes	I	D	D	A	A	D	M	M
3. Measure objects using non-standard units e.g. multiple copies of units of the same size, such as paper clips laid end to end.		I	M	A	D	A	M	A
4. Differentiate and use standard units: customary and metric.		I	M	A	D	A	M	A
5. Develop common referents (similarities) to measure and make comparisons and estimations.	I	D	D	M	M	A	A	D
6. Identify relationships among units and convert from one unit to another within the same system.				I	D	D	M	M
7. Explore what happens to measurements of a two-dimensional shape such as perimeter and area when the shapes change in some way.					I	D	D	M
8. Identify coins and bills, and make change for given amounts.		I	A	D	D	A	D	M

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MEASUREMENT

Sub-goal 4: Make and use measurements of objects, quantities, and relationships and determine acceptable levels of accuracy (**Continued)**

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
9. Use strategies for estimating the perimeters, areas, and volumes of irregular shapes.				I	D	D	M	M
10. Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and size of angles.					I	D	D	M
11. Use formulas to find the area of rectangles and related triangles and parallelograms.						I	D	M
12. Develop strategies to determine the surface areas of volumes of rectangular solids.							I	D
13. Identify, select, and use units of appropriate methods for estimating measurements.						I	D	M
14. Select and apply techniques and tools that would accurately find length, area, volume, and angle (measures should be precise).					I	D	M	A
15. Use formulas to determine the circumference of circles and the area of triangle, parallelograms, trapezoids, and circles.							I	D
16. Solve simple problems related to measurement.	I	D	D	M	A	A	D	M

SCOPE AND SEQUENCE
PRIMARY SCHOOL MATHEMATICS CURRICULUM

GEOMETRY

Sub-goal 5: Use geometric methods to analyze, categorize, and draw conclusions about points, lines, planes, and space.

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
1. Identify, name, build, draw, compare, and sort two- and three-dimensional shapes.	I	D	D	A	A	D	M	M
2. Describe attributes and parts of two-and three-dimensional shapes.		I	D	D	M	A	A	D
3. Investigate and predict the results of putting together and taking apart two-and three-dimensional shapes.			I	D	D	M	A	D
4. Name, describe, interpret relative positions in space, and apply ideas to relative position.		I	D	D	M	D	M	A
5. Find and name locations in coordinate systems such as maps.	I	D	D	A	M	D	D	A
6. Identify and apply slides, flips, and turns to objects and shapes.			I	D	M	D	M	A
7. Identify and create shapes that have symmetry	I	D	D	M	A	A	M	D
8. Create mental images of geometric shapes using spatial memory and spatial visualization.			I	D	D	A	D	M
9. Identify and represent shapes from different perspectives.	I	D	D	A	M	D	D	A
10. Relate ideas in geometry to ideas in number and measurement.				I	D	D	M	A
11. Identify geometric shapes and structures in the environment and specify their locations.	I	D	D	A	M	M	D	D
12. Identify, compare and analyze attributes of two-and three-dimensional shapes and develop vocabulary to describe the attributes.				I	D	D	M	A
13. Classify two-and three-dimensional shapes according to their properties and develop definitions of classes of shapes such as triangles and pyramids.					I	D	D	M
14. Investigate, describe, and reason about the results of subdividing, combining, and transforming shapes.						I	D	D

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GEOMETRY

Sub-goal 5: Use geometric methods to analyze, categorize, and draw conclusions about points, lines, planes, and space (**Continued**).

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
15. Describe location and movement using common language and geometric vocabulary.					I	D	D	M
16. Make and use coordinate systems to specify locations and to describe paths.				I	D	D	M	M
17. Explore congruence and similarity.						I	D	D
18. Make and test conjectures about geometric properties and relationships and develop; logical arguments to justify conclusions.							I	D
19. Find the distance between points along horizontal and vertical lines of a coordinate system.						I	D	D
20. Predict and describe the results of sliding, flipping, and turning two-dimensional shapes.						I	D	D
21. Describe a motion or a series of motions that will show that two shapes are congruent.						I	D	D
22. Identify and describe line and rotational symmetry in two-and three-dimensional shapes and designs				I	D	D	M	A
23. Build and draw geometric objects.	I	D	D	A	A	M	D	D
24. Create and design mental images of objects, patterns, and paths.				I	D	D	M	A
25. Identify and build a three-dimensional object from two-dimensional representations of that object.			I	D	D	M	A	A
26. Use geometric models to solve problems in other areas of mathematics, such as number, and measurement.				I	D	D	A	M
27. Identify geometric ideas and relationships and apply them to other disciplines and problems that arise in the classroom or in everyday life.				I	D	D	A	M
28. Describe, classify, and understand relationships among types of two-and three dimensional objects using their defining properties.						I	D	D

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GEOMETRY

Sub-goal 5: Use geometric methods to analyze, categorize, and draw conclusions about points, lines, planes, and space **(Continued).**

Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
29. Explain relationships among the angles, side lengths, perimeters, areas, and volumes of similar objects.						I	D	D
30. Use coordinate geometry to represent and examine the properties of geometric shapes.						I	D	D
31. Describe sizes, positions, and orientation of shapes under informal transformation such as flips, turns, and slides.					I	D	D	M
32. Identify and apply geometric ideas and relationships in areas outside the mathematics classroom, such as art, science, and every day life.				I	D	D	M	M

SCOPE AND SEQUENCE
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STATISTICS AND PROBABILITY

Sub-goal 6: Collect, organize and analyze data using statistical methods: predict results; and interpret uncertainty-using concepts of probability.
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Key: I = Introduce, D= Develop, M= Maintain, A= Advance

Objectives	Preschool	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
1. Pose questions and gather data about themselves and their surroundings.	I	D	D	M	M	A	D	M
2. Sort and classify objectives according to their attributes and organize data about the objects.	I	D	D	M	M	A	D	M
3. Represent data using concrete objects, pictures, and graphs.	I	D	D	M	M	A	D	M
4. .Describe parts of the data and the set of data as a whole to determine what the data show.			I	D	D	M	M	A
5. Discuss events related to students' experiences as likely or unlikely.	I	D	D	A	M	M	A	D
6. Collect data using observations, surveys, and experiments.			I	D	D	M	M	A
7. Represent data using tables and graphs such as bar graphs and line graphs.			I	D	A	D	M	M
8. Describe the shape and important features of a set of data and compare related data sets, with emphasis on how the data are distributed.					I	D	D	M
9. Compare different representations of the same data and evaluate how well each representation shows important aspects of the data.						I	D	D
10. Propose and justify conclusions and predictions that are based on data and design studies to further investigate the conclusions or predictions.						I	D	D
11. Describe events as likely or unlikely and discuss the degree of likelihood with such words as *certain, equally, likely, and impossible.*				I	D	A	M	M
12. Predict the probability of outcomes of simple experiments and test the predictions.				I	D	A	M	M
13. Formulate questions, design studies, and collect data about a characteristic shared by two populations or different characteristics within one population.					I	D	D	M