Summary of Changes

1999 Math Syllabus In Comparing to that in 1985

- **Change in the curriculum organization**
  - **From Year Level to Key Stage**
  - **From Strands to Learning Dimensions**
  - **From Units to Learning Modules and Learning Units**
- **Change in the learning contents**
- **Change in the teaching and learning strategies**

Summary of Changes on Learning Contents
1999 Math Syllabus In Comparing to that in 1985

Number & Algebra Dimension

Change in Focus

- Increased attention to topics which can foster number sense
- Increased attention to building up a transition from number to algebra
- Increased attention to studying relations between quantities from a graphical perspective
- Not allocate fixed time ratio to revise topics learnt in primary school levels
- Decreased attention to manipulate complicated algebraic or numerical expressions
- Decreased attention to algebraic methods applicable to solve only a specific problem

Change in Content

- Topics added:
  - Functions and graphs (S4 - S5)
  - Exponential and logarithmic functions (S4 - S5)
  - Numerical estimation (S1 - S3)
- Topics deleted
  - Numbers and counting (Form I Units 1.1 to 1.3)
  - Open sentences (Form I Unit 2.3)
  - Meaning of percentage and practice in converting fractions (Form I Units 4.1 to 4.2)
  - Direct and inverse proportion (part of Form II Unit 1.3)
  - Graphical solution of 2 linear inequalities in one variable (Form III Unit 7.2)
  - Roots and coefficients of equations (Forms IV and V Part of Unit 1.2)
  - H.C.F. and L.C.M. and manipulation of algebraic fractions (Form IV and V Units 4.4 to 4.5)
  - More on rate, ratio and proportion and algebraic manipulation of ratio and proportion (Forms IV and V Units 5.1 to 5.2)
  - Summation notation (Forms IV and V Unit 7.3)
  - Solve quadratic inequalities in one unknown by algebraic method (Forms IV and V Units 9.2)
  - Method of bisection (Forms IV and V Unit 12.2)
- Topics arranged in different ways
  - Laws of rational indices (from S3 to S4 -S5)
  - Common logarithms to logarithmic functions (from S3 to S4 - S5)
  - Quadratic equations (from S3 to S4 -S5)
  - Division of polynomials (from S2 to S4 - S5)

Measures, Shape & Space Dimension

Change in Focus

- Increased attention to hands-on-experience in manipulating of concrete figures, solids or those constructed with IT
- Increased attention to studying figures/shapes from different approaches
- Increased attention to historical development of knowledge
- Decreased attention to rote memorization of formulae and different forms of equations
- Decreased attention to the manipulation of identities, equations in trigonometry
- Decreased attention to computational strategies used in pre-computer era
- Decreased attention to co-ordinate treatment of circles

Change in Content

- Topics added
  - Transformation & symmetry; and simple co-ordinate treatment of transformation (S1-S3)
  - 3-D solids (S1-S3)
  - Estimation strategies in measurement (S1-S3)
  - Lines and centres of triangle (S1-S3)
  - Heron's formula for areas of triangles (S4 -S5)
- Topics deleted
  - Use of square root tables (Form II Unit 4.2)
  - Use of trigonometric tables (Form II Unit 6.2)
  - Intersection of straight line and a circle (Form IV to V Unit 11.6)
  - Measures of angles in radian and arc lengths and areas of sectors using radian (Forms IV to V Units 6.1 to 6.2)
- Topics arranged in different ways
  - Equation of straight lines (from S3 to S4 - S5)
  - Break down "Angle and line segment bisector" (Form I Unit 10) into parts and subsume under corresponding topics

Data Handling Dimension

Change in Focus

- Increased attention to constructing statistical graphs or diagrams with different tools besides paper-and-pencil
- Increased attention to foster the ability in choosing an appropriate graph or diagram to represent a given set of data
- Increased attention to interpretation of statistical graphs or diagrams
- Increased attention to fostering a critical view to interpret the statistical reports of real-life activities
- Decreased attention to focusing different algorithms to find mean or standard deviation

Change in Content

- Topics added:
  - ✧ Stem-and-leaf diagrams, scatter diagrams, line graphs; (S1 - S3) box-and-whisker diagrams (S4 - S5)
  - ✧ Reading data from given frequency : percentiles, quartiles, median (S1 - S3)
  - ✧ Expectation (S1-S3)
  - ✧ Uses and abuses of statistics (S4 - S5).
- Topics deleted:
  - ✧ Construction of bar charts, pictograms (Form I part of Unit 13.2)
  - ✧ Assumed mean (Form III part of Unit 11)
  - ✧ Mean deviation, variance (Forms IV to V parts of Unit 8.3)
  - ✧ Various methods of computing standard deviation (Forms IV to V part of Unit 8.4)
  - ✧ Normal curve, standard scores (Forms IV to V part of Unit 8.5)
- Topics arranged in different ways
  - ✧ Weighted averages (from S4 - 5 to S1 - S3)
  - ✧ Break down “Abuses of statistics” (Form III Unit 12) into parts and subsume under each corresponding topic