



Mathematics Initiatives

Glen Cove School District

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Teaching for Understanding

- A District Goal
- Implemented K-12
- Student-centered approach to learning



Understanding by Design

- UbD is a backward design
- Emphasizes understanding and conceptual learning



Understanding by Design: Math Examples

Examples of Big Ideas:

- Mathematics is a system of patterns
- Statistics can represent a model of complex phenomena
- Fractions and Percentages can represent the whole or portions of the whole



Staff Development

- 30 hours for every teacher of math
 - Math, ESL and Special Education (K-8)
 - Content and pedagogy
 - Aligned with State standards
- Staff Developers
 - Dr. Elliot Bird, Prof. of Mathematics, C.W. Post
 - Mariana Ristea, K-12 Math Coordinator
 - Judy Dodge, National Consultant



Improved Collaboration Among Departments

- Mathematics
- ESL
- Special Education
- Teaming



Math Committee

- Includes teachers and administrators from across the District
- Responsibilities
 - Evaluate curriculum/pacing charts
 - Investigate new resources
 - Development of new assessments
 - Recommend professional development strategies



Benchmark Tests

- Being developed
- Provide data for differentiation of instruction
- Are reflected in pacing guides
- Allow for uniform assessment of all students
- Prepare for State assessments in March



Extended Math Instruction

- Redistribute resources at Middle School
- Minimum on 60 minutes of instruction each day K-5
- Bilingual math class at Middle School



Development of Pacing Guides

- Grades 1 – 12
- Designed to ensure that all teachers adequately complete the pre-March curriculum
- Clear and structured reflection of flow of topics
- Aligned with resources
- Aligned with standards



Online Resources and Math Vocabulary

- Available for math teachers at all levels
- Available for Special Education and ESL teachers involved in math



High School AIS for Math A

- Identification and recommendation of appropriate students
- One semester in duration
- Offer assistance in math basics and strategies in problem solving



New High School Courses

- Math Research
 - Introduction to research and provide opportunity to connect with professionals
- Math Applications
 - Project based approach
- Computer Math
 - Relationship between math and technology



Future Needs/Initiatives

- Creation of additional bilingual sections at Middle School
 - Provide more bilingual instruction to reduce the achievement GAP
- Smaller AIS classes at High School



Future Needs/Initiatives

- Investigate effective remedial math programs
- Use of technology
 - scientific calculators
 - educational software
- IB Program at High School



Expectations for '07—'08 School Year

- Increased time for math instruction (K-8)
- Revised curriculum and pacing guides
- Continued professional development
- Effective and aligned resources
- Common assessments and formative testing
- Teaching for Understanding not coverage