MathScape

Created by Teachers for Teachers
Philosophy

• Mathematics in the human experience
  – Using mathematics to create understanding of the physical universe.
  – To be “human”
    • Think
    • Create
    • Communicate
Philosophy

• Constructs ones “own” knowledge.
• Importance of social context
• Assessment is integrated into daily activities
• TECHNOLOGY!!!
Who

• The program is designed for a wide range of students 6-8 grade
• Address the needs of diverse learners
• Geared towards allowing parents to be involved in student learning
  – Family Math Nights
  – Parent workshops
Where

• The printables are located in the back of the teacher edition

• The learning happens:
  – Investigations - Daily
  – Mini-projects - Links a few investigations
  – Projects - Culminates the unit
Where

• The student guides are set up in 3-4 phases
  – Phase I - A pre-test
  – Phase II - Introduction of new knowledge
  – Phase III - Build on phase II
  – Phase IV - Assessment
Why

• Students use hands-on materials
• Students represent problems in different ways
  – Words
  – Diagrams
  – Tables
  – Expressions
  – Equations
  – Graphs
Why

- Believe all students can succeed
- Students use personal experiences to assist the learning process
- Promote the “more than one way of solving a problem” philosophy
- Depth versus “skimming” leads to mastery
- Use assessment to inform instruction and evaluate learning
Why

• Experimenting - Students play with a problem to discover the underlying mathematics
• Facilitate classroom discussions
• Flexibility of lessons for teachers to meet students needs and extensive support for the teachers
MathScape

• One of four middle school programs to receive a *satisfactory* rating from the American Association for the Advancement of Science (AAAS)
• Tips and stories from field test teachers on website.*
• [http://main.edc.org/newsroom/articles/focus_curriculum](http://main.edc.org/newsroom/articles/focus_curriculum) (Article)
## Benchmarks

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<th>Number Skills</th>
<th>Geometry Concepts</th>
<th>Geometry Skills</th>
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MathScape on the Net

- Book-Specific Web sites*:
  - www.mathscape1.com
  - www.mathscap2.com
  - www.mathscape3.com

- The above websites are meant for teacher, student and parent support

- http://www.shodor.org/interactivate1.0/texts/mathscape/ones.html
MathScape on the Net

• Publisher The McGraw Hill Company: Glencoe
  – www.glencoe.com
MathScape – Teacher Resources

- [http://www2.edc.org/Mathscape/phil/default.asp](http://www2.edc.org/Mathscape/phil/default.asp)
- 21 units over 3 years
- Technology option page in teacher guides
- Units directly related to spreadsheets and internet
MathScape Teacher Guides

- Assessment rubric and skill quizzes
- Homework problems and solutions
- Reproducible handouts and overheads
- Lesson Plans in Teachers guide
  - Questions to initiate conversations
  - Activities
MathScape Manipulative

• Rulers, calculators, dice, spinners, and other ordinary tools often used
• Other eccentric materials used:
  – Mystery Devices (Number Theory)
  – Slope-o-Meters (Pythagorean Theorem)
  – Complete list of manipulative materials: http://www2.edc.org/Mathscape/teach/manipulatives.asp

• Optional
• Reference book for students
• Two parts:
  – Glossary of Terms, symbols, and formulas
  – Extra Support and Practice
You want some more MathScape?

• [http://www2.edc.org/Mathscape/implem/overview2005bg.pdf](http://www2.edc.org/Mathscape/implem/overview2005bg.pdf)