On The Shoulders of Technology

Spreadsheet Sliders

- Software: Excel®,
- Adopted from: *Spreadsheet Sliders as new graphing tools.* Presented by Sergei Abramovich and Rory Szwed, NCTM Chicago 2000
- Also see: *Making Sense of Slope*, Mathematics Teacher Feb. 2000, p. 114

Sliders in Sketchpad

- Software: Geometer Sketchpad®
- Adopted from: *Visualizing Functions: Introductory Algebra Activities with The Geometer Sketchpad* by Nicholas Jackiw, NCTM Pittsburgh 1999

Fractal drawing

- Software: Word®, AppleWorks®, Geometer Sketchpad®
- Many sources
- A special thank you to Alan Russell from Elon U
- Also see: Fractals for the classroom by Maletsky, Perciante, Yunker, Peitgen, Saupe, Jurgens, NCTM 1995

The Chaos Game

- Software: Excel®
- Adopted from: Various Sources

Digital Images—Problems Around Us

- Digital Camera
- From: Some original ideas, others from various sources

Digital Images—Making Parabolas

- Software: Geometer Sketchpad®
- Adopted from: *Using A Digital Camera To Verify Quadratic Behavior*, by Harris S. Shultz, Mathematics Teacher, April 1999

Digital Images—Permutations & Combinations

- Software: PowerPoint[®]
- Adopted from: *Photographs and Committees: Activities That Help Students Discover Permutations and Combinations*, by Jennifer Earles Szydlik, <u>Mathematics Teacher</u>, February 2000

Digital Images—Video to frame a problem

- Software: PowerPoint[®]/Excel[®]/Video Editing Software/TI Interactive[®]/Sketchpad[®]
- Original Idea!
- Basketball video copyright ESPN 2003

The Birthday Problem

- Software: Excel[®]/AppleWorks[®]
- Adopted from: Original Idea!
- Also see: *Exploring the Birthday Problem with Spreadsheets* by Lawrence M. Lesser, <u>Mathematics Teacher</u> May 1999

Teaching while away.

- Software: Geometer Sketchpad ,Windows Journal, Camtasia Studio, TI Smartview.
- Out of necessity… or good substitutes are hard to find.

Chaos—Newton's Square Root Algorithm

- Software: Excel® /AppleWorks®
- Adopted from: Newton's Method for Square Root: A spreadsheet investigation and Extension into Chaos by Sharon Dugdale, Mathematics Teacher, October 1998

Also see: *Chaotic Behavior in the Classroom*, <u>Mathematics Teacher,</u> Feb. 2000

Dynagraphs

- Software: Geometer Sketchpad[®]
- Adopted from: Sample files on Sketchpad CD

Other Resources:

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Free Math Clipart and Fonts

- Software: Netscape[®]/Internet Explorer[®]
- Website:<u>http://www.educaide.com/downloads/graphics.html</u>

Math Jeopardy & Other Games People Play

- Software: PowerPoint[®]/HyperStudio[®]
- Adopted from: Technology Tips by Mary Kathryn Geesaman*,* <u>Mathematics Teacher</u>, January 2000

Make your own Clipart!

- Software: Geometer Sketchpad[®]

Email: <u>fsobierajski@nrwcs.org</u> in the subject line type: *points.* Your comments on this session are also welcome.