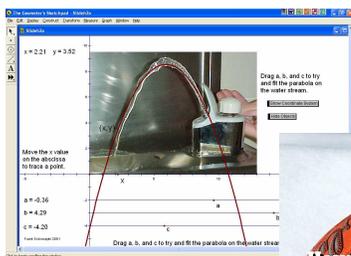


## Starting Points



Ideas for Using Technology in the  
Mathematics Classroom  
By Frank Sobierajski  
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*Sparking a Revolution in Learning*



NECC  
Philadelphia, PA  
June 29, 2005

## A Treasure Hunt using Locus Definitions

- Software: Geometer Sketchpad®
- Adopted from: Idea heard in a discussion with a colleague.

## Spreadsheet Sliders

- Software: Excel®, Sorry AppleWorks® doesn't have this feature.
- 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®
- Adopted from: *Focus on Fractals* by Dr. Evan M. Maletsky, NCTM Boston 1995 & some original ideas.

## More Fractals

- Software: Geometer Sketchpad®
- Some original ideas with a little help from my friends—with special thank you to Alan Russell.

## 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, Mathematics Teacher, February 2000

## Digital Images—Transformations

- Software: PowerPoint®
- From: Chip Pierce—used with permission.

## 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, Mathematics Teacher May 1999

## Dynagraphs

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

## Other Resources:

### 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*, Mathematics Teacher, Feb. 2000

### Free Math Clipart and Fonts

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

### Math Jeopardy & Other Games People Play

- Software: PowerPoint®/HyperStudio®
- Adopted from: Technology Tips by Mary Kathryn Geesaman, Mathematics Teacher, January 2000

### Make your own Clipart!

- Software: Geometer Sketchpad®

