

Using Navigator and SimCalc to Reach the Unreachable Algebra Student



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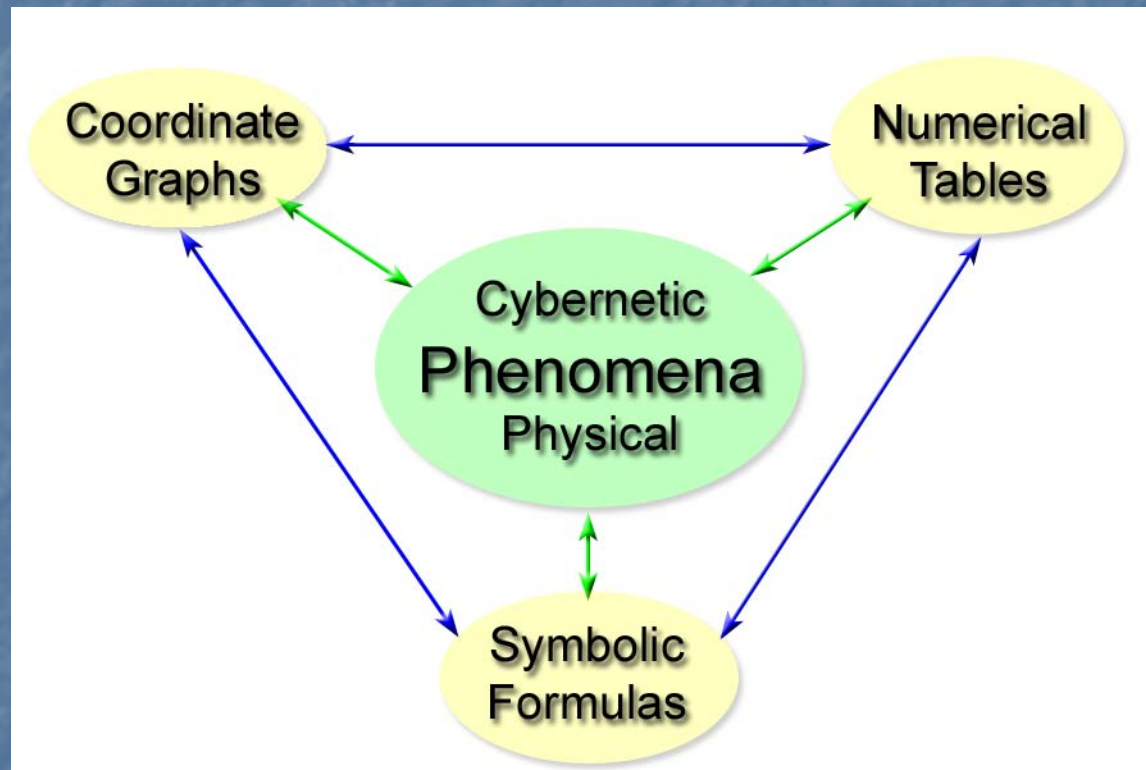
University of Massachusetts-
Dartmouth SimCalc Projects

www.simcalc.umassd.edu

Plan for the Session

- Intro to Big Ideas / Big Picture
- Video clips of students in action
- Commentary
- Demonstrate a MathWorlds performance activity to get a sense of Mathworlds on the TI-83+
- If time, make your own "Sack Race"

A SimCalc Assumption: Math Needs to Be **About** Something



Big Picture

Combining **Dynamical Mathematics** (in the form of SimCalc MathWorlds)

with

Classroom Connectivity (in the form of TI Navigator) leads to...

**Uniquely Powerful,
Engaging
Educational Experiences
for Students!**

How?

- Facilitates work-flow
- Ease of adapting curriculum
- Makes individual mathematical constructions public, e.g., “mathematical performances”
- Centralizes classroom activity

**Let's see it in action in
a classroom full of
"unreachables"!**

Behind the Scenes

- Teacher renders an individual's mathematical activity public in a shared display
- Mathematical structures and classroom social structures are interlinked (both by design and naturally occurring)
- The end result is an infusion of personal & social identity in students' mathematical constructions

Calculator MathWorlds DEMO

Exciting Sack Races

And Now

It's your turn!

The Power of Qualitative Mathematics

- Fosters student creativity
- Another means of personalization
- Non-threatening

AGGREGATED DISPLAYS

- We aggregate student constructions to:
 - Vary essential parameters on a per-student basis
 - Elevate student attention from single objects to parametrized families of objects
 - Provide opportunity for generalization across cases
 - Expose common thought-patterns (e.g., errors)

CD Contents:

**Sample Lessons from the
Algebra Subscription**

&

**Connected MathWorlds
Subscription**

Thank You!

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