

# SO YOU'VE GOT AN IPAD

Transforming Math Education

Debbie Ferry - [dferry@misd.net](mailto:dferry@misd.net)  
Susan Hardin - [shardin@misd.net](mailto:shardin@misd.net)  
Macomb ISD  
November 6, 2012

1

## GOOD INSTRUCTION

- Inquiry based
- Engaging
- Challenging
- Interdisciplinary Connections (real world)
- Collaborative
- Models the process
- Opportunity for discourse



2

2

## SETTING THE STAGE FOR THE IPAD

- AppleTV
- VGA Cable
- Reflections App with AirPlay
- Document Camera
- VNC Viewer - core math tools NCTM
- PowerPoint Displayer

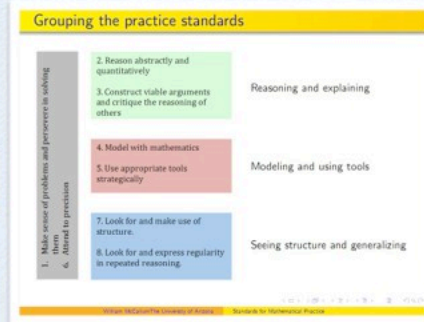


3

3

# MATHEMATICAL PRACTICES

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.



<http://illustrativemathematics.org/standards/practice>

4

# OVERARCHING HABITS OF MIND

- analyze and conceptualize the problem
- look for entry point to begin
- ask themselves “does this make sense?”
- communicate precisely to others
- understand and use vocabulary
- calculate accurately and efficiently



5

# REASONING AND EXPLAINING

- make sense of numbers and their relationship in a problem (meaning of quantity)
- alternately contextualize and decontextualize
- construct an argument and justify conclusion
- discourse and discussion



6



## MODELING AND USING TOOLS

- apply to everyday life
- make assumptions and approximations to simplify complicated situations
- interpret results in context to and see if they make sense
- familiar with tools and choose tools helpful for the work at hand

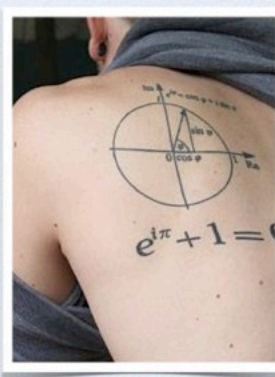


7

7

## SEEING STRUCTURE & GENERALIZING

- discern a structure or pattern
- see the big mathematical picture
- notice if calculations are repeated, and look both for general methods and for shortcuts.
- maintain oversight of the process, while attending to the details.



8

8

## COMMON CORE TOOLS

• CCL4S app



• Ci2 Protocol



• Smarter Balanced

<http://sampleitems.smarterbalanced.org/itempreview/sbac/index.htm>

9

9

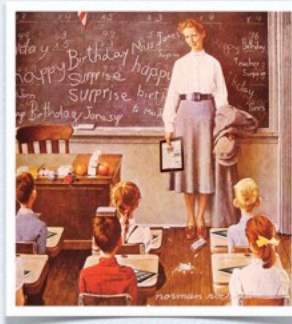
# APPS 4 GOOD INSTRUCTION

10

10

## INSTRUCTIONAL APPS

- Unit Circle
- Chance Lab
- Quick Graph
- VNC Viewer



11

11

## SUPPORTING LEARNING IN MULTIPLE WAYS

- On the Spot
- Educreations
- Explain Everything
- Virtual Manipulatives
- Interactive Textbooks  
- iBooks



12

12



## APPS FOR STUDENT REASONING AND EXPLAINING

- Whiteboard Lite Collaborative
- Math Terms & StoryLines for School
- Coach's Eye
- ScreenChomp

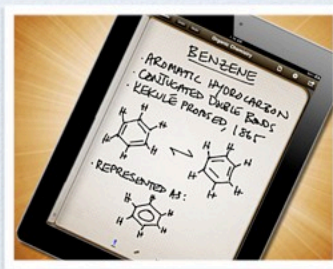


13

13

## APPS FOR CLASS SCRIBE

- Notability
- Evernote
- Type on PDF free
- neu.Annotate+



14

14

## APPS FOR STUDENT SUPPORT

- Wolfram Alpha
- Kahn Academy
- Algebra Solver
- Triangle Solver
- Fraction Math



15

15

## APPS FOR STUDENT PRACTICE

- SAT math
- Chicken Coop Fractions
- Algebra Touch
- Study Stacks: A+Pro



16

16

## APPS FOR TEACHERS

- PresentTimer
- Random Mstr
- MyPoint
- New in IOS 6: Guided Access



17

17

## 'APPY HOUR SHARE



18

18