

# Formative Assessment, Inquiry with TI-Nspire™ Navigator and SMART™ Technology

NCTM #232 Hyatt Manchester E/F, Thursday, April 22, 2010, 1–2:30

Pearson textbooks come alive with TI-Nspire

Box Problem – multiple representations

Geometry Nspired activities

Algebra Nspired inquiry activities

**Sean Bird**, T<sup>3</sup> Instructor,  
 math & science teacher  
 Covenant Christian High School  
 Indianapolis, IN  
[covenantbird@gmail.com](mailto:covenantbird@gmail.com)  
<http://covenantchristian.org/bird>

More robust than any clicker system, the TI-Nspire Navigator & TI-Nspire handheld are versatile in improving documented formative assessment, data collection and student engagement. It has enabled me to get feedback from a quiet class and get 100% involvement in the class where one student says the correct answer right away.

### **TI-Nspire Navigator**

1. Communicate completely wirelessly with a class of students who have any of TI-Nspire: CAS or numeric, Touchpad or Clickpad.
2. Easily prepare questions in advance and send the file. Students can work at their own pace. (Send many file *fast*.)
2. Class Analysis & Slide Show – this can automatically or manually be graded
3. Transfer Tool can be used to send & delete many file without students even being logged in.
3. Screen capture. See what is on their screen. This is useful for accountability, providing assistance, and for formative assessment - for example Swingometer.tns and BigDigits.tns  
Want to discuss what is on a screen? Drag & drop into your notes or into a Word doc.
4. Quick Poll - great for open response questions, discussion starters and review for the quizzes and test.
5. Live Presenter – handheld's screen and key presses shown
6. Receive and automatically grades
7. Portfolio – Organize Grades, documented formative assessment

### **Links**

<http://covenantchristian.org/bird/TTT.htm>

<http://timath.com>,

<http://www.ti-mathnspired.com/>

<http://www2.smarttech.com/st/en-US/Products/SMART+Notebook+Math+software/>

### **What's so great about the TI-Nspire?**

1. It now comes with the Student Software.
2. Math Print – looks like what is on students' paper or textbook
3. Dynamic relation between environments
4. Resolution (What if it is too small for your eyes? Use the software.)
5. It even has grayscale (color on the software)
6. Geometry is integrated. Dynamic geometry in the hands of students!
7. Animation
- 8a. TI-Nspire (not Nspire CAS) comes with TI-84 keypad - 2 for the price of 1.  
b. CAS has units – great for science  
CAS has exploration & discovery possibilities in algebra
9. Notes - makes it so much more pedagogical.  
This really is a learning (& teaching) tool.  
NEW - Interactive Notes make this dynamic too.
10. History preserved. It is better than an 84 which only has a history of 10 that many of my students didn't even know existed. History of 99 for each page (50 pages max) in each of the 30 problems allowed in a single document.
11. INEQUALITIES
12. TRANSFORMATIONS
13. no more false asymptotes
14. Graph function, polar, parametric, implicit on the same screen.
15. sliders
16. Incredibly easy to use data collection
17. Many inquiry activities have been written.
18. Demonstrations – powerful visuals & multiple representations