Using TI-Nspire™ in Your Physics Classroom

Overview
Facilitated by T³ - Teaching with Technology™ instructors, this workshop will focus on the integration of TI-Nspire™ technology into the classroom with the use of content-specific activities for Physics. This 3-day learning event is ideal for beginners who will learn to integrate TI-Nspire technology into their Physics curriculum.

Learning strategies will include, but not be limited to:
- Using multiple representations
- Working with Inquiry-based learning
- Implementing action/consequence documents

Participants will:
Become comfortable using the TI-Nspire handheld and TI-Nspire Computer Software - Teacher Edition Software.

Understand the power and potential of TI-Nspire's key mathematical and pedagogical features.

Take away classroom-ready materials suitable for Physics.

Explore the pedagogical implications of the document model as a tool for presentation, curriculum delivery, problem solving and recording students' thought processes.

Discuss the implications of having students create and use their own documents, along with the value of exploration and investigation using pre-made documents.

Explore assessment opportunities provided by the new tools from Texas Instruments.

Encourage the building of a community of like-minded educators.

Mathematical Concepts Examined
Through the course of this 3-day event these and other Physics concepts will be examined:

- Motion
- Light
- Temperature
- Conservation of Energy
- Gravity
- Velocity
- Potential and Kinetic Energy
- Coulomb's Law
- Acceleration
- Ohm's Law
- Friction

Workshop Agenda

Day 1
Introduction: themes, process, and agenda
Connect to Class: show C2C by sending out .tns files for the day
Prior Nspire Skill: issues from 1.5 day/moving on.
Exploring Motion with the CBR2: data collection
Roller Coaster Energy: ACR model, simulation
Ohm's Law: ACR simulation with data capture
Light at a Distance: scratch data collection document on Theme
Law of Gravity: ACR simulation on Theme
Coulomb's Law
Debrief Day 1

Day 2
Document Fan Out: process to send out .tns files for the day
Finish Coulomb’s Law (on Theme)
CAS & DCC: More Features
Rates of Cooling
Let's Roll: Ball on Ramp
Projectile Motion
Introduction to Carousel
Debrief Day 2

Day 3
Transfer Files
Jump Analysis
Forces on an Incline
Friction
Carousel Work
Carousel Presentations
Wrap-up & Closure