



Announcing!

The Second Midwest Teacher Leadership Training on *The Physics of Cell Phones and Wireless Communications* June 24-26, 2008 Troy, Michigan



Supported by:

The Convergence Education Foundation

"Igniting the creative potential of students in engineering, science and mathematics."

Join other outstanding physics and technology teachers from across the Midwest to discover the fundamental science and engineering of cell phones and other wireless communications.

We live in a world with instantaneous global communications. Over 250 million Americans have cell phones. Our students use cell phones, MP3s™, and iPods™ every day and their parents use Palms™, BlackBerrys™, and iPhones™. Despite the ubiquitous nature of modern communications, most students (and teachers!) don't have a clue of the science behind these wonderful, technological marvels. Three high school teachers working with engineers from Cingular, Motorola, and the University of Michigan have developed an exciting and innovative 3-week program.

We have discovered that these devices can be used to effectively teach physics concepts (vibrations and waves, sound, light, and electromagnetism), technology, engineering, and mathematics.

Not only will you learn the science, you will also learn:

- ◇ How to teach the concepts to your own students and to other teachers. The program is inquiry-based and student-centered.
- ◇ Participants will design, build, and test devices to send and receive their voices over personal radios, light beams, and through optical fibers.
- ◇ Participants will learn the fundamental of GSM and CDMA systems and structures of cell networks and the answers to most common student questions about cell phones.

The pedagogy is "constructivist" and based on the best practices in science education as outlined in the National Resource Council's Guide, "**How People Learn**," and "**12 Brain/Mind Principles in Action**" (Corwin Press 2004/2008).

The 2 and ½ day workshop will be hosted by the Convergence Education Foundation at the National City Building in Troy, MI (I-75 and Big Beaver Roads) from **noon on June 24th to 3:00 on June 26th**. The Convergence Education Foundation will pay for training, invited speakers, and a complete classroom set of equipment for participants.

Upon successful completion of the program, participants will have over \$2,000 of materials and equipment to use in their own classrooms. **All teachers who make at least one professional presentation and one full workshop by May 30 of 2009 will become owners of the equipment.**

Requirements of Participants:

Teachers who would like to participate in the workshop need a letter from their principal committing \$300 toward the cost of materials. Participants will also need to pay their own travel, meals and hotel expenses.

CEF will secure a group rate at local accommodations and provide you with this information in your notice of acceptance into the workshop.

Some teachers will be selected as individual and some as partners. If you have a colleague who would like to partner with you, write a note "partner with _____" at top of both Application Forms and submit at the same time. Partners will be expected to share one classroom kit.

Conference Details will be updated on the CEF website at: www.cef-trek.org



Application Form Midwest Teacher Leadership Training Workshop

(Please type)

Name:

Summer e-mail address:

Home Address:

Best Telephone Number: () -

Teaching Experience: must be teaching at least $\frac{1}{2}$ time next school year
(list courses, levels, years in reverse chronological order)

Leadership Experience: (list your presentations at local, state, regional, and national conferences, your professional awards, etc. in reverse chronological order)

Professional Background in Pedagogy: (Modeling in Physics, brain-based learning, inquiry-based learning, etc. in reverse chronological order)

Describe who you might approach for funding and where you might host your follow-up workshop:

FAX a letter on school letterhead from your principal committing \$300 toward the cost of the materials to: (313) 647-9993

Completed application should be sent as an attachment to email **by April 28, 2008** to.

markdavids@comcast.net

If needed, you can fax to: 313-647-9993

(All applicants will receive e-mail notification by May 10.)

Please contact Mark Davids by email or phone for further information
markdavids@comcast.net 313.885.3895 (evenings)

