

The ARRL Teachers Institute 2009

Mark Spencer, WA8SME

The gift that keeps on learning!

"I wanted to thank you for the pleasure and experience of attending the class last year. It was one of the most meaningful and enjoyable learning experiences I have ever participated in. The changes you have made to improve it this year make me feel envious that I can't attend again."

The ARRL Teachers Institute (TI) on Wireless Technology continues to evolve and expand. This summer, six TIs are planned to provide in-service training opportunities for 72 teachers, and a new "graduate" level TI-2 is planned that will focus on space technology.

The TI has become an integral part of the portfolio of resources made available to teachers and schools through the ARRL's Education & Technology Program. This week-long, in-residence learning opportunity is designed for motivated teachers and other school staff who want to learn more about wireless technology. A typical agenda for the week-long training includes learning — and learning how to teach — basic electronics through the art and science of radio, an introduction to microcontroller programming and the basics of robotics. On the air activities include radio direction finding, bringing space technology directly into the classroom through satellite contacts and just enjoying ham radio operations.



Clockwise from top: Lots of pride in the projects completed during the TI (especially when they work!).

Satellite contacts are a popular component of the curriculum, so popular in fact that the topic deserves its own workshop for TI graduates next year.

Most of the time, the TI is just plain work, but fun work!

Sometimes the instructor (KD7RPP) offers some individual assistance.

The Goal: Bringing It Back to the Classroom

Participating teachers can use the TI to fulfill their continuing professional education requirements to maintain their teaching credentials and they can receive 3 hours of graduate level college credit. The goal of the

TI is to provide teachers with the skills and resources they need to learn more about wireless technology so they can bring the concepts to their students in their classrooms.

"I just wanted to let you know that I used my robot in class today to talk about motion,"

one graduate wrote. "The kids were very impressed."

The TI curriculum also includes a 24 hour clock project so teachers can learn basic soldering skills and how to build and use a radio telescope for demonstrating the fundamentals of radio astronomy. In addition, a "Mars Lander" simulation ties all the content presented during the TI together into one, student centered application of the science of radio.

Teachers find the hands-on activities presented during the TI a great fit in their classrooms when they get home. "We had our first ever fox hunt! It was great... the adults and the students loved it!!! We all had so much fun we are doing a second one next week as well. Thank you for teaching about this in your class. This was an awesome project for our students."

"I have been going into classrooms doing some basic "how radio waves work." I really liked the visual that the magnet and the three pieces of pipe show how the magnetic field works."

Apply Now —Space is Limited

If you are a teacher, or you know a teacher who could benefit from the experience, I encourage you to check into the Teachers Institute. The dates, locations and application for this year's TIs can be found on the ARRLWeb at www.arrl.org/ti. If you want additional information, you can contact Mark Spencer, WA8SME, the ARRL Education & Technology Program Coordinator (and TI instructor) at 530-495-9150 (Pacific Time) or at m Spencer@arrl.org.

"Great workshop. Too many times, technology is considered computers only. This workshop expanded my technological horizon. I was amazed how many national science standards could be addressed through the use of wireless technology."

"As it is Teacher Appreciation Week, I just wanted to thank you for teaching us at the TAMPA-TI all of these great technologies that we can share with our students and for your continuing assistance that you provide." 

2009 TI Dates and Locations

Date	Location	Application Deadline
May 26-29, 2009	New Mexico Military Institute Roswell, NM	April 15, 2009
June 15-18, 2009	Parallax Inc, Rocklin, CA	April 15, 2009
June 15-18, 2009	Pueblo Magnet High School, Tucson, AZ	April 15, 2009
June 23-26, 2009	Brevard Public Schools, Viera, FL	May 15, 2009
June 29-July 2, 2009	Berrien Regional Education Service, Berrien Springs, MI	May 15, 2009
July 13-14, 2009	TI-2 Location TBD	May 15, 2009
July 27-30, 2009	ARRL Headquarters, Newington, CT	May 15, 2009