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Resources for Licensing Instructors

<http://www.arrl.org/es/instructor-resources/>

Resources for Teachers

<http://www.arrl.org/FandES/ead/teacher/>

Education & Technology Program:

<http://www.arrl.org/FandES/tbp/>

Teachers Institute on Wireless Technology:

<http://www.arrl.org/FandES/tbp/ti.html>

New Instructors Manual for Technician/General Licensing Available

The 4th Edition of the *ARRL Instructors Manual* has arrived! This new edition is designed to coordinate classroom instruction with the current ARRL student manuals for Technician and General Class licensing, the 1st edition of the *ARRL Ham Radio License Manual* and the 6th edition of the *ARRL General Class License Manual*. You may order the new publication at <http://www.arrl.org/catalog/?category=Instructor+Support&words=>

The lesson plans and instructional Power Points in the new edition of the Instructors Manual have been developed by Mark Spencer WA8SME, ARRL Education & Technology Program Manager, and are intended to provide an outline for instruction. We expect that you will customize these lesson plans and materials to fit your course format and to address the needs of your particular audience.

We encourage you to think of the Power Points we provide with our instruction materials as teaching aids—one tool among many in your instructional toolbox. They are no substitute for knowledge of the content, adequate preparation to lead the class and the ability to respond to the needs of students by offering alternative channels of instruction. Learning is most effective if all learning channels are engaged: visual, auditory and kinesthetic. Most people have a natural preference for one channel or another. Use Power Points, but use them to reinforce your instruction, not as the main focus of instruction. Reading Power Point slides to your class is just as engaging as reading the manual. You'll be sure to put your students to sleep! Ask questions to engage students in discussion and include activities and demonstrations as part of your lesson plan whenever possible.

An excellent discussion on the appropriate use of Power Points in instruction occurred on the Yahoo Groups instructor reflector recently. You can find the reflector at http://groups.yahoo.com/group/ham_instructor/. I've extracted part of that discussion and include it in this newsletter with the permission of the author. I encourage you to become a member of that group and read the entire discussion. You can also tune into projects other instructors are working on to develop resources for instruction. [Top of page](#)



ARISS Program

FAQs:

<http://www.rac.ca/ariss/faqariss.htm>

Application:

<http://www.rac.ca/ariss/arissapp.htm>

Continuing Education Program

<http://www.arrl.org/cce/>

Contact Us

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Six Teachers Institute on Wireless Technology 2008 Session Dates Announced, Instruction Staff to be Augmented

ARRL will be holding six sessions of the Teachers Institute on Wireless Technology in 2008. Details of the dates and locations are as follows:

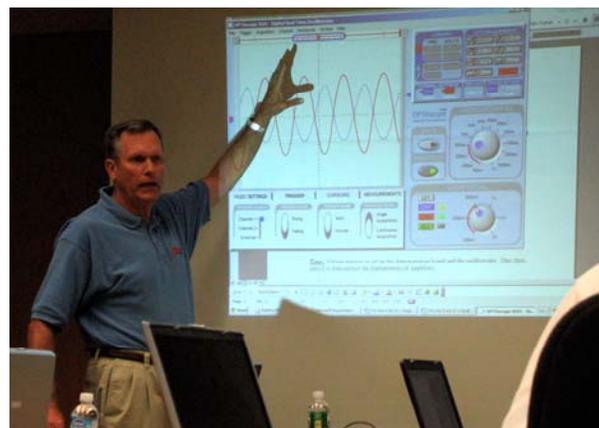
April 7-10 (Museum of Science and Industry, Tampa, FL)
June 16-19 (Parallax Facility, Rocklin, CA)
June 25-28 (Pueblo Magnet High School, Tucson, AZ)
July 14-17 (P&R Communications, Dayton, OH)
July 28-31 ARRL HQ, Newington, CT
August 4-7 ARRL HQ, Newington, CT

Brochures and flyers describing the program and an application can be downloaded at: <http://www.arrl.org/FandES/tbp/ti.html>

Applications are coming in daily so don't delay if you want to attend this year!

We will be adding two new instructors to our Teachers Institute staff this year. An announcement of the selected candidates will be made in *The ARRL Letter* soon.

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Spreading Ham Radio into Cooper Elementary School

By Jay Eimer, AD5PE, Tulsa Amateur Radio Club W5IAS

One of the goals of the ARRL is education regarding amateur radio, with the intent of bringing new licensees into the fold. As a special service club, the Tulsa Amateur Radio Club strives to do the same in many ways. One obvious way is through licensing classes, but there are other ways we can reach out to non-hams as well, such as holding events in public, or giving presentations to other community organizations.

Yet another way to bring new blood into the ranks is to show the benefits of ham radio to children.

Tulsa (Oklahoma) Public Schools has the Tulsa Metro Chamber Partners in Education program, funded through a grant from Tulsa Area Community Schools Initiative (TACSI). This program is designed to broaden the students' horizons by showing them areas where what they are learning in school can be applied later in life.

Putting these two concepts together, having the TARC adopt a school lets us spark the interest of the students, and accomplishes the goals of TACSI. One of our members, Rita Kukura (KE5JZW) is the counselor at Cooper Elementary School. With her acting as liaison, the club was contacted with questions about how amateur radio could be tied in to the school curriculum and spark the interests of the students in their academic pursuits. Well, that list is pretty long - there is science, of course, with the electricity and RF concepts involved, and math when it comes to the formulas involved with converting frequency to wavelength, figuring the resonant length of antennas, and calculating SWR. There are also language skills - we are communicators, after all, so talking is very important. But the initial presentation took it much farther. From Industrial arts (antenna building) to Geography (where IS that contact, really) to Social Studies and Foreign Language (learn about the DX you just worked) and even spelling (CW) and computers and typing (PSK31), we managed to tie in to nearly every subject the students would cover in their classes.

So, starting back last November, we've been meeting after school with a group of 30 fourth and fifth graders after school for a one-hour Enrichment program. So far, we've talked about what ham radio is, and made some local contacts via repeater with Don (K5OKB) and James (KD5ICG). The next session we covered Ohm's Law. This involved playing with multi-meters and resistors to prove that Ohm's Law really works. We've demonstrated the importance of safety devices by "making" our own fuses, then melting them by intentionally shorting them out. But what the kids loved most was making those contacts.



One Wednesday in early December, the club's Communications trailer was set up in the school parking lot, and using its capabilities (including a Yaesu FT-897 and LDG AT-897 feeding 100 watts to a G5RV on a 30' mast), all the students had time to make a short contact on 20 meter phone. A quick "CQ School Demo" using the club call, W5IAS, under the direction of control operator Jay (AD5PE) yielded a 59 reply from Dave, W4PBU of Tampa, FL. Some of the kids immediately got big eyes when they realized how little it took to talk to someone that far away, while others had to wait for the next session to learn where Tampa was! Dave was gracious enough to stay on the air for over 30 minutes, talking for a minute or two to each student in turn, until band conditions took a turn for the worse, and we started having trouble hearing him. At that point, Del, W7JG broke in and told us we were 59 to his shack in Tacoma, WA. The last handful of students as well as all the teachers got their turn talking to Del, just as our hour ended. Meanwhile, Lee (KE5CUB) kept those waiting their turn on HF entertained by showing off his handheld as well as his mobile HF (ICOM IC-7000) which was listening to the goings on from the trailer.

The teachers are thrilled because the kids are excited to have us visit with them, and the kids want to turn their one hour per week Enrichment Program sessions into a full blown Technician licensing class. Let's all do whatever we can to bring them fully into ham radio.

Using PowerPoint for Instruction

Extracted from Yahoo discussion with permission from Garrett Dow, KD6KPC

Sept. 22 4:36

My training and experience comes from the State of Oregon where I was trained last year in Instructor Development. All instructors must pass this course in order to be certified as an instructor in anything. PowerPoint was the presentation engine of choice for this class, but I think I made it clear in my post that it was not the only choice. The City of Portland, where I am employed, does most, if not all, of its presentations in PowerPoint.

My point was that a visual, audible, and tactile learning experience is the most effective. I'm sure your quoted expert would agree to this. PowerPoint can effectively appeal to the visual. The instructor must use other method to achieve audible and tactile instruction. I agree with your quote, "PowerPoint presentations are often used incorrectly and to very bad effect." That's why they teach classes on how to build and use PowerPoint.

I use PowerPoint as a teaching aid. A slide is not to be created to just be read from. The instructor presents the material verbally and uses the PowerPoint to make the point visually. It assists with the presentation, but is not the presentation.

Sept 22 5:01

As instructors, we all need to be intimately aware of the adult learning style and use our own styles to teach to it.

Adults need to first know what's in it for them. This is especially true of younger adults who are coming from the gen-x and gen-y eras. You must also help the student feel good about himself and recognize the knowledge and experience each person brings. Encouragement, in other words.

There are three types of learners, Visual (those who learn by seeing), Auditory (those that learn by hearing), and Tactile (those who learn through the sense of touch). An instructor needs to combine all three styles as much as possible to appeal to all three types. He must also be able to recognize which type of learner each student is to better help them understand.

There are three domains of learning, Cognitive (knowledge), Affective (attitudes), and Psychomotor (skills). When you set out to teach students, you have to help them learn the knowledge and the skills and the attitudes that are required.

In all three Domains of Learning, active involvement of the senses is essential to maximize learning efficiency. The least efficient way to teach is to lecture and give reading assignments (this is the way I started and got a 50% drop-out rate).

Visual symbols alone provide a slightly better learning experience than do Verbal Symbols, but visual symbols alone are still inefficient. Visual Symbols combined with Verbal Symbols provide a much more efficient learning experience. Examples could be lectures accompanied by slides, lectures with dry erase board presentations, and videos.

We start to approach maximum learning efficiency when we combine verbal symbols, visual symbols, and hands-on involvement by the students. Letting students practice a QSO with FRS radios, from making the contact to identifying with call signs, can be practiced. This is more effective than just listening to a recording of someone doing that.

There are 4 steps to the process of teaching and learning.

1. PREPARATION. Get the students ready to learn. Overview the objectives of the session and explain the benefits of learning the material. Relate the subject-matter to what the students have already learned.
2. PRESENTATION. Use simple language and be familiar with the lesson plans. Use eye contact and use humor appropriately. Ask questions often. Use body language appropriately but avoid distracting mannerisms. Be yourself. Use visual aids.
3. COACHING AND PRACTICE. Self-explanatory.
4. EVALUATION. Find out how well the student has learned.

Does it sound like I typed this right out of a manual? I did, so be assured I am not making this up. This is not my own opinion or theory on how to teach to adults. This is what the "experts" say.

For those of you have what you consider to be successful classes, look at the points listed above and see how many you do well. For those who would like to be a little more effective, consider how to better incorporate the points listed above.

Since the original post emanated from a PowerPoint discussion, the bottom line is that some sort of visual stimulation is needed to effectively teach. Use whatever works for you.

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Education Department Staff Changes

We're very pleased to welcome Nancy Hallas, W1NCY to our team in Education Services. Nancy will be working with us part-time as the Administrator of our Continuing Education Program. Her duties include student enrollments in on-line courses, mentor assignments and coordination of field instruction and field activities.



Nancy has been working at ARRL in other departments during the past year and brings

with her familiarity with ARRL systems as well as her knowledge as a licensed ham. She is a retired Congregational pastor and is working 3-days a week with ARRL, commuting with her husband Joel Hallas, W1ZR who is on ARRL's editorial staff. Nancy will be in the office on Monday, Wednesday and Thursday of each week.

Please direct your questions and correspondence about the Continuing Education Program to the general mailbox cce@arrl.org rather than to Nancy's personal e-mail. This will help us better coordinate support for this program, particularly on days when Nancy is not in the office.

Rose-Anne Lawrence KB1DMW has moved on to new responsibilities in the ARRL QSL Bureau where she can speed members' QSL cards on to their destinations. While we are looking for a replacement for her to fulfill duties as Education Services Assistant, please direct your calls and questions to me or to Nancy. [Top of Page](#)

To subscribe, unsubscribe or change your address for e-mail delivery of this newsletter:

ARRL members first must register on the Members Only Web Site, <http://www.arrl.org/members/>. You'll have an opportunity during registration to sign up for e-mail delivery of this newsletter as well as others, including the ARRL Letter, W1AW bulletins, and other material. ARRL members may subscribe to the ARRL Instructor/Teacher Newsletter by going to the Member Data Page at: <http://www.arrl.org/members-only/memdata.html?modify=1>

Note that you must be logged in to the site to access this page. Scroll down to the section "Which of the following would you like to receive automatically via email from ARRL?" Check the box for "ARRL Instructor/Teacher E-Letter " and you're all set.

Past issues of this newsletter are available at <http://www.arrl.org/FandES/ead/instructorNews.html>. Issues are posted to this page upon publication.

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