

The following excerpts are from an article entitled **Science is Our Secret Weapon**, first appearing in the antennex Online Magazine in their opinion column "From the Shack."

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For more years than I care to count I have been hearing about how we need "to get young people involved" in amateur radio. The image most of us old-timers have is of sitting in a small closet-spaced room with headphones on, a Morse code key on the table, and a paper log book in front of our transmitter and receiver. Radio has changed, at least for those of us who have actually made it into the 21st century. There is nothing wrong with the image we might have of our own past and early days of radio, but this is not an appealing image to today's youth.

But what does it really mean to appeal to today's youth? First off, amateur radio is what it is – it does not change. What I mean by this is amateur radio is about communication, science, mechanics, and exploration. We are primarily communicators (and yes one can have a license and never communicate, but the spirit of amateur radio centers around making communication between two or more people possible radio to radio.)

Science is involved even if, again, those who get their license never choose to explore the science any farther. Science is one of the major "draws" to amateur radio. Let's face it: the ability to communicate is greater than ever, and yes, the Internet can go down, and the cell services can fail, and amateur radio is our last, best line of defense in these situations. All of this is true. But on a typical day-to-day basis Skype and Texting and Twitter and Facebook and a hundred other means of communicating means telling folks they can talk on a radio with a microphone attached hardly seems earth-shattering.

Science is Our Secret Weapon

Of all the various aspects of amateur radio which we can promote, I believe science is our secret weapon. Almost every day advances are being made in RF technology, which is of course directly related to our hobby. We are making connections with Arduino, Raspberry Pi, Mesh Networking, digital modes, software programming and implementations of computer technology in almost every area of the hobby. Not to mention DV, Remote Control, APRS, Balloon launches, CubeSats, propagation and solar/space activity, Radio Astronomy, Digital TV and SSTV, and on and on.

The science behind all of these activities can capture the minds of folks who are interested in science already, as well as become a pathway to the sciences themselves. What we learned by watching our fathers or neighbors or friends as they operated shortwave and amateur radio, is what our kids and grandkids can learn from us as we blend science in with our hobby.

I believe kids need to see the wonder of things and to be able to ask "How did you do that?" Such a thing might be as simple as showing them how you can follow a fellow ham on the family vacation by tracking their APRS signal across the country. Or how you can follow a hiker along as they travel the Appalachian Trail.

[Or let them hear a satellite contact or receive images from outer space, or listen to Jupiter when it makes its rounds and we can hear it up near 20-meters, or try some meteor scatter or track a signal around the world with a WSPR beacon network.] - Robert

Concluding Thoughts

The list of possible connections between science and amateur radio could almost be endless. Wave theory as illustrated by radiation patterns from antennas. Microwave and Wireless RF technologies now and in the future can be a back door into the hobby. The common denominator in any link between science and the radio hobby is the mentor. The person who demonstrates directly or indirectly science and amateur radio in action.

Science is intimately connected to amateur radio, and our participation in and guidance through the scientific connection can bring around a whole new generation of hams.

As is often said, many things are caught even more than taught, and if we are actively pursuing interesting aspects of the hobby, the more likely we are to generate interest in the young people. Be "that crazy neighbor with all the antennas" who helps kids see how science and amateur radio are related. Making connections is all about capturing the imagination, and amateur radio has room for plenty of imagination!