

Project Name: W4WC - Youth STEM through Amateur Radio Outreach

Total Grant Request Amount: \$5,750

Project Summary (250 words or less, include audience, duration, location)

The Andrew Johnson Amateur Radio Club (AJARC.org) (501(c)(3)), in partnership with the Greene County Makers (GCM) (501(c)(3)), is creating STEM classes for Greene County youth (ages 8-18) to grow their interests in amateur radio and gain a technician class license. Providing an electronics workbench and amateur radio station, that will reside at the Greene County Makers space, are additionally planned for youth to utilize for classes, exploration, fun (GOTA), and create a positive community impact.

Steven Bible, N7HPR, member AJARC, has developed a pilot class scheduled to start on Thursday, July 7, and run weekly for 3 months. Steven is a technical training engineer with a major semiconductor company and president emeritus of the Tucson Amateur Packet Radio (TAPR) association. Working with the Free Wildlings Homeschool Playgroup (<https://www.facebook.com/groups/346818820230409>), this class provides STEM knowledge and skills for students to pass the Technician Exam and giving them credits for science and math. Their parents will also attend, providing both support and additional new amateur radio enthusiasts. For introduction, students and parents joined AJARC Field Day 2022. Classes are being held at the Greene County Makers, 310 Cutler St, Greeneville, TN 37743.

After the pilot class is completed, the curriculum will be made available to any group wishing to emulate this project. Going forward, we will develop new STEM classes such as Arduino programming, radio building, Morse code, providing fertile ground for exploring the varied interests and community service offered by Amateur Radio.

Project Impact (250 words or less – outcomes for organization, community and amateur radio)

Greene County, Tennessee is a rural county in North-eastern Tennessee with a population of 70,621 (estimate July 1, 2021, census.gov). Parents are actively searching for STEM classes for their children. There are not a lot of options available to them. Therefore, AJARC, in partnership with Greene County Makers, want to provide the community with an engaging and enjoyable STEM experience utilizing amateur radio. This is expected to expand amateur radio interest, knowledge, skills, and use.

We believe that this project can be an asset to the community by giving these youth the opportunity to learn STEM to further their education and life skills. Amateur radio is the perfect vehicle to teach STEM as it involves many technical aspects and involves the community, such as emergency communications. Therefore, we feel confident that this outreach program can enrich the lives of Greene County youth, their families, the community, all the while growing amateur radio.

Project community support

This project has the support through the membership of AJARC (57 members), the Greene County Makers (over 100 contributors), and the Free Wildlings Homeschool Playgroup (close to 300 members).

The AJARC (<https://ajarc.org/>), formed in 1959, is a very active club holding monthly meetings, supporting a repeater (2m, 440, and 6m all linked), and putting on an annual hamfest (3rd Saturday in April), and tailgate swap meet (October).

The Greene County Makers (<https://www.facebook.com/greenecountymakers/>) is a 501(c)(3) organization whose mission is to build and support a thriving local maker community. It was incorporated in 2018. There are over 100 contributors and over 300 on the mailing list. The Greene County Makers space is the perfect location for setting up a STEM classroom, an electronics workbench, and amateur radio station that can be enjoyed by members of AJARC, GCM, and the community.

The Free Wildlings Homeschool Playgroup (<https://www.facebook.com/groups/346818820230409>) has close to 300 members. In this group are families home schooling their children. Home school children are a perfect fit for supporting a pilot class teaching STEM and leading to a Technician License. Parents will also attend, providing both support and additional new amateur radio enthusiasts.