

## THE YORK COUNTY AMATEUR RADIO CLUB VISITS THE WELLS MAINE JUNIOR HIGH SCHOOL

Mr. Samuel Burne – 8<sup>th</sup> grade teacher at the Wells Junior High School – asked the York County Amateur Radio Club (YCARC) to assist him in teaching the students something about the electromagnetic radiation spectrum, and to demonstrate Morse code. On 14 February 2024, YCARC members Roger Pience, N1XP, and Tony Baker, AA3HD fulfilled the request and made a presentation to four of Mr. Burne's science classes.

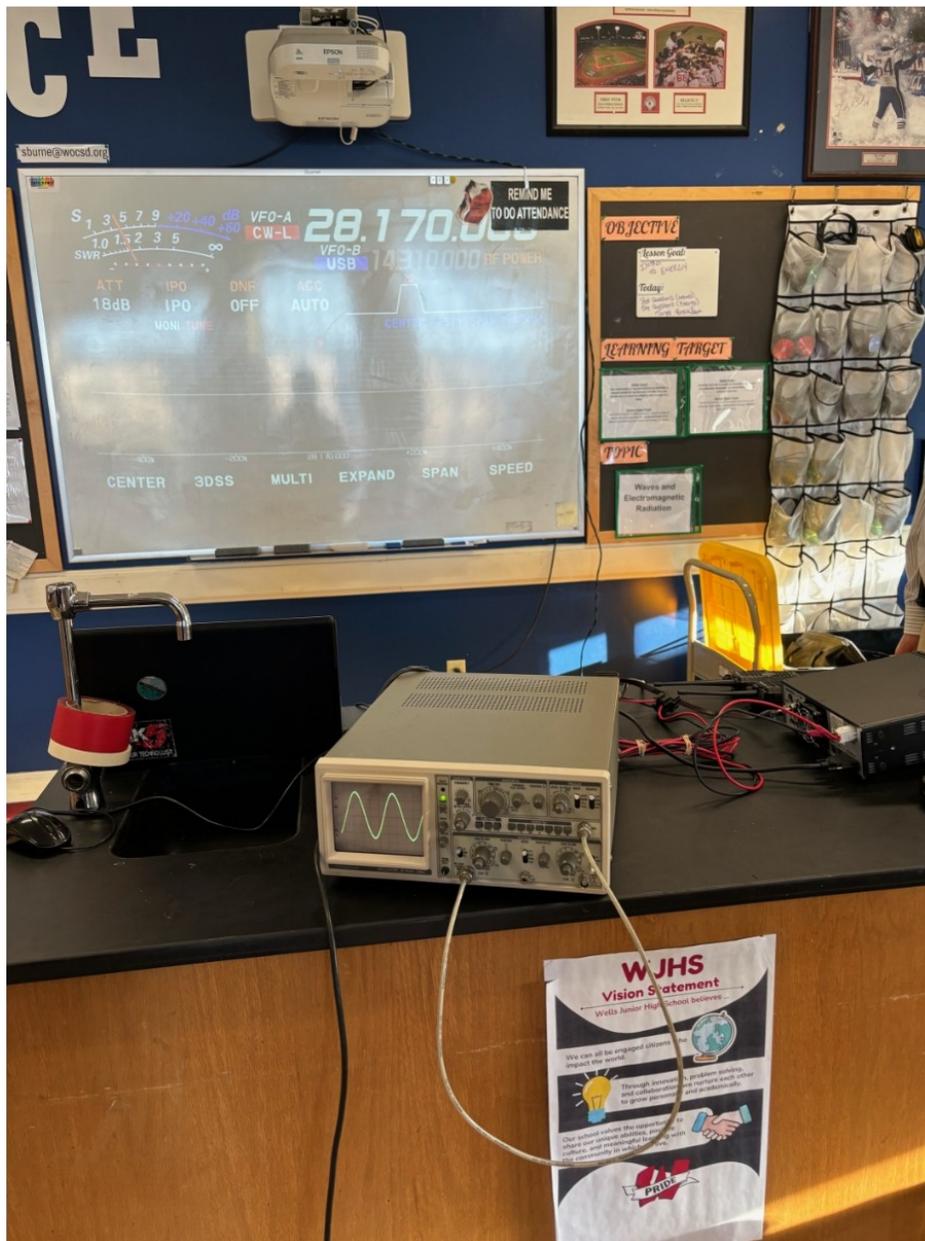
The Wells Junior High School's mission is to create an environment that caters to the developmental needs of 10 to 14-year-olds, fostering both productive and enjoyable learning experiences for students and adults. Their vision emphasizes engagement, impact, innovation, problem-solving, collaboration, and community involvement.



**The Wells Junior High School**

Mr. Burne is serious about educating his students and fulfilling the school's mission and vision statements. Specifically, Mr. Burne wanted the YCARC presenters to focus on: measuring the distance between wave crests as time, and converting it to frequency; explaining the formula and relationship between frequency and wavelength, and; allowing students to send by hand key an "SOS" from one radio to another radio across the room where another group of students would listen and decode the transmission. It was apparent that Mr. Burne's science lesson plan was well coordinated with the curriculum of his fellow instructors as he also weaved in math and history the students were currently learning about in their other classes so as to make his science class more relatable.

Roger is the Chairman of the Training and Education Committee of the YCARC. His Power Point presentation to the Wells Junior High School 8<sup>th</sup> graders, although thorough, was brief enough to maintain their interest. Tony, YCARC Secretary, provided a radio with a waterfall spectrum scope, and assisted Roger with some of the demonstrations. The waterfall spectrum scope radio and the oscilloscope that Roger also brought gave the students a visualization of the fundamentals Roger was teaching. It was evident that the students were familiar with some of the formulas and math concepts Roger presented because they had already been exposed to them in their math classes and/or Mr. Burne's classes.



**The oscilloscope and projected image of a transceiver's real-time waterfall spectrum scope provide visual aids during Roger's talk to the students.**

It was clear that the students had the most fun sending and receiving code. Once again, Mr. Burne related this portion of the learning experience to what the students had been learning in other classes about the *Titanic* sending its distress signals, and to the late Senator John McCain's use of a tap code when communicating with other prisoners of war in Vietnam. During this portion of the class, Roger set up a transceiver in the back of the room while Tony sent up another transceiver in the front of the room. Half of the class sent code from the radio in the back of the room, while the other half of the students set up around the radio in the front of the room to 'decode' what was being sent. After some practice sending and receiving, the groups switched places. All this was done to prepare the students for an exercise they would all participate in the next day where one group of 'captive' students will be sending

coded messages via radio to another group of students who will try to meet them when the door is unlocked on the 'captives.' At the same time, a third group of students - called 'wardens' -- will try to intercept the code and prevent the two groups from joining up. (Later the next day, Mr. Burne informed Roger and Tony that the 'captive' code sending activity went well.)



Mr. Burne reviews the code some of his students are to send out, as Roger, N1XP, looks on.



**Students on the other side of the classroom try to decode what was sent. Tony, AA3HD watches.**

Roger and Tony gave Mr. Burne a YCARC brochure and American Radio Relay League (ARRL) flyers regarding amateur radio, which he posted on the classroom bulletin board. The YCARC had been trying for over a year to somehow expose youth in York County to amateur radio. The club thanks Mr. Burne and the Wells Junior High School faculty and staff for giving us the opportunity to introduce the students to some aspects of what amateur radio is about, and how it works.

73 - Tony Baker - AA3HD

Photos courtesy of Samuel Burne and Wells Junior High School