

The local League of Women Voters Education Committee is interested in learning more about STEM (Science, Technology, Engineering and Mathematics) programs in Volusia County schools. STEM programs provide opportunities for students to investigate and engineer solutions to problems and construct explanations to real world issues. To increase our understanding of STEM, six women from the committee visited two elementary schools that have adopted a STEM curriculum: Edgewater Public School and Burns Science and Technology Charter School in Oak Hill.

Edgewater Public School houses Pre-K through 5th grade and is one of the first elementary school to become STEM certified in the United States. Edgewater staff modified the STEM approach to include literacy and the arts (STrEaM) and in 2014 this school of 621 students began its program with fifth graders. The following year it extended to fourth graders and now all students are involved. Wednesdays are STrEaM days in all classrooms and students clamor to be present, excited about the opportunities to work together and create interdisciplinary projects, aided by teachers who provide support and encouragement.

Visiting League members were treated to a visit through several classrooms. Students were collaborating with each other on projects about space, robotics, agriculture and animal life among other areas of interest. Students not only worked together on projects, they were eager to explain their work and to answer questions. Even kindergartners were involved, able to pick up a microphone and explain what they were doing.

STrEaM activities require students incorporate the four C's: creativity, collaboration, communication and critical thinking- skills that are key to college and career readiness. This was evident in classrooms as the committee members observed students K-5 attempt different solutions and share their reasoning with their peers. Teachers stood back while students took the floor and helped facilitated those discussions. Students worked together – as they will in businesses and other endeavors someday – to accomplish goals, whether it was to build a space model that will land on Mars or figure out how to take care of the plants and animals that have become part of the school curriculum.

At the end of the classroom visits, Principal Jeff Reaves explained the progress of STrEaM at the school, explaining that STrEaM had grown from 5th grade involvement in 2014 and 4th grade in 2015 to a total school program. His plans for Edgewater Public School's future are full of vision and achievement. He wants to continue to increase academic rigor into the program. He also is far-reaching in his goal of tracking students to see what this program does for them in high school, college and career fields.

The amount of planning and collaboration among the teachers was readily recognized. The faculty work together to integrate the curriculum, setting a model for students who also need to work together.

The committee also visited Oak Hill's Burns Science and Technology Charter School. Principal Jan McGee hosted the group and explained what had been accomplished by teachers, staff and students since the school's inception as a charter school. The Burns Charter is an example of a locally grown charter that was established to meet the needs of the community. Faced with a diminishing student body, the school district was forced to close the public school for financial reasons. The community rallied and the Burns Science and Technology Charter School was born. Much of Dr. McGee's focus is on student safety and self-confidence. Her philosophy of "loving, caring, kindness" was seen in interactions with students, teachers and staff – who are certainly not overlooked in every activity and at each venue. Based on her

doctoral research, Dr. Mcgee has implemented anti-bullying strategies that were evident during our visit.

Since its inception, the school population has continued to grow. Now, students come to Burns SciTech from everywhere it seems. Only 80 of its 420 students are residents of Oak Hill. Others come from as far away as Ponce Inlet and Ormond with many places in between. At 420, the school's enrollment is at capacity. Of the students attending this charter school, 59% receive free or reduced lunches.

Science and Technology are evidenced in the butterfly gardens and farming projects visible around the school. The group heard about other STEM projects involving Florida waterways and a local archeology projects in Oak Hill. During the tour, the group observed the technology lab, the yoga studio, and watched as students used technology to solve math calculations

Principal and community have many plans and expectations for the school which seems to keep expanding in facilities. The far-ranging community support – from Oak Hill to Ormond - has been forthcoming, from providing buildings to cafeteria needs.

Many thanks to the principal and staff at both schools for their warm welcome and for allowing us to visit their classrooms.