



Legacy Staff
mary.cortez@fumch.org

Mentis Sciences introduces STEM to Legacy Scholars Academy using the Mentis Sciences Educational Toolkit

At Legacy Scholars Academy we face many challenges. We are a small school serving students, in grades K-12th in the middle of the campus of the Florida United Methodist Children's Home (FUMCH), who have been abandoned, abused, or neglected by their families. Our challenge is helping our students recognize their feelings and learning to regulate their feelings, so they are able to focus on their academics. Our other challenge is keeping our school and curriculum rigorous and not "watered down" as we find our students, although most behind academically due to missed schooling or multiple school changes, all want to learn and seek higher education or technical certification upon graduation.

Mary Cortez, Director of Education, was invited to observe a STEM Summer Camp at Bethune-Cookman University, where the Mentis Sciences Educational Toolkit was being introduced for the first time. After observing the MSET perform a few tests, the students literally stated, "I think I want to be an engineer." After spending about two hours with the MSET, it was obvious this was a program we wanted to implement with our students. We want to provide experiential learning that is challenging our students to "think outside the box" and provide higher level critical thinking questions and answers.

Legacy Scholars Academy chose the MSET over other STEM programs, because the LSA Director of Education was able to see the tool used in action with students and saw the value of how having a tool like the MSET brings hands-on learning to our students. It would allow them to do more than just read about science, technology, engineering, and math, it would give our students the opportunity to dive right in and engage in these concepts. Legacy Scholars Academy and our teaching staff had zero hesitations teaming up with Mentis on the STEM program. John and his team have been available and helpful since day one and provide support in person, via email, and via phone.

Mentis Sciences hosted a two-day teacher and student training session at Legacy Scholars Academy, leading up to the launch of our new STEM program on campus. The teachers were trained in a morning session lasting from 9:00 am – 12:00 pm, and 6 students from multiple grade levels participated in the afternoon training sessions facilitated by their own teachers. Mentis was there to support the teachers as we worked with the students. They made sure we were comfortable leading the students in the different tests and program on the MSET. The students who were training, were named "STEM Scholars." The LSA STEM Scholars acted as MSET champions and assisted the teachers in implement the MSET activities into the LSA science and math classes. They were also able to lead and show the other students how the MSET worked. We did multiple experiments with the MSET Champions during our two-day training session. Mentis also facilitated a Bridge Building competition, where the students built their own bridges with glue and spaghetti noodles. The last day of training, we tested each of the bridges on the MSET to see which bridge design could hold the most weight. After the training session, the teachers who were trained performed multiple experiments with all the students at LSA.

During one of our MSET sessions during the school year, one of the experiments we found highly successful, was the Springs Experiment. The objectives were to have students learn how to use the MSET and to understand how it relates to real life in bungee jumping. It was a very good experience working with Mentis Sciences. The most exciting part for teachers and students was the connection we



saw to real life situations. It is very hands-on. The result of the spring experiment we did, was the students better understood how springs work in real life and how material in general reacts over time. Students learned about the stretching and elongation of bungees and understood the concept of constant checking of material in order to guarantee safety in the world.

The original expectations were for students to be more engaged in the learning process and that the students better understand real life scenarios. A lot of our students at LSA have challenges in learning, due to different social/emotional and academic limitations, so the MSET is a great way to boost their learning experience and confidence in STEM concepts.

We are definitely planning on continuing to use the MSET for the years to come. We will make sure to periodically use the MSET by combining our Math and Science classes, so we can walk our students through the MSET tests and show how Science and Math work together. One of the things we could do is make an even greater connection to the real world by having the students do an experiment in class and then go to a real world place/factory to help students better understand how it works in real life and also to better understand the proportion of real life machines and the MSET. We absolutely encourage other schools to implement the MSET for their students, so they can learn more hands-on as well.