



4. The Professional Development that EBEC offers in the area of Science is aligned to the NGSS and is Inquiry based. Teachers are expected to teach modeling how they expect their students to learn. In an Inquiry based model they investigate by asking questions, observing, experimenting, and measuring to collect data. The data is evaluated to derive knowledge based theories to formulate hypotheses and propose solutions. The NGSS standards reflect a science or engineering concept that students must investigate and use knowledge to explain phenomena in order to solve problems. This involves a shift in teaching which is modeled in EBEC's trainings. Teachers are taught how to teach science using argumentation, explanatory models, and interpreting evidence. The assessments that reflect this learning are also covered and teachers are able to utilize on-line models with the Technology component of the program. Teachers are able to follow student progress and engagement in a variety of ways in order to determine the impact on student learning. They are given a password to access the technology available for them (RIPLS 8). Most of the lessons are integrated into other content areas. Professional development is embedded in the subject matter and incorporates active problem solving in order to be effective in the classroom. Teachers report back that their students are more engaged and excited to use the materials that support the curriculum. Satisfaction Surveys are completed by participants at every training. Teachers take back to their classrooms new lessons and skills to teach science. Some Principals conduct evaluations during the new science lessons so that they can become familiar with the curriculum, materials, and the shifts in teaching. Many elementary teachers feel more confident teaching science (RIPLS 6) after attending the PD sessions throughout the year as their prior experience in the Science field was limited. EBEC also offers leveled readers with the Science materials we provide to the districts to assist with differentiation of instruction. Many of EBEC grants, especially the ONR grants, require "evidence of impact" quarterly feedback from the teachers in regard to the lessons, e books, and how the materials are being utilized (**Attachment C Survey Form STEM Resources**). These reports are disseminated to EBEC's Board of Directors and are on EBEC's website.