

**ESC Region 12 Technology Foundation  
Instructional Technology Grant Evaluation Report Summary  
2017-2018 Grant Awards  
September 2018**

<b>Project Title</b>	<b>Grades Served</b>	<b>Students &amp; Staff Served Projected Vs Actual</b>	<b>Achieved Objective?</b>	<b>Outcomes?</b>	<b>What We Learned</b>	<b>What We Would Do Differently</b>
<p>An Opportunity to Spark the Sense of Wonder</p> <p>(3D Digital Microscopes for elementary age children.)</p>	<p>6</p> <p>Science &amp; LA with Writing</p>	<p>Students 600/605</p> <p>Staff 30/28</p>	Yes	<ul style="list-style-type: none"> <li>Students showed growth in curiosity &amp; vocabulary.</li> <li>STAAR scores for the unit of “Organisms &amp; Environments” showed growth from 24% to 36% (the original goal was 40%).</li> <li>Writing teachers created cross-curricular writings via photos.</li> <li>The objective of “our elementary-aged students will analyze specimen found in their natural world to create meaningful connections in the units for organisms &amp; environments” was fully met.</li> </ul>	<ul style="list-style-type: none"> <li>Children enjoy testing &amp; experimenting with objects found in nature.</li> <li>Many more grade level concepts can be taught after discovering nature in the microscopes.</li> <li>When VR was used, the understanding of the lesson increased.</li> </ul>	<ul style="list-style-type: none"> <li>Make sure that no add'l technology was needed (had to purchase the required SD mini cards).</li> <li>Create picture books that are cross-grade level. This would be a finished product of the student’s findings and favorite microscopic photos.</li> </ul>
<p>Oh, the Places We’ll Go</p> <p>(Shared Google Expeditions Virtual Reality Kit)</p>	<p>K-8</p> <p>8 Subjects (Including ELA, Sci, SS, &amp; TX History)</p>	<p>Students 844/910</p> <p>Staff 46/58</p>	Yes	<ul style="list-style-type: none"> <li>The major objective was to expose low-SES students to amazing, worldly experiences in order to expand their level of understanding on important content specific concepts &amp; to enhance their overall educational experience.</li> <li>The teachers surveyed stated that test scores &amp; lesson understanding greatly increased (detailed survey responses are available).</li> </ul>	<ul style="list-style-type: none"> <li>It is wise to look at your weak subject areas and to think outside the box to come up with solutions.</li> <li>Background knowledge is necessary for student achievement.</li> </ul>	<ul style="list-style-type: none"> <li>Nothing</li> </ul>

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<p>I Need Math for That! Programming and Creating Video Games</p> <p>(Increase mathematics &amp; critical thinking skills with computer coding apps &amp; tools.)</p>	<p>K-2 Math &amp; Computer Science</p>	<p>Students 460/430 Staff 24/25</p>	<p>Yes</p>	<ul style="list-style-type: none"> <li>• Winter NWEA math screening indicated that students increased math skills from the Fall screening (8.3% to 25.5% increases in Computations &amp; Algebraic Relationships).</li> <li>• Students receiving math intervention from the previous year only decreased by 1%, so HES did not consider this objective met.</li> <li>• A post-survey showed that 90% of students had increased knowledge of coding.</li> </ul>	<ul style="list-style-type: none"> <li>• Some teachers felt overwhelmed with the technology demands for time &amp; implementation of 2 digital academic programs and some found it extremely difficult to get past their technology fear.</li> <li>• A lot of the learning to code programs was initiated through the library rather than the computer lab.</li> <li>• The coding to learn/curriculum-based programs happened in the classrooms.</li> </ul>	<ul style="list-style-type: none"> <li>• Some of the technology items were geared more to one grade level than another. We would share ideas on how to modify the use of technology to better integrate the items with the younger grade levels.</li> <li>• We would include more paraprofessionals in the training to help teachers implement the technology during lessons.</li> </ul>
<p>Drop the Mic with STInG (Mobile Innovation Center/Student Technology Innovation Gurus)</p> <p>(Students lead the way to learning through creation of a library of digital resources.)</p>	<p>6-8 (K-12 students were served directly or indirectly)  ELAR, Math, Sci, &amp; SS</p>	<p>Students 160/146 Staff 15/48</p>	<p>Yes</p>	<ul style="list-style-type: none"> <li>• Attendance went up by 1%, attributed to the increased levels of engagement.</li> <li>• 6<sup>th</sup> &amp; 7<sup>th</sup> grade at-risk students with unsatisfactory scores on rdg &amp; math STAAR raised their scores to the satisfactory level.</li> <li>• 52% of 8<sup>th</sup> graders increased their progress measure score by 1 level, 15% by 2 levels.</li> <li>• 24/44 students increased math STAAR scores by 1 level, and 9 by 2 levels.</li> <li>• Every student in 8<sup>th</sup> grade increased his/her reading lexile level by at least one grade level.</li> </ul>	<ul style="list-style-type: none"> <li>• There is a direct correlation between engaging students through the strategic use of technology &amp; increase in rdg levels &amp; math &amp; rdg scores.</li> <li>• The ability to close the gap in the digital divide increased passing %ages for core classes.</li> <li>• The abilities of the STING groups were underestimated, so actual productivity was greater.</li> </ul>	<ul style="list-style-type: none"> <li>• Add a video editing tool.</li> </ul>

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<p>DEC Space  (Install Makerspace technology on all campuses to promote Design, Engineering, and Coding [DEC].)</p>	<p>PK-12  (Grades 6-8 were served directly)  4 Subjects</p>	<p>Students 1475/ 1475  Staff 117/117</p>	<p>Yes</p>	<ul style="list-style-type: none"> <li>• Makerspaces have 100% attendance by all students &amp; staff with GT students on a daily basis.</li> <li>• 100% of students are at the Explorer Level, 42% at the Inventor Level, 28% at the Voyager Level, &amp; 4% at the Designer Level.</li> <li>• Secondary campuses have established Makerspace challenges.</li> <li>• Participation in UIL technology-based events has greatly increased.</li> <li>• Interest in Computer Science Careers has grown significantly.</li> <li>• Attendance in STEM &amp; CTE courses has increased, and add'l CTE courses will be offered.</li> </ul>	<ul style="list-style-type: none"> <li>• Students are not only engaged but they are guiding their own learning experiences.</li> <li>• More space is needed for student participation &amp; project storage.</li> <li>• Teachers &amp; students did not need prior knowledge of the use of equipment &amp; materials in the Makerspaces.</li> </ul>	<ul style="list-style-type: none"> <li>• We would have requested storage options for on-going projects.</li> <li>• We need to add add'l funds to the Makerspace budget to allow for purchases of consumable materials &amp; supplies throughout the school year.</li> </ul>
<p>Libranasium: Enter Active Library  (Promote student-centered learning through interactive library lessons.)</p>	<p>K-4  Science, Tech, Rdg, Engineering, Art, &amp; Math (STREAM)</p>	<p>Students 224/230  Staff 25/25</p>	<p>Yes</p>	<ul style="list-style-type: none"> <li>• Student excitement &amp; engagement.</li> <li>• We saw increases in Map Mean RIT scores in Math, Reading, ELA, &amp; Science.</li> <li>• STAAR data for 3<sup>rd</sup> &amp; 4<sup>th</sup> grades showed gains for Math, Reading, and Writing.</li> </ul>	<ul style="list-style-type: none"> <li>• I can build a set of STREAM stations around almost any library skill to tie them together.</li> <li>• I learned how to develop the stations, track student movement, lesson plan format and processes.</li> </ul>	<ul style="list-style-type: none"> <li>• I wish I could have been more specific about the exact supplies I was planning on buying, but glad I didn't – as I continued to research STEM/STEAM, I learned &amp; found more ways to better utilize the funds.</li> </ul>

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<p>Drones: They're Not Just Toys</p> <p>(Minicourse for GT students exploring drones.)</p>	<p>6-8</p>	<p>Students 150/200</p> <p>Staff 3/3</p>	<p>Yes</p>	<ul style="list-style-type: none"> <li>• Pre- and post-assessment surveys quantified a significant gain in students interest in a STEM endorsement in HS &amp; pursuing a career in a STEM field.</li> <li>• Students learned to build, fly, &amp; repair drones.</li> </ul>	<ul style="list-style-type: none"> <li>• That even though a project can be highly engaging for them, MS students still need a significant amount of guidance.</li> <li>• That I need to have the right person for the course and have a team of people for a project of this magnitude.</li> <li>• Children can do a lot more than most people think they can, specifically in STEM areas.</li> </ul>	<ul style="list-style-type: none"> <li>• I would have partnered with a community group to assist in the development of the program.</li> </ul>
<p>Makerspaces!</p> <p>(Students will create, solve, &amp; explore while learning skills across all grade levels &amp; subjects, encouraging a higher depth of knowledge.)</p>	<p>3-5</p> <p>Math, Science, SS, ELAR, &amp; Tech</p>	<p>Students 338/136</p> <p>Staff 22/9</p>	<p>Yes</p>	<ul style="list-style-type: none"> <li>• 1/3 of students used the room on a regular basis. It was mostly used during intervention &amp; GT times.</li> <li>• Pre- and post-tests on 3<sup>rd</sup> grade Math TEKS 3.9A &amp; 3.9B showed almost a 30% gain in scores (from 47% to 75% on average).</li> <li>• We had expected a focus on ag &amp; mechanical activities, but the room was used to explore many different subject matters, including supply &amp; demand, as well as planning for beautification projects around the school.</li> <li>• A popular activity was designing class field day shirts for classes.</li> </ul>	<ul style="list-style-type: none"> <li>• A more unified culture was created among those who participated.</li> <li>• Not all teachers were on board and this stopped students from new experiences.</li> </ul>	<ul style="list-style-type: none"> <li>• I would request more encouragement for a project like this from a campus-wide perspective.</li> </ul>

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**SUMMARY NOTES:**

- 4,251 students were to be served; 4,132 were actually served (compared to 1,678 students served in 2016-2017)
- 282 staff members were to be served; 313 were actually served (compared to 232 staff members served in 2016-2017)
- All grade levels were served, including special needs
- All types of campuses were represented (elementary, middle, high, K-12, plus an academy within a campus)
- Sizes of districts and geographic locations were diverse
- How did you originally hear about this grant opportunity?
  - Administration – 37.5%
  - ESC Region 12 Email – 25%
  - ESC Region 12 Social Media – 12.5%
  - ESC Region 12 Website – 12.5%
  - Other Teachers – 12.5%

