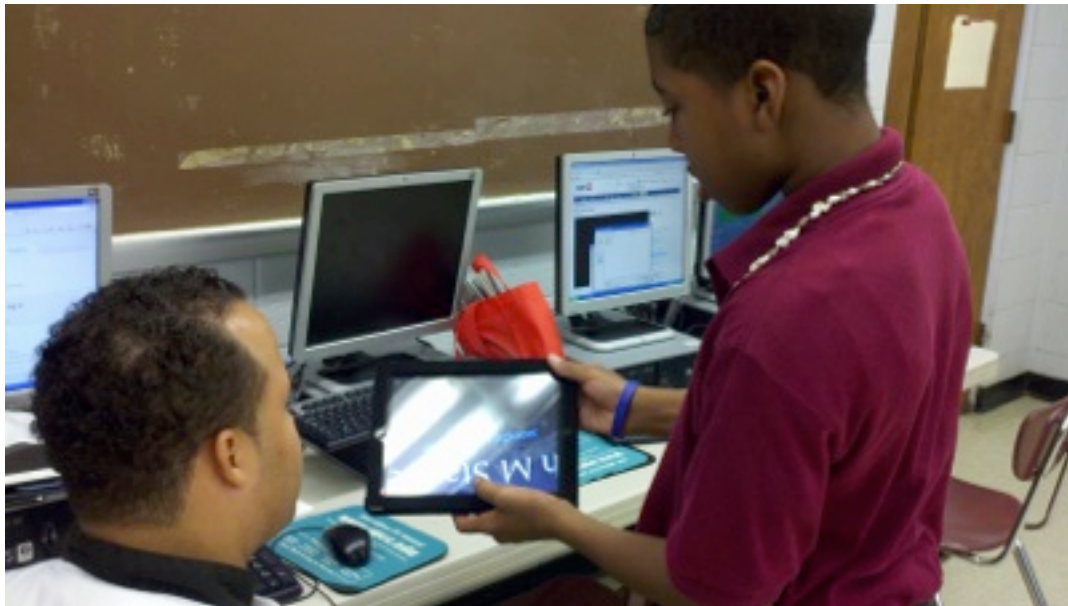


STEM STAR FIRST YEAR REPORT

Prepared for the



Rural School and Community Trust

August 29, 2012



RSCT STEM STAR

Investment in Innovation

The Rural School and Community Trust (RSCT) funded the implementation of the STEM Students and Teachers Achieving Reform (STEM STAR) model in five North Carolina and one Louisiana rural high schools. This implementation was a smaller version of a highly rated unfunded STEM STAR proposal submitted to the U.S. Department of Education's Investment in Innovation (i3) program. As part of the i3 Foundation Registry, the RSCT provided the funds to implement and evaluate STEM STAR.

General Description

STEM STAR was built from the ground up to address the needs of rural schools. A recent report from the Alliance for Excellent Education (Alliance, Feb. 2010) identifies the use of technology as a major challenge facing rural schools if they are to improve. For technology to address this challenge requires teachers and students who are qualified to spearhead the effort. STEM STAR is an innovative and proven way to address this technology use challenge.

The Rural School and Community Trust STEM STAR project's student/teacher collaboration strategy is based on the Student Technology Leadership (STL) model developed by the nonprofit Generation YES organization. The STL model has shown strong levels of evidence that, based on national and state science, mathematics and technology standards, increased academic achievement occurs when well-prepared students collaborate, support, and share their knowledge with their teachers and peers.

The five strategies that make up the STEM STAR's five points were combined to realize STEM STAR's objectives and goal: (1) Focus on rural schools, (2) Professional development, (3) Project based inquiry, (4) Professional learning communities, and (5) Student STEM Leaders (SSLs).



St. Helena Parish HS, Louisiana



Warren County HS, North Carolina



St. Helena Parish HS, Louisiana

Year One (2011-2012) Summary

In each participating high school, a group of twelve specially prepared Student STEM Leaders (SSLs) collaborated with STEM stakeholders (peers, teachers, scientists, researchers, content specialists, policy makers, and project administrators) to improve STEM achievement. Each SSL and all participating science teachers received an iPad to help communicate, inform and assess student generated projects.

During the summer of 2011, Generation YES staff delivered a four-day workshop to twelve SSLs and all 9th grade science teachers from five North Carolina and one Louisiana high school. SSLs learned to mentor all 9th grade students in their school as they completed two substantial science projects aligned to state science standards. They also

learned how to assess these projects for alignment to the 24 ISTE National Technology Standards for students (NETS). Each STEM STAR summer camp participant used his or her iPad to assist in these tasks.

Incoming high school freshman Abigale Chandler didn't know when she enrolled in St. Helena Parrish Central High School that she would become a leader on the forefront of using digital technology to help her school improve science and math education. But even before her first day of school, Abigale attended a Technology Leadership summer boot camp where she did just that. Using a new iPad 2, she participated in 4 days of intensive workshops covering a range of topics, including the use of the latest technology such as iPads, Skype, science and math simulations, high quality online learning resources, and other topics such as peer mentoring, leadership, and Internet safety and ethics.

When the 2011-2012 school year commenced, all 9th grade science students were assigned their first STEM STAR project. These projects covered major science concepts and substantially used technology hardware and applications available in their schools, home and community. Ninth grade students then completed a second and more rigorous project during the second semester. Students who successfully completed both projects received national TechYES technology proficiency certification.

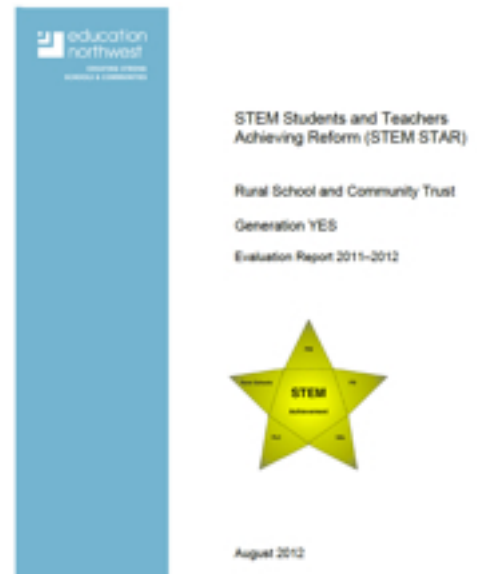
Year One (2011-2012) Evaluation Results

First year findings were reported by STEM STAR's external evaluator Education Northwest in August of 2012. The 57-page comprehensive report (pictured here) is available as a separate document and represents the perspectives of various stakeholders.

The report found the "All six sites infused technology with the support of the SSLs, recruiting and retaining them in a variety of ways. Furthermore, all sites engages students in developing at least two technology-infused science projects. Projects used a remarkable number of technology tools through the year, most of which were all new to teachers and students alike."

Sustainability and Expansion

All schools plan on continuing the project in the 2012-2013 school year and expand the model to other science classes in multiple grades. In addition, three rural schools in Vermont were trained in the July 2012 and will begin implementing STEM STAR in the 2012-2013 school year.



STEM STAR Financial Summary

The Rural School and Community Trust authorized a STEM STAR grant to Generation YES in the amount of \$185,000. An initial payment of \$138,503 was sent to Generation YES on May 17, 2011. The remaining Generation YES invoice for \$46,485 is outstanding and waiting for review of the Year 1 report and the Education NW Evaluation Report. A detailed breakdown of these expenses follows. Note that the project came in under budget as districts wanted us to pay teacher stipends directly and this required no benefits. Also, some teachers did not complete required work and were paid less (see Stipend payments table that follows). This leaves

DELIVERABLE	DATE	AMOUNT	BUDGET
	Completed	Invoiced	Category
Supplies & STEM STAR informational meeting with administrators and staff. Selection of the school's STEM STAR advisor. Selection of the 12 Student Science Leaders (SSLs). Work with Education NW to finalize evaluation plan. Configure iPads, and help prepare schools network infrastructure. Four-day workshop for SSLs and STEM STAR Advisors.	5/15/11	\$138,503	iPads - \$51,150 Routers - \$1,500 TY Science Kits - \$3,570 TY Student Guides - \$4,179 Workshop Fees - \$19,000 Travel Expenses - \$3,000 Teacher per diem - \$14,400 Materials - \$500 Lunch/Snacks - \$4,104 9 monthly service - \$18,000 9 month indirect - \$10,090 50% Evaluation - \$9,009
STEM STAR teachers receive ongoing support. Plans and preparation for 2012-2013 school year finalized. Final evaluation report delivered and scalability strategies considered.	8/30/12	\$38,735	6 monthly service - \$12,000 6 month indirect - \$6,726 50% Evaluation - \$9,009 Teacher Stipends - \$15,000 Teacher Benefits - \$3,750 Unpaid Stipends - (\$4,000) Unpaid Benefits - (\$3,750)
Total		\$177,238	\$7,763 Under Budget

Teacher Stipend Payments

NAME	SCHOOL	AMOUNT
Amanda Herlacher	J.D. Webb HS - Granville Co.	\$2,000
Alicia Carlucci	South Granville HS - Granville Co.	\$2,000
Fode Kamara	Warren County High School	\$2,000
Erik Escuro	Warren County High School	\$500
Kelsey Parry	Warren Early College High School	\$1,000
Amy Hoback-Whitten	Warren New Tech High School	\$2,000
Elvelon W. Mason	Warren County Tech Director	\$500
Josephine Dyson	St. Helena Parish High School	\$1,000