

NASA Explorer Schools Partnerships for Sustainability

Alabama Math Science and Technology Education Coalition Proposal

In Partnership with:

Phenix City Intermediate School, Joe Blevins, Principle and April Harrell, Lead Teacher;
Ga. Coalition for Science Technology & Mathematics Education, David Stone, Director;
Alabama Space Grant Consortium, John Gregory, Director.

Additional partners in support of their NES activities may include:

Tennessee Math, Science and Technology Education Coalition, Ray Phillips POC;
Mississippi Coalition for Mathematics, Science & Technology Ed., John Colonias, POC.

Names and Title of Team Lead: April Harrell, Phenix City Board of
Education

NASA Explorer School Representative: Joseph Blevins, Phenix City
Intermediate School

Proposal Submission Deadline:

Friday, April 30, 2004

Proposal Point of Contact

Robin L. Denson, AMSTEC Executive Director

National Space Science and Technology Center, 320 Sparkman Drive
Huntsville, AL 35803 256-961-7936 denson@nsstc.uah.edu

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Proposal Cover Sheet

Name of the Performing Organization^a

Alabama Math Science and Technology Education Coalition

Address of the Performing Organization^b

c/o UA System Office
401 Queen City Avenue
Tuscaloosa, AL 35401-1551

Amount Requested From NASSMC \$ 20,000

Project Director's Name & Title	Signature	Date	Telephone Number
Robin L. Denson, Executive Director		4/15/04	(256) 961-7936

Project Director's Address

c/o National Space Science Technology Center
320 Sparkman Drive
Huntsville, AL 35803

Fiscal Officer's Name & Title	Signature	Date	Telephone Number
Charles Nash, Vice Chancellor		4/15/04	(205) 348-8347

Fiscal Organization's Address

c/o UA System Office
401 Queen City Avenue
Tuscaloosa, AL 35401-1551

Title of Proposed Project

ACTION PLANS FOR SUSTAINABILITY: Education Coalitions Partnering in Support of NASA Explorer Schools and their Districts

Abstract or Brief Description of Proposed Project

The Alabama Math Science and Technology Education Coalition (AMSTEC) will assist in the effort to aid the Phenix City Intermediate School and its district in the creation of an advisory council to address its sustainability issues after the NES program award years have come to term. Its intent, beyond identifying the appropriate stakeholders to participate in this task and gaining their willingness, is to agree upon and design an Action Plan for achieving sustainability. AMSTEC envisions that this plan will minimally focus on programs in the areas of family involvement in math and science reform and the use of STEM professionals as mentors and coaches in the classrooms. Building upon the school's strategic and implementation plans, AMSTEC will work with the advisory council to achieve these goals, relying heavily on the school and district to determine their most pressing needs and desires with respect to sustainability.

Section 2: Proposed Work Plan

Background and Experience of AMSTEC

The Alabama Mathematics, Science, and Technology Education Coalition (AMSTEC) (www.amstec.org) was formed to serve as a positive advocate of systemic improvement of mathematics, science and technology education (MSTE). AMSTEC was founded as a direct result of the NASA Linking Leaders Education Initiative in the State of Alabama in the late 1990's and is now incorporated as an IRS 501c(3) organization. The goal of AMSTEC is to provide leadership for improving mathematics, science, and technology education in the state of Alabama through the facilitation of communication among education, business, and public policy organizations. Current membership remains between 100 and 125 members. AMSTEC recently was introduced to the State legislature in a bill designed to provide legislative authority

Proposed Program Major Objectives

This proposal establishes the AMSTEC major objectives in support of the NASA Explorer School at Phenix City Intermediate School as follows:

- Establish a coordinating council to advise in the community and build upon the NES's year 1 programs
- Develop an Action Plan for Sustainability based upon Phenix City Intermediate School's strategic and implementation plans
- Focus on engaging science, technology, engineering and math (STEM) business professionals and parents in STEM education reform in the Phenix City Board of Education District
- Highlight Phenix City as a leader in integrating NASA educational programs in other Alabama systemic STEM education reform efforts

The Role of the Advisory Council

The focus of the work of the advisory council is to lead and assist in establishing the local ability for long-term improvement in mathematics, science, and technology education not

only in the designated school of Phenix City Intermediate School(PCIS), but to extend those opportunities to all schools in the Phenix City School District. This proposal will establish a coordinating council, which will serve in an advisory capacity to PCIS. The council will be comprised of representatives from AMSTEC at the state level and from local business, education (K-16) and public policy members to provide technical assistance, advise and support in the development and maintenance of an enriched and reformed, inquiry-based STEM educational experience in Phenix City Schools.

The NASA Explorer School program provides wonderful opportunities for its schools, administrators, students and their families to partner with NASA to improve student learning; to participate in authentic experiences with NASA science and technology; to apply NASA science, mathematics, and technology knowledge to real-world issues and problems; and, to participate in special events and other opportunities. The role of the advisory council is to build upon the continuation of STEM learning through NASA and other related inquiry-based resources after the initial grant year.

The Steps It Will Take

The primary objective for the advisory council is to develop and implement an Action Plan designed to assist the school and its district in achieving sustainability for its STEM education reform activities. This will require local participation and build upon existing state-based partnerships like those represented across the academic community through the Alabama Space Grant Consortium. AMSTEC will provide the framework for building upon and establishing the local business partnerships. The purpose of these partnerships is, likewise, to build a role for the NASA Explorer School/District in Alabama's state-based efforts to improve mathematics, science and technology education for all students in conjunction with its Alabama Department of Education MST program, AMSTI. As a result of this interaction, Alabama's coalition of business, education, and government agencies will expand to include representatives from Phenix City, thereby leveraging the work done and the relationships already built upon in NASA's Linking Leaders program.

Establishing the Council

Working in conjunction with the school, AMSTEC anticipates allowing for a three month period to meet and greet the “right” council representatives in order to get the entire council in place and functioning smoothly. Gaining representation and active participation from across the district involving ALL the stakeholders is important. Beginning the dialogue and construction of the Action Plan in advance of having all its stakeholders represented is inefficient and may not afford the local community the necessary “buy-in” needed to reach sustainability. Strategies proposed for identifying stakeholders include but are not limited to: word of mouth, public speaking engagements at area business and community meetings and functions, newspaper articles and announcements, presentations and direct requests to public policy makers – both local and in Washington. Once the council is formed, AMSTEC will facilitate and lead regular meetings to dialogue the goals and visions for sustainability, the development of the Action Plan for implementing two foci identified by the proposal team – training retired and active STEM professionals as mentors and coaches for support in classrooms and the engagement of parents in STEM education reform through a SEMA-like family café program.

Engaging the Community

The partners in this proposal have identified two areas of focus for the advisory council as it develops its strategic plan for sustainability. The first area involves developing a program to engage retired and active STEM professionals in the classrooms of Phenix City as mentors and coaches. Through the use of inquiry-based physical sciences materials and a training program developed with assistance from the National Science Foundation and the National Academies (RESEED), Phenix City’s business community and its Explorer School will be the recipient of this mentoring program. Through this activity, public awareness and engagement in the Explorer School and of the awareness of the importance of STEM education reform for all children will be achieved.

Likewise, the second area of focus involves raising the awareness of Phenix City parents to the potential for their children’s future in the technological fields and to the importance of a solid STEM education. AMSTEC and PCIS seeks to work in collaboration with the

SEMAA program to bring a Family Café – Phenix City style – to the community. Building upon the existing parental connections programs already underway in the district, the advisory council will seek to develop the next step in the process for raising/encouraging greater parental involvement in the explorer school and its district. One suggested idea already discussed has been the notion of a café-on-wheels that goes into the local communities where the children live, providing hip-hop entertainment supportive of the message of education and achievement, along with a local and state-based family café coordinator trained through SEMAA in its instruction and delivery of the SEMAA message.

Technical Assistance from AMSTEC and its members

AMSTEC members are already actively supporting the NASA Explorer School at Phenix City. AMSTEC is involved in the development and support of the Alabama Department of Education’s Alabama Math Science and Technology Initiative (www.amsti.org). The NASA Explorer Schools at Phenix City is already signed up to participate this summer in the Leadership Academy for Math Science and Technology taking place in conjunction with AMSTI’s Summer Institute. Two full weeks of professional development for each math and science lead teacher along with leadership training for its administrator will be provided at no charge to the school. Each lead teacher will also receive the classroom module or kit in which they are trained. Alabama Space Grant, an AMSTEC member, has also agreed to provide the school with a \$2,500 grant in support of its efforts. In addition, Phenix City teachers are also participating in the “Exploring Space” Series offered by UAH Continuing Education Office on a grant from the Alabama Commission on Higher Education in support of professional development. Both the STEM professionals acting as mentors and coaches and the family café programs will also provide an influx of technical assistance from AMSTEC to Phenix City in support of the programs there.

Use of Funds to Build the Network

Funds will be primarily used to support the efforts of AMSTEC Executive Director to develop the advisory council and its Action Plan for sustainability. Travel to and from

the school is extensive at 600 miles round trip. A minimum number of 10 trips during the year is anticipated as well as a minimum of two formal meetings that would involve additional expense for room rentals and food provisions. The network will be built at the local level with the AMSTEC organization providing the site-based structural model that will be replicated and expanded in that local region. The consistent and continued dialogue between stakeholders over the course of the year, focused on the tasks agreed upon by the partners, should provide the Explorer School and its district with the basis for creating a sustainable systemic STEM education reform initiative that incorporates NASA resources and technology.

NASA Explorer Schools Partnerships for Sustainability

Budget Form

Report Period Beginning Date: 7/1/04

Ending Date: 6/30/05

Total Amount of the Award: \$ 20,000

Performing Organization: AMSTEC

Fiscal Organization: University of Alabama System Office
(if different from the Performing Organization)

Note: This budget form includes some allowable categories of expense and is presented as an example. Applicants may use this form or create their own on the blank form provided.

Type of Expense	Funds Requested	Matching Funds (if any)
A. Salaries & Wages		
Professional	9,167	
Clerical		
Student		
B. Fringe Benefits		
Professional	2,291	
Clerical		
Student		
C. Meeting Expenses		
Meeting room rental	500	
Equipment rental		
Participant meals	500	
Participant lodging		
Participant transportation		
Consultant services		
D. Staff Travel (Domestic)		
Meals	500	
Lodging	1,100	
Transportation	2,250	
E. Operational Expenses		
Materials and supplies	2,000	
Fiscal accounting costs		
F. Media and Communications		
Publication costs	1,692	
Dissemination		
Total Costs	20,000	

Section 4: Budget Explanation/Comments

Salaries: the salary provides two months of time for the AMSTEC Executive Director at regular wage including benefits. 40 days at \$286 per day

Fringe: calculated at 1.25 of salary (University rate)

Meeting Expenses: room rental and participant meals budgeted at \$500 each for the purposes of not more than two meetings outside of the NES

Staff Travel: 10 trips over the 12 month period are planned.

Mileage is calculated at 600 miles round trip at 37.5 cents per mile,

Meals are calculated at \$25/day for 2 days each trip

Lodging is \$110 per trip

Operational Expenses: materials and supplies, postage, phones, faxes,

Media and Communications: publication costs, printing of materials to support advertising STEM training and family café program development, promo ads and radio coverage for the advisory council, school and districts use for informing community of its Action Plan and its programs.

Authorization of Project Director:

Authorization of Fiscal Officer:

Name Robin L. Denson

Name: Charles R. Nash

Title: Executive Director

Title: Vice Chancellor

Signature: 

Signature: _____

Section 5: Description of the Performing Partnership

Organizations

AMSTEC

Key Personnel

Robin Denson, Executive Director
Lorrie Bess, Corporate representative
Gregory Cox, Scientist/Govenment rep.
Gary Martin, Academia representative
Rep. Michael Rogers (or his staff), Politician

Alabama Space Grant Consortium John Gregory, Director (or its local rep)

The AMSTEC key personnel are all members of the organization and will help to establish the function of the advisory council and its action plan. Each has been selected so as to represent the stakeholder community needed for designing an action plan in the local NES context.

Phenix City School District Joe Belvins, PC Inter. School Principle
and April Harrell, Lead Teacher

Phenix City Intermediate School IS the NES for Alabama and as such, wishes to include the entire district in its efforts to address sustainability.

Ga. Coalition for Science Technology
and Mathematics Education David Stone, Director

The Georgia Coalition and its members in the Columbus region are crucial to the NES's sustainability plan since a large portion of its families work in Columbus businesses across the river.

Additional partners in support of their NES activities may include:

Tennessee Math, Science &
Technology Education Coalition Ray Phillips POC

Mississippi Coalition for
Math, Science & Technology Ed. John Colonias, POC

The Tennessee, Mississippi and Georgia Education Coalitions are mentioned here so that any overlapping programming the advisory councils may seek to establish can be offered conjunctively in order to leverage the NASA funds and ensure the most cost effective measures are retained. This will occur without discrediting the local needs of the individual NES that the coalitions and the councils will service. We will be coordinating our efforts in support of sustainability with Tenn, Miss. And Georgia in the areas of families programming and mentoring training for STEM professionals in support of the NES and district classroom teachers.

Section 6: Biographical Sketches

Robin L. Denson, Co - Project Director

Robin L. Denson earned a PhD in Archaeology and Fluvial Geomorphology from the University of St Andrews, Scotland in 1995. She co-founded the Gulf Archaeology Research Institute in Florida in 1992 where she worked in historic, prehistoric, and underwater archaeology until relocating to Huntsville in 2000. With a background in non-profit management of Earth and social sciences including development and implementation of educational programs with GIS and environmental applications, she was drawn to the challenges that systemic STEM (science, technology, engineering and mathematics) education reform faces in implementing citizen-science education programs in America's schools and educational systems.

Now she works at UAH on the National Space Science and Technology Center's Education and Public Outreach team and serves as Executive Director of the Alabama Math Science and Technology Education Coalition. Her duties include strategic planning for the Center's education program development and implementation of the plan, increasing the participation of business and industry in Alabama's systemic STEM education reform activities, and proposal development. She supports systemic STEM education reform well by bringing her organizational, leadership, and strategic thinking skills to bear on the development of partnerships in science education reform involving innovative roles for government, academia, business and industry STEM professionals. She enjoys using her experience in international scientific research and her formal training in cultural and applied anthropology to aid in expanding the systemic STEM education reform partner support model.

Joe Blevins, Co- Project Director

Education

- 1989 BS from Troy State University in Troy, Al (History and PE)
- 1993 Masters in administration from Troy State (Phenix City)
- 1997 Educational Specialist from Troy State (Phenix City)

Work Experience

- 1989-1993 Teacher US History South Girard Jr. High
- 1993-1997 Assistant Principal South Girard Jr. High
- 1997-1999 Principal South Girard Jr. high
- 1999- pres Principal Phenix City Intermediate School

In his current position, Mr. Blevins is responsible for the day-to-day operation of the school. This includes serving as the instructional leader, support of instructional

programs through allocation of resources, communicating with stakeholders, and establishing community partnerships.

April Harrell, Team Lead

Education

2000	BS in Middle School Education	Columbus State University, Ga.
2002	Master in Educational Technology	Troy State University / Ft. Benning, Ga.

Work Experience:

2003 - Current	South Girard School	Phenix City, AL
2000 - 2003	Phenix City Intermediate School	Phenix City, AL
1993 - 2000	Ft. Mitchell Post Office	Ft. Mitchell, AL
1992 - 1996	Padgett Business Services	Phenix City, AL

Professional Development Workshops:

2003	Nasa Explorer School	Huntsville, AL
2003	National Education Computing Conference	Seattle, WA
2003	Alabama Forestry Workshop	Opelika, AL
2002	Keystone II Sustainability	Racine, Winconsin
2002	Clear Solutions (Environmental)	Phenix City, AL
2001	Keystone I Environmental School	Keystone, CO

In my current position I teach 8th grade Inter-grade Science. I was moved to the 8th grade as a team leader to cover an area in which I am highly qualified to teach. I teach about 130 students a day during 4 classes. This teaching format is new for Phenix City Board of Education and South Girard Middle School. I am also on the school-wide safety committee and a member of the Power Team, which is a local bi-city (Phenix City & Columbus, GA) environment committee that includes teachers, business leaders, and environmentalist. I continue to be the Teacher Team Lead for the Phenix City Intermediate School NASA Explorer School program and I participate in community activities as well as school functions in this role.