

**Progress Energy “Energy Education Teacher Grants”  
Asheville City Schools Foundation  
2008-2009 Teacher Grant Winners**

School of Inquiry and Life Sciences of Asheville (SILSA)	<p style="text-align: center;"><b>Converting a Gas-Powered Car to Electric Power</b></p> <p>This grant is needed for expenses related to converting a car that runs off of gas into a car that runs off electricity, and lab materials to educate students about the physics behind electric cars. The program is led by the first graduating class of SILSA and the Metals II class at Asheville High. This experiment will help them have a major role in the future because it will reduce pollution, lessen our dependence on fossil fuels, and save Americans money because cars will be running off of batteries instead of gas.</p>	\$2500
Randolph Learning Center	<p style="text-align: center;"><b>Understanding Alternative and Conventional Sources of Energy</b></p> <p>The opportunity to participate in hands-on science experiments will allow the entire middle school at RLC (35-40 students) to learn about the multiple sources of energy already available, those still in development and those not yet imagined. This will be a cross-disciplinary unit of study. Additionally, students will go on field trips to Progress Energy’s coal plant, a jobsite where an electrical contractor is installing solar panels and to UNCA to study sustainability projects. RLC students have already built one solar car, and this grant will allow them to build and race additional cars. This project, combined with activities in other subject areas, will allow for an effective concentrated understanding of energy issues.</p>	\$2500
Vance Elementary	<p style="text-align: center;"><b>Developing Inquiry Based Units for the Study of Energy and Ecology</b></p> <p>An experienced, highly trained ecology instructor will develop integrated units of study on energy and ecology based on the NC standard course of study. The ecology educator will build on an existing bank of lesson plans to integrate inquiry-based instruction, particularly in the areas of energy education and environmental issues. The educator will serve 270 students in grades K-3 by focusing on six different science competency goals. The educator will also draw on community resources, including Project Wild’s curriculum resources, RiverLink and their various educational programs, the Appalachian Sustainable Agriculture organization, and the Green Building Council’s curricula regarding solar power.</p>	\$2438.27
Hall Fletcher Elementary School	<p style="text-align: center;"><b>Building a Bio-Mass Fuel Generator</b></p> <p>“It is obvious that our country/world is facing an energy crisis and that the dependence on foreign oil is risky and expensive...By creating an alternative fuel from readily available plant waste, the children will be prepared to lead our country and the world...This project will have children over time see how global greenhouse gasses produced by waste decay, and under proper conditions will produce a useable gas.” This is an integrated 7-week project that will use pod-cast and movie maker to document the entire scientific inquiry from collecting plant waste, through decomposition, and production of methane gas. The budget will purchase durable materials that can be reused in the future.</p>	\$1400
Asheville Middle School	<p style="text-align: center;"><b>Designing A Solar House</b></p> <p>“These materials will allow teachers to conduct engaging energy experiments with students in which they can design, orient, and build homes that run on solar energy. Students will use scale drawings, map reading skills, construct and evaluate the success of their designs with actual model homes.</p>	\$844.68

Randolph Learning Center	<p align="center"><b>Becoming Leaders in Energy Conservation</b></p> <p>“Students in the 10<sup>th</sup> grade at RLC are part of a program called PeaceJam, an international educational effort led by leading Nobel Laureates with the goal of creating a new generation of young leaders capable of instilling positive change in themselves and in their communities...The RLC PeaceJam team has chosen solar energy as their project.” WCU and RLC students will assist in the construction of solar panels, and developing the science display to be presented at the Peace Jam Global Youth Conference in Florida in March. RLC students will also conduct an energy audit of the school, and present the entire project with recommendations to members of the school board.</p>	\$2500
Ira B Jones Elementary	<p align="center"><b>Changing the World, One Bag at a Time</b></p> <p>5<sup>th</sup> grade Jones students will focus on “How Can I Change the World?” in the third quarter. Students will study environmental problems, including the wasted energy expended by the production of plastic bags. Students will design and hand-out canvas Earth Day bags that will include brochures about how to “go green!”</p>	\$250
Ira B Jones	<p align="center"><b>Training Teachers to Engage Students in Deep Discussions About Energy and the Environment</b></p> <p>The purpose of this project is to utilize a best practice teaching methodology, Paideia Seminars, to explore concepts of energy use and conservation through 4 in-depth units of study in grades K-3. Our current environmental crisis demands new dialogue and new solutions and the Paideia approach is uniquely suited to create in-depth dialogue and solutions for a complex, multi faceted problem. All classes in grades K-3 will engage in one 4-6 week Paideia Project on Energy Conservation and complete a service learning project about a conservation issue that is relevant to them.</p>	\$2000
Vance Elementary School	<p align="center"><b>Building an Energy Efficient Outdoor Classroom</b></p> <p>This structure is the culminating effort of the entire school community to understand how the use of alternative materials can reduce the amount of energy required to build, heat, and maintain a structure. Funds will provide for an expert builder to provide hands-on demonstrations to students about the use of alternative building materials. Classroom instruction will explore the different heating and cooling properties of various materials and other relevant extensions of the building including energy and color, temperature, electricity production, and cost comparisons of building materials.</p>	\$2000
Asheville High School	<p align="center"><b>Building Solar-Powered Cars</b></p> <p>The building and testing of solar cars will provide an over-arching project-based learning opportunity for physics students. Eight solar car kits will be used by 18-20 students per year as a basis for building and testing a student designed “model” for a solar car. Students will ask questions for their own inquiry and make modifications to the kit model based upon their own learning. Students will also use blogging as a journal of their own learning. Assessment of the project will be a thorough analysis of student journals (blogs), student/peer feedback, presentation with peer review and testing of the physical car built through the kit. The project will link hands-on learning with the core curriculum, and students will learn about issues that affect us on a day-to-day basis, such as, renewable resources, global warming and transportation.</p>	\$1600
<b>Total</b>		<b>\$18,032.95</b>