

November 2011

Knox County Schools

Benchmarks

Noteworthy news for KCS Employees



TEAM - A professional growth model



Teachers are the most important school-related factor influencing student success, and the goal of TEAM is to provide educators with a model to help them continuously improve their practice. More information about TEAM may be found through the Human Resources Department's [HR Insider e-newsletter](#).

Teacher Town Hall Set for November 15

Please join us for our upcoming Teacher Town Hall on Tuesday, November 15 from 5 to 7 p.m. to provide additional feedback on the Tennessee Educator Acceleration Model (TEAM) evaluation framework. The meeting will be hosted by Dr. Jim McIntyre, Superintendent of the Knox County Schools. Please note that two or more Board of Education members may be present.

WHAT: TEAM Teacher Town Hall Meeting

WHEN: Tuesday, November 15 from 5 to 7 p.m.

WHERE: Bearden High School (8352 Kingston Pike, 37919)

Thank you for your support in our mission to provide Excellence for All Children. We look forward to seeing you there!

L&N STEM Academy Unveils Mascot

The L&N STEM Academy recently unveiled its school mascot at its inaugural school dance. Students of the academy voted and selected a Gryphon, a mythical creature with the head of an eagle and body of a lion (king of the air and the beasts). The creature is said to have guarded priceless treasures of the ancient and medieval worlds.

Students voted to select the school mascot. A conductor, lynx and phoenix



were also included for consideration. The gryphon was an appropriate mascot because, in addition to being part of the stained glass at the school, it is protecting the treasure of the culture, knowledge and relationships the school creates for its students.

School merchandise must meet licensing guidelines



Knox County Schools Establishes Licensing Seal

Beginning in the 2011-2012 school year, all high school merchandise emblazoned with school logos or mascots must meet licensing guidelines established by the Knox County Schools and Strategic Marketing Affiliates, a national licensing agency.

“The licensing program allows the school district to better manage the use of our school brands in the marketplace. Consumers will have the confidence of knowing they are purchasing official apparel that financially supports our schools,” said Supervisor of School Partnerships, Scott Bacon.

Licensing high school merchandise allows schools to receive royalties from local retailers, such as Walgreens, Wal-Mart, and various sporting goods stores. Only manufacturers licensed by Strategic Marketing Affiliates will be able to sell items with school trademarks.

The Knox County Schools will receive a 10 percent royalty on each item sold by the retailer. When buying high school team merchandise, look for the Knox County Schools seal in the store to confirm the product is an officially Knox County licensed item.

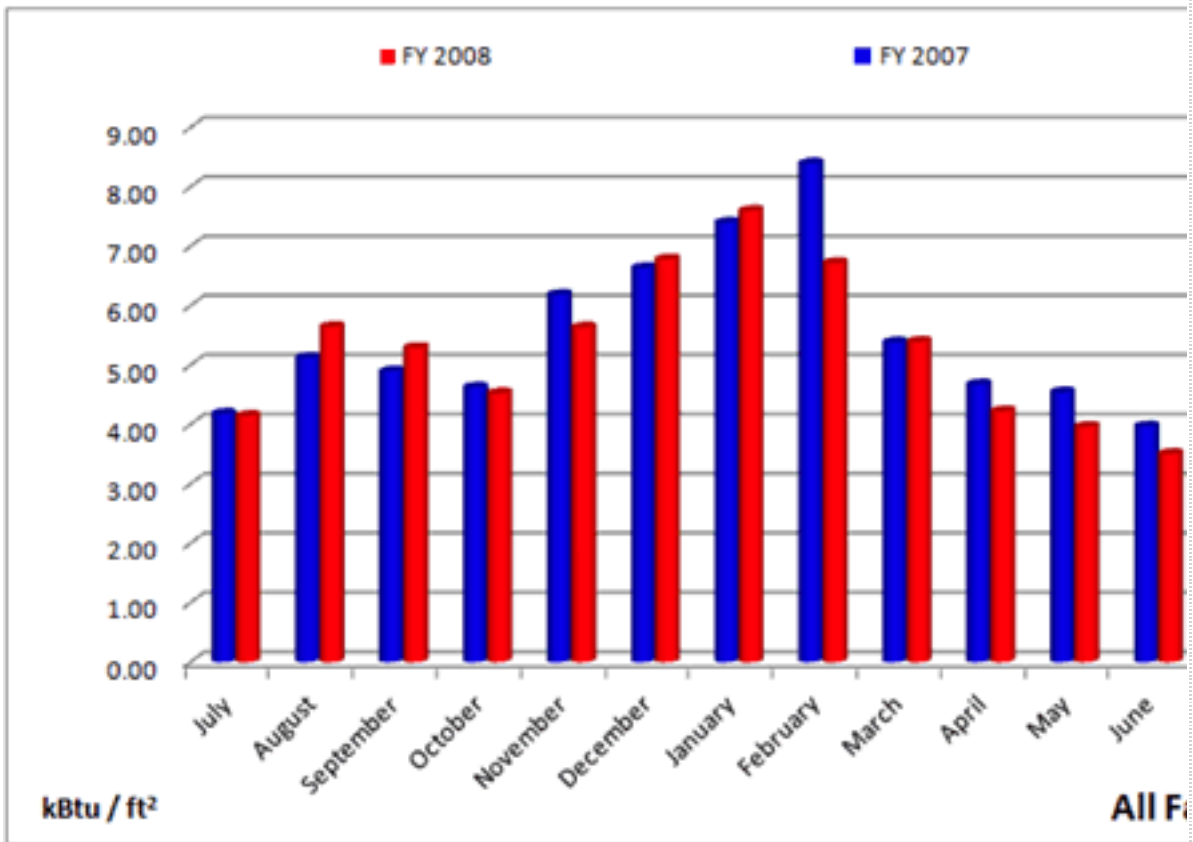
School support organizations such as booster clubs and parent-teacher groups are exempt from paying royalties when they produce apparel that is then sold to support their organizations. If you have questions or need additional information, please contact Scott Bacon at 594-1909.

Small things, personal buy-in, training, and diligence add up to millions in energy savings

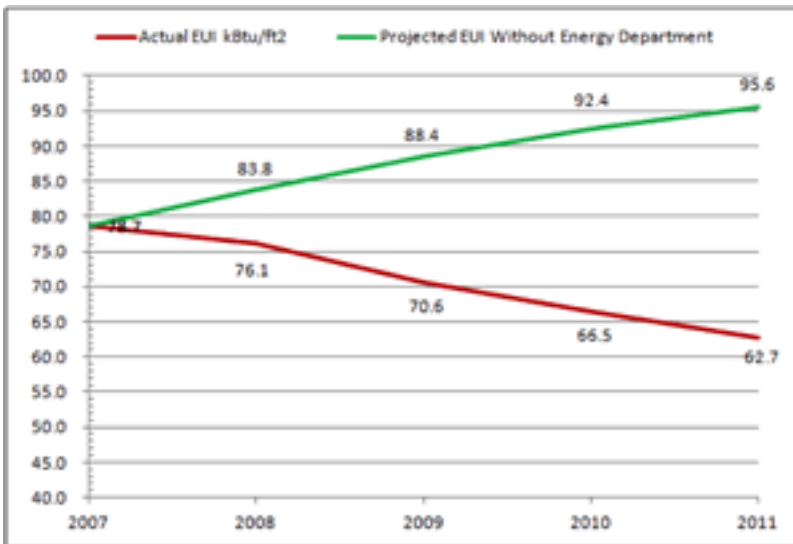
There's a familiar TV commercial you may have heard: a smooth, slow-talking gentleman gives his name then states "...and I'll leave the light on for you." But making sure that lights - and other energy consuming devices and habits - are turned off when not needed has generated huge savings for the Knox County Schools over the last few years thanks to the KCS Energy Department.

"Beginning in the Spring semester of 2008 the Energy Department conducted training sessions focusing on energy efficient behaviors in all schools," said Zane Foraker, Energy Department Manager. "The initial sessions focused on energy tip sheets that were handed out to the staff. In several cases the principal of a school had the tip sheets laminated and placed on bulletin boards in every classroom."

The results of the training in those schools that have aggressively adopted those practices have translated into huge savings for the school system.



Energy training had an immediate impact on energy use starting in February 2008 and Energy Use Intensity (EUI) has continued to decline every year since then as indicated by the red line.



Comparison of actual (red) vs projected (green) energy use over the years. The difference equals energy savings in real dollars.

Examples of energy efficient behaviors include:

- Turning off lights in areas that are unoccupied
- Keeping exterior doors and windows closed at all times
- Keeping interior doors closed except when changing classes
- Turning off computer monitors when not in use during the day
- Turning off personal computers and as many plug loads as possible at night

The training had an immediate impact with energy use starting to trend lower in February of 2008 than the previous year, while previous energy use had been increasing (See Chart at right). "Just being trained in the simple behavioral changes on that tip sheet resulted in this success," noted Foraker.

The department measures energy by **Energy Use Intensity (EUI)** by comparing costs per square foot of facility space. Energy Use Intensity has continued to decline in every year since the Energy Department was formed.

Effect on projected vs actual energy consumption

In the second chart, the red line shows actual EUI data trending down every year, indicating continuous improvement in energy efficiency. (See graph at right)

Before the Energy Department was founded, energy use had been increasing at an annual rate of 6.5% a year. The **Green line** shows what the projected trend would have been if Knox County Schools had failed to start an Energy Management Program.

"The target EUI for new KCS schools is 35.0 kBtu/ft², so there is still room for improvement from our current average of 62.7 kBtu/ft²," observed Foraker, "but we are in much better shape than the 95.6 kBtu/ft² that it might have been otherwise." The average this last year is 32.9 kBtu/ft² or almost a third less than predictions.

Training to continue

Training will continue with a more school-specific focus identifying school-by-school and building-by-building efficiency gains and trends. "Special training sessions have been conducted with custodians because they are in the building more hours than any other staff and therefore have the most opportunities to save energy," said Foraker who noted that savings was the most in those buildings where custodians were diligent about lights, open doors, and so on.

Budgetary Impact of Energy Program: Good energy practice offsets costs of rate increases

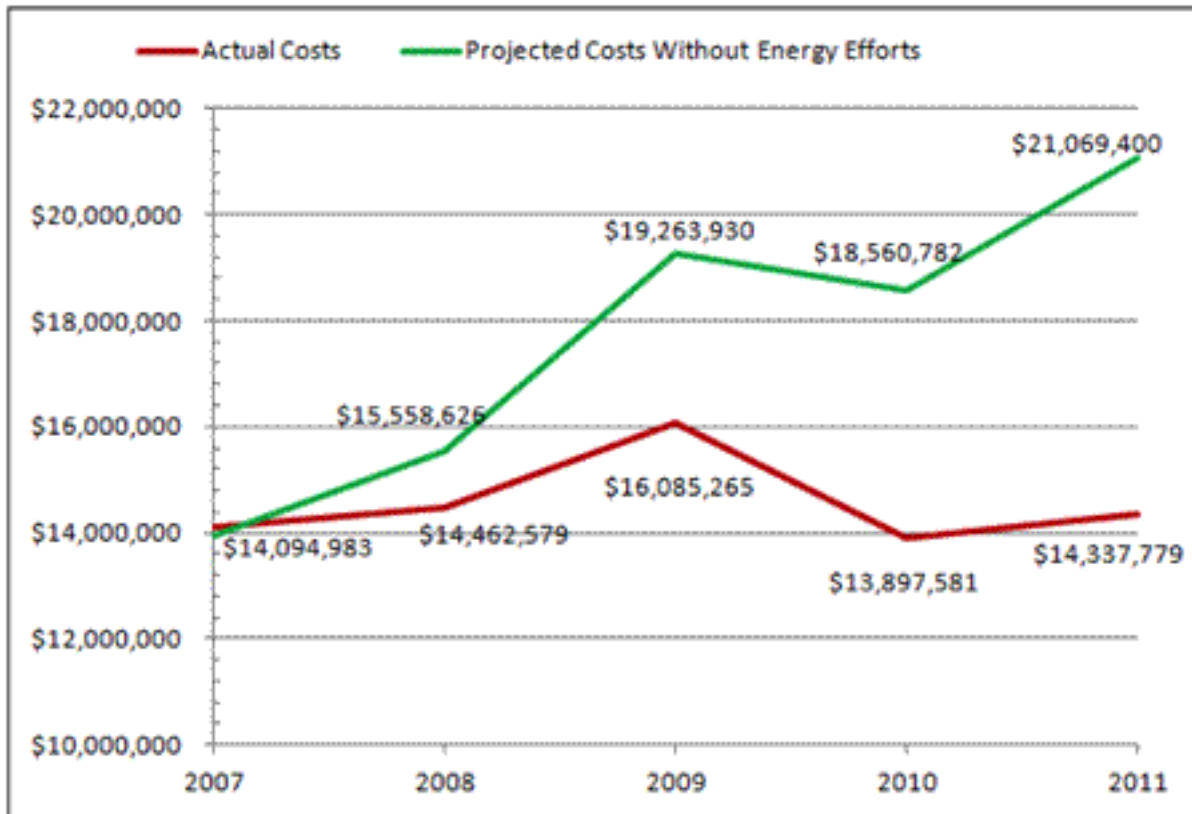
The Energy Department always explains that the goal of our program is to reduce

energy consumption because reducing consumption will always reduce cost in the long run. "We as a school system have no impact on the utility rates, but we can always make decisions to reduce our consumption of utilities," Foraker pointed out.

Since 2007, the Energy staff has identified energy issues that resulted in either direct reimbursement or annual savings totaling more than a half-million dollars (See Table). "Many of the items are water leaks that were identified only by bill analysis," said Foraker. Some are utility company billing errors that would have gone unnoticed without energy and water consumption focused auditing. The annual savings currently attributable to these types of items is now at \$385,046. The one-time payments and reimbursements received stands at \$140,268.

That is a significant amount of money, but it doesn't come close to illustrating the true effect and benefit of having an active Energy Department. "The biggest savings is the value of the avoided costs of electricity, natural gas, and water that we don't use," said Foraker. However, it is often hard to visualize that cost avoidance or to realize how much more we would have been paying had the energy efficiency focus not been in place.

What effect has the Energy Program had on district utility costs?



Based on the escalation rate of energy consumption prior to 2007 it is possible to project what the utility costs might have been if KCS had maintained the status quo. The graph at right shows that projection.

Over the four years that the Energy Management Program has been in place, the combined avoided utility cost savings is estimated to be \$15,669,533.

Foraker is quick to point out while utility costs have gone down, square footage has gone up. "Keep in mind that since 2007 KCS has added Hardin Valley Academy and Cedar Bluff Elementary, and completed major expansions at Powell Middle and Ball Camp Elementary. Total KCS square footage has increased 474,095 from 9,094,516 in 2007 to 9,568,611 in 2011."

Obviously utility rate changes have a large effect on actual dollar expenditures. If utility rates had remained unchanged from 2007, in 2011 KCS would have only spent \$11,511,944 for utilities, or \$2,660,309 less than the actual expenditure. Electric rates alone have increased by 39.% since September of 2007 when the program started.

School, Administrator, Teacher, Staff, Student buy-in is critical factor for cooperative success

The Energy Management staff is quick to attribute the energy savings to the efforts of all employees of the Knox County Schools and the students, themselves. "While spending money and installing new, more efficient equipment never hurts, there is seldom room in the budget for projects like that," said Foraker. "We have found that the most reliable predictor about whether a school will reduce or increase energy consumption is the level of buy-in by the principal and habits of the staff."

Foraker said that it is usually easy to spot schools that are doing a good job on energy conservation even without going into the building. "There are obvious differences detectable just by driving around a school, without even going in the door. If entryway lights are on during the day, or there are doors and windows propped open, or if the irrigation is watering fields in the rain, those are indications that the staff is not focused on efficiency or the energy tips that have been reiterated for over four years now," he said.

If these conditions are seen outside, then one could expect that if they were to continue on into that school that they would see computer monitors with screensavers running instead of being turned off. There would probably be door wedges propping doors open, lights left on in unoccupied rooms, and other energy inefficient behaviors taking place.

"By contrast in our most efficient schools lights are being turned off in hallways by custodians between classes, computer monitors have stickers on them reminding people to turn them off as they leave the desk, and students have been given tasks such as making sure the door gets closed or the classroom light gets turned off as they go to lunch," said Foraker.

The three most energy efficient schools as of the end of FY 2011 are:

Sam E. Hill –	32.5 kBtu/ft ²
Blue Grass Elementary –	34.5 kBtu/ft ²
Holston Middle –	36.3 kBtu/ft ²

Programs that are helping:

The Trane Company has contributed a large portion of savings through the energy efficient projects they are completing pursuant to the PACT agreement. Hard work and efforts of custodians and maintenance personnel to change purchasing procedures and adopt energy efficient habits have contributed as well.

TVA Green Schools Program: a two-year pilot that the Energy Department is continuing

There is a Green Schools program that was started by TVA that went through a two-year pilot that focused on directly training students in energy efficiency and teaching them how to use the tools of the trade, such as light meters and different kinds of thermometers.

Part of this program includes an actor dressing up in a large Energy Hog outfit and helping to reach the students in assemblies where the Energy Hog tries to waste energy and the good teacher admonishes him with the help of the students.

This program was so obviously impactful, that the Energy Department chose to fund it for a third (gap) year in the expectation that TVA will offer it to all KCS schools next year.

The Energy Department does not have a budget for tools, programs, or pilot projects. To get the necessary funds to participate in things like the Green schools program, the department runs the EnerNOC Demand Response program.

That is a TVA-funded program that allows KCS to be paid for participating if TVA calls a Demand Response event. To date that program has generated revenue of \$38,111 with quarterly payments increasing as more schools can be enrolled. Some of that money has been shared with schools that have reduced energy costs by participating in those programs.



Students get a delight in catching the notoriously famous "Energy Hog" and pointing out his energy-wasting habits when he visits their school.

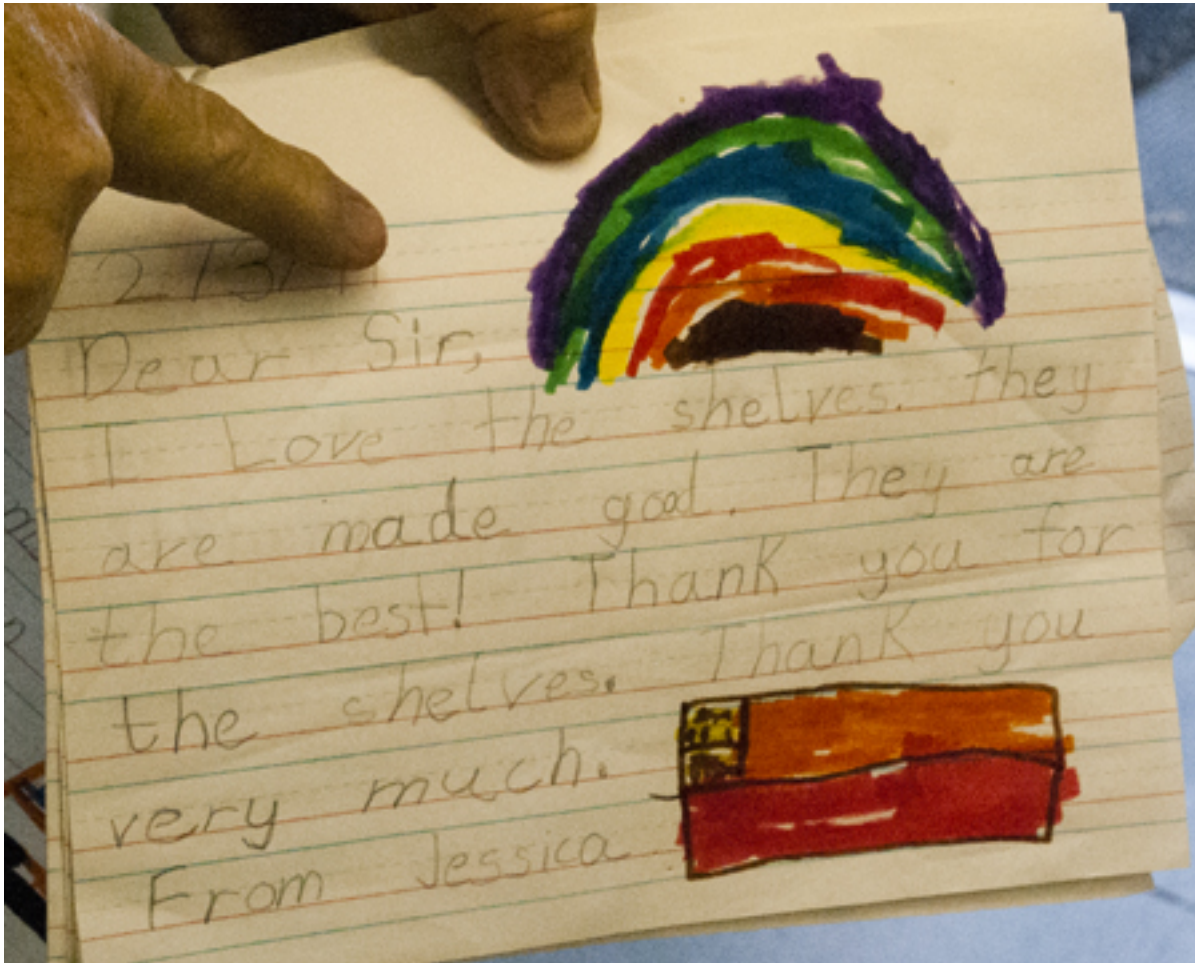
KCS Cabinet shop builds shelves, cabinets and lasting relationships with students



Bill Breeden, foreman, and Paul Waldrop test the position of a lighting strip being installed on a radio broadcast cabinet for Fulton High School station WKCS-FM 91.1.



Paul Waldrop prepares shelves are painting in the paint room at the Knox County Schools cabinet shop.



Building life-long relationships with students and schools is another product of the cabinet shop crew. Here is a 'thank you' note from one of 'their' students.

They have over a hundred years of experience in their line of work, but they go quietly about their business behind the scenes in the Knox County Schools system where their talents save thousands of dollars in custom shelving and furniture and serve hundreds of children with special needs. They are the skilled craftsmen of the cabinet shop in the KCS maintenance department.

“We are fortunate to have such a talented group of men in our cabinet shop,” said Chris Towe, Supervisor of Skilled Crafts. “We have only five employees in that department, but they have the skills to build almost anything that we feel is needed in our schools.”

Their work is most often found in new school libraries, in renovation projects, and in custom-made conference and office furniture throughout the system. High-grade bookshelves made of cotton core birch grade plywood are a staple product of the crew. Comparable shelving bought commercially would cost the system 3-4 times as much. Their crafts grace the superintendent’s conference room in the central office.

But the crew builds more than just furniture. Bill Breeden, shop foreman, who has been with the school system since 1972, steps from the spotlessly clean shop area into his small office and brings out a thick stack of letters that the shop has received from handicapped kids over the years. "This is what it is all about," he says as he begins to flip through the carefully scripted letters often graced with art from the students. Each letter is a thank you for a customized project that the crew has built for a student.

"They do a wonderful job building things for students who require adaptation for seating or positioning to access their regular or special education curriculum," said Regina Jenkins, Supervisor of Occupational and Physical Therapy for the system. "They have built special desks to accommodate power wheelchairs and made things that meet the special needs of students."

Breeden said that often times as the student grows, they have gone back and made the adaptive equipment bigger as well. "These kids are special to us," he beams.

Regina points out that there have been many cases where commercially purchased equipment has broken and the cabinet shop has manufactured the parts for repair. "They can design just about anything we need," she said.

Members of Breeden's crew are Scott Hill, Tony Ridenour, Ronnie Campbell, and Paul Waldrop.

The crew usually builds all the library shelving for new school construction projects and for renovation projects thereby saving the system thousands of dollars in furniture costs. In these times of tight budgets, their labor translates into several positions that might have otherwise been cut due to costs.



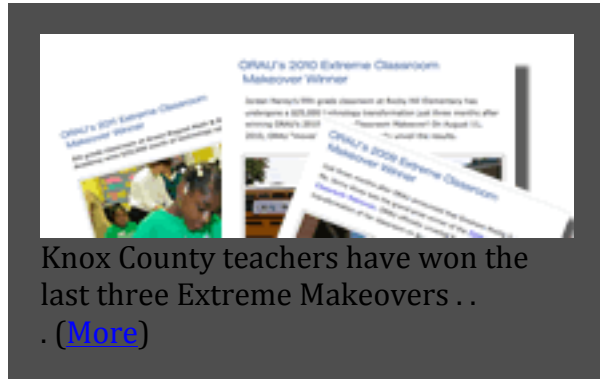
Scott Hill, Bill Breeden, and Tony Ridenour show some of the special projects the shop designs and manufactures for students all across the county. Their skills have saved the system thousands of dollars in cabinets, furniture, and have provided many 'one of a kind' products to help handicapped students.



Oak Ridge Associated Universities Extreme Classroom Makeover:

The Extreme Classroom Makeover award provides \$25,000 worth

of the latest educational technologies, training and support. The contest is open to public school math and science teachers who teach grades 5-8, and are located within a 50-mile radius of Oak Ridge.



Knox County teachers have won the last three Extreme Makeovers . .

. ([More](#))

Teachers interested in competing must file their intent to apply no later than Nov. 18. Entrants will also be required to submit a full application and a 3-4 minute video that illustrates potential uses of technology and the need for technology in their classrooms. For more info, visit www.orau.org. See [Green Magnet's 2011 Extreme Makeover](#) winner.

KCS in the News:

[First Lady Promotes Book of Knox County School Children Essays](#)

[Second Grade Teacher Goes Full Circle](#)

[Knox students get close look at Civil War in new history class](#)

[Knox County Schools Roll Out Text Tip Program](#)