

# Energy Efficiency and Natural Gas Utilities

## K-12 Education: Teaching children about energy and conservation

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### LIBERTY ENERGY EDUCATORS WORKSHOP

Liberty Utilities underwrites educational programs and materials on energy efficiency and conservation for kindergarten through grade 12 students and teachers in its Missouri service area. The educator program was created by the Missouri Botanical Garden's EarthWays Center for the 2013-14 program year (September 1 through August 31), and is now offered every year. EarthWays' focus is to help people understand how their behavior affects an ecosystem and the earth's environment.

The educator program provided three professional development workshops for up to 75 teachers in the three primary regions of the Liberty Utilities' Missouri service area (west, northeast and southeast). The overall goal of the workshops is to empower educators to create greener, healthier schools and to incorporate sustainability practices, particularly in the field of energy efficiency and conservation.

Activities are designed for a range of grade levels and cover many topics, including the fundamentals of and solutions for resource use, energy generation and environmental impact. The curriculum allows teachers to investigate different sources and forms of energy—including natural gas, electricity generation and renewable/non-renewable energy resources—and to explore sustainable energy production and use. The course explains the full fuel cycle of energy from source to site, or in other words, how energy is lost along the transmission and distribution pathway to homes, business and industries: About 92 percent of produced natural gas and about 33 percent of generated electricity arrives at homes and businesses as usable energy.

The lessons are leveled and standardized to the state curriculum requirements as well as the Next Generation Science Standards, and all involve active participation of the students. Workshops culminated with a planning period for educators to generate plans that incorporate newly acquired knowledge and activities into their classrooms. Teachers received digital copies of all activities, a give-away bag, and a hand boiler (energy toy) as well as a \$70 stipend for participating in the workshop.

The program is continuing through summer 2015 with four more workshops being held over summer vacation for teachers. The efficiency education programs developed by EarthWays Center for Liberty Utilities have been so successful that the utility plans to extend this partnership for its Iowa service territory.

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*Liberty Utilities serves Bates County, Missouri — one of 50 communities across the United States competing in the Georgetown University Energy Prize to make the most significant impact on energy savings.*