

# Energy Efficiency and Natural Gas Utilities

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

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### PIEDMONT AND NATIONAL THEATRE FOR CHILDREN K-5 ENERGY EDUCATION

Piedmont Natural Gas (“Piedmont”), headquartered in Charlotte, North Carolina, partnered with The National Theatre for Children (“NTC”) to administer a multi-platform school educational theatre program for grades K-5 in its North Carolina service territory. As part of Piedmont’s energy efficiency programs, Piedmont has administered this program throughout its NC service territory for the past 5-years. The purpose of the Piedmont school-based education program is to provide interactive, engaging performances, lessons and take-home activities for K-5 grade students on the importance of natural gas conservation and safety.

Throughout the program, NTC has setup engaging performances called “Adventures of the Blue Flame,” “The Clue that Burned Blue,” and “The Energy Time Trek.” NTC uses colorful stage backgrounds and various engaging characters. The troupe also interacts with the school kids throughout the performance to keep them engaged. Some of the main educational messages that are delivered during these enactments are the following:

- What is natural gas
- The uses of natural gas
- How to conserve natural gas
- How to be safe around natural gas
- The science of energy resources
- How we use energy resources
- How natural gas is engineered to reach you?



In addition to the live theatre performance, NTC sends to each school a student and teacher workbook with classroom and take-home exercises. These workbooks cover materials and characters from the performances. The program's goal is to generate excitement and engage participants in natural gas, energy resource, and energy conservation education, both in school and at home. There is no cost to the school for the performances or any of the printed materials.

Although Piedmont doesn't measure energy savings from the program, it estimates that its school-based natural gas education program may have an impact on energy usage behaviors and choices among students and their families as well as on teachers and the broader community. Environmental and energy conservation education has been shown to influence choices regarding the installation and purchase of energy efficient technologies as well as more broad behaviors, such as energy use habits, lifestyle choices and consumption patterns.

In addition to encouraging simple, low-cost measures for conserving natural gas, such as turning down thermostats, lowering the temperature on water heaters, and installing air sealing, the program provides important information on natural gas safety, such as detecting natural gas leaks and avoiding potentially dangerous situations.

After each school performance, teachers are asked to complete an on-line survey giving feedback on the performance. The feedback has been extremely positive each year. Based on the evaluation results, teachers' rate the overall educational value of the program a 6.4 on a scale of 1-7, 97 percent of teachers reported that they would use the printed curriculum, and 99 percent would like Piedmont to continue to offer this program at their school.



Some highlights of the teacher comments Piedmont received about the NTC performances are included below:

- I appreciate what you do because everyone needs to be responsible for the world we live in and our environment. This gives students the opportunity to be involved and help make the changes necessary to save our resources.
- Thank you for the energetic and memorable performance. The safety component was priceless for students to hear.

- My fourth grades were enthralled with every detail. They didn't realize that were learning real-world information that they could use at their homes until they received the booklets. I also have an autistic child that was so engaged and laughed throughout the program. He remembered every part of the program and relayed it to us when we returned to the classroom. BRAVO!!!
- Great way to teach kids about Natural Gas. The students were very engaged during the show! Thanks for supporting education.
- The program was kid friendly and exciting for our students. The actors brought about lots of thrills and learning. The visuals were very specific and a great review enabled the students to stay focused on what had been taught.

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