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PRESS RELEASE

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Grants fund HCDE specialist's 'teaching science through children's literature'



The 4-year-olds in pre-k teacher Melissa Faltysek's classroom in Huffman learn chemistry concepts involving definitions of magnetism and metal introduced through children's literature books. Now the popular teacher workshops created by Harris County Department of Education science consultant Lisa Felske will train pre-k through second grade teachers like Faltysek to introduce physics concepts through children's books. In one of Felske's five new literature-through-physics selections called "Hot-Air Henry," Felske introduces density and temperature. Five-foot-tall hot air balloons are inflated with hair dryers. Tiny plastic cats fit in the basket and the question is posed: How many cats can the balloon hold before it falls? Grants for Felske's workshops come from the Education Foundation of Harris County, a nonprofit organization which serves as a conduit for charitable funding which supports innovative instruction services for classroom teachers in Harris County's 26 independent school districts. From grants through Shell, Boeing Company, American Honda Foundation

and the Henry and Camille Dreyfus Foundation, hundreds of Harris County elementary school science teachers receive free training, books and supplies via Felske's future workshops. Included are the children's books, lesson plans and materials needed to apply the science concepts in the classroom. Because of her own experiences as a mother, Felske, a science content specialist, knows of the inquisitive nature of children and their zeal for knowledge. As a former teacher, she realizes the pressure which early elementary teachers face with teaching reading and other TAKS fundamentals to children in the formidable years. "Teachers will tell you that they don't have time to teach science, that they can't take time away from teaching reading to teach science," she said. "You have to read to research science, so why not teach science while learning how to read?" Teacher Samya Kansao is one of 350 teachers trained in Felske's past workshop called "Science Fiction: Teaching Chemistry with Children's Literature." The Houston Independent School District Briargrove Elementary K-5 science lab teacher says that literature is an ideal way to draw children's interest into learning information unfamiliar to them—all in a fun manner. "Literature coupled with hands-on science experiments gives the kids a wallop of fun, exploration, experiences, skill and understanding of how things relate to them and how science connects to the big picture of our ecosystem," said Kansao. A book called "Gregory the Terrible Eater" gave pre-K teacher Faltysek the leverage she needed to introduce the biology of goats while also talking about concepts of metal/nonmetal, magnetic/nonmagnetic and edible/inedible. -more- Add one: The Ben Bowen Early Childhood Center teacher says her classroom buzzes with excitement after her students apply what they learn in an interactive classroom center. "This is my 31st year to teach, and I get very excited when I see the joy of learning in my students as I do using the materials from Lisa's workshop," Kansao said. Douglas Kleiner, president of the Education Foundation of Harris County, says oftentimes science isn't a focus in elementary school classrooms because teachers aren't confident in teaching subject matter. "Our goal is to have several hours per week during which children are doing hands-on science with their classmates and teachers," Kleiner said. Many teachers tell us that prior to these workshops, they did little or no science. As a result of these workshops, they say their classroom become small science academies." Kleiner says Education Foundation grant-makers desire to support elementary school teachers so they become comfortable with science instruction. "We accomplish that by collapsing artificial silos between disciplines and subject in the classroom," said Kleiner. "Lisa finds books for these teachers which they may use for reading and introducing science. Together they look for opportunities in the stories where teachers may pause for a lesson in water density as characters splash through a puddle, or a lesson about qualities of air and flight if characters go up in an air balloon." Science questions come up naturally in children's stories, Felske says. When water splashes, why does it fly up? How and why does the water come apart and form droplets? "You help children understand that science answers questions," she noted. "When you teach children at an early age how to think scientifically, you change the way kids think about the world. Once you get kids thinking this way, they continue to ask questions throughout their school years." As Felske chooses new books to teach physics to children, she points to the ones she currently uses which are all-time favorites: "Zack's Alligator" includes information for teachers to introduce properties of concentration gradients, polymers, polar nature of water and discussion of mass versus weight. "Diary of a Worm" helps students observe properties of soil by using senses of touch, smell and sight. They also perform a simple chemical test to separate topsoil into four components. Then students look at earthworms and their behavior. Problem-solving skills taught through the story books assist in the critical challenge of how to educate the 21st Century American workforce as baby boomer scientists retire. Add two: "Education Foundation is working diligently alongside its partner in this project—the Harris County Department of Education—because both the Foundation and HCDE believe the future of our county depends on retaining problem-solving skills as an American virtue," Kleiner said. "Doing this kind of work with public school teachers in large cities means that children can go out and get the jobs and make the next most significant 100 inventions that need to be made in this country." Felske stresses practicality in her "science through children's literature" venture. There is the need for each experiment and book to be recycled so that teachers can replenish their supplies and repeat the process year after year. "We give them everything in terms of materials for the experiments," she said. "Anything that does need to be replaced must be able to be purchased at a discount store." The largest reward that Felske gets after training several hundred teachers in the

literature/science process is the excitement it generates and the following-up e-mails and calls she gets about "how it works" in the classroom. With teachers from 20 different school districts training in the same science in literature classrooms, she also hopes to make a big impact in spreading the good word about science education. For information about teacher trainings, e-mail Felske at lfelske@hcde-texas.org.

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