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Science course educates local middle school teachers

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Some North Texas teachers now know how to make musical instruments from plastic pipes. The "thumb tubes" vary in length to correspond to different notes. They can play such tunes as "Three Blind Mice" and "Ode to Joy." With every demonstration, there's something to be learned. The thumb tube exercise illustrates sound, one concept teachers learned last month through the Empowering Science Teachers of Texas program, which instructs teachers using hands-on experience. The program was held on campus. ESTT is preparing teachers for an updated approach to science instruction, the Texas Essential Knowledge and Skills curriculum, which takes effect Sept. 1. **Dr. Judy Reinhartz, a science education professor here, received the National Science Foundation and Eisenhower grants to sponsor 24 middle school teachers.** Each will teach five others in the district. To integrate technology into the classroom, the teachers also received graphing calculators, digital cameras and scientific probes.

The teachers have been brushing up on their physics knowledge for three weeks. Sheryl Schickedanz, a teacher at H.S. Stevens Middle School in Crowley, said many teachers dread teaching physics, but the program prepared her for it. "A learned that physics can be fun, so it's going to be fun for my students too," she said. ESTT emphasizes reaming using a five E lesson plan, which are evaluation, engagement, exploration, explanation and elaboration. In the evaluation phase, a teacher determines the mastery level of students using methods other than written tests. Schickedanz said she learned the value of doing something rather than simply being told through the program. She said she had been given constellation maps at planetariums but never knew how to use them. Physics assistant professor Dr. James Gelb taught the ESTT team how to use their maps on a stargazing trip. They identified M-13, a globular cluster where a new star was being born, and also tracked the moon's phases. "I never understood it until I did it," Schickedanz said. Peggy Strybosch, a Bailey Junior High teacher and ESTT instructor, said that is the type of attitude they hope to inspire in students. "We're leading by modeling rather than telling," she said. Schickedanz said science knowledge is crucial because technology is assuming a dominant role in society. "Leaders will have to know more about science," she said. "It is important because they are making laws and changing our everyday lives."

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