

“Science and Technology for Elementary Educators:  
A Literacy, Engineering and Environmental Approach”

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ABSTRACT

This three year multi-regional program will integrate science, literacy and technology, and will serve 30 K-5 teachers/administrators in the south-central, southwest, and southeast sections of Missouri. Activities were planned in response to High Needs K-5 partners' needs for science integration with math and literacy, critical thinking, measuring equipment for their schools, content instruction, and up-to-date hands-on inquiry curricula. In addition to required objectives, the program will address additional objectives concerning K-5 engineering, environmental education, the Nature of Science, and technology. Most sessions will take place at the MSU Greenwood Laboratory School's Science Scholars facility. Teachers will meet for a Saturday pre-summer session, an intensive nine day summer academy, and four Saturday follow-up sessions. The curriculum will center on physical science the first year, Earth science the second year, and biological science the third year. Inquiry pedagogy will be modeled. Many community partner field trips will occur. The national Engineering is Elementary (EIE) program will be a curriculum base; every activity of EIE is literacy and math-connected. Teachers will use Vernier probeware for grade-appropriate electronic measuring and data collection, including experimental design. Teachers will learn, practice, and perform data collection and graphing with basic instruments such as thermometers or laboratory balances before using probeware of the same type or electronic balances. Teachers will be trained in Projects WET, Wild, and Discover Nature Schools, and will receive science equipment and books used in the sessions for classrooms.