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Nanoscience and Nanotechnology Concepts for Enriching High School Curricula CHARLOTTE SANDERS, University of Texas, JILL MARSHALL, University of Texas at Austin — High school science teachers seeking to enhance student enthusiasm for science and to enrich their curricula with “real world” examples might be interested in drawing on nanoscience, which is currently a major branch of study in biology, chemistry, and physics—key high school curriculum areas—and is also a subject much reported upon by the news media. However, presenting nanoscience and nanotechnology in the classroom presents key challenges: the subject matter must be successfully integrated into the core curriculum so as to enhance the students’ educational experience; it must support the aims of Texas Essential Knowledge and Skills for Science (TEKC), or equivalent systems in other states; it must be made accessible to students; and it must be presentable with the use of equipment or supplies that are neither too expensive nor too rare to be obtainable by school districts. These last two requirements are particularly difficult, because it is the nature of nanoscale research that complex fabrication processes and expensive characterization methods are typically required. This talk will discuss the authors’ experience leading a teachers’ workshop session in 2009 to address the issue of introducing nanoscience into the high school science classroom. The workshop is funded by the NSF through the UT-IGERT program, and brings together teachers from across Texas annually for discussion, curriculum-building, and training in concepts related to nanoscience and nanotechnology.

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