1116-VO-2158 **Jerry F. Dwyer*** (jerry.dwyer@ttu.edu) and **Aimee M. Cloutier** (aimee.cloutier@ttu.edu). *Combining sports and STEM in activity-based lessons for middle school students.*

Active STEM was a 5-day summer program designed to enhance interests in STEM. The program's focus was the math, science, and engineering that undergird the sports most popular among its prospective participants (middle school males from underrepresented populations in STEM). The program was designed by a mathematics professor and an engineering graduate student, while active presentations were enhanced by graduate students in exercise science. Program activities were equally divided between interactive lectures (students constantly participating) and active lessons (involving lots of movement or exploration of patterns, math, engineering principles, etc.). Pre-to-post survey results were studied to measure increases in self-efficacy in that area of STEM. The program provided an opportunity to explore the effectiveness of different types of activity-based lessons for encouraging student engagement. Program highlights included an active engineering design lesson with an inquiry-based approach and a series of math games, which involved high levels of mental engagement without any physical activity. These observations provide a basis for future studies focused on the nature of interactive lessons that may be most effective for STEM learning among underrepresented groups. (Received September 21, 2015)