To: Joint Interim Committee to Study the Public School Finance System
Date: September 24, 2012
From: Dr. Sandra West, Chair, Science Teachers Association of Texas (STAT) Legislative Committee
Re: STEM Education Funding

The education funding cuts that began in 2005 for an increasing number of students and increasing number of high need students have significantly and negatively impacted Texas science education in the following ways:

1. **Unsafe overcrowded science classrooms and laboratories**. See attached graphs that demonstrate what common sense tells us. Overcrowded science classrooms aren't safe. Students must safely "do" science, not just read about it and memorize vocabulary words, if they are to deeply understand fundamental scientific principles necessary to be successful functional adults. Science classrooms with 35-40 students who are using hazardous chemicals or handling science equipment are unsafe.
2. **Inadequate number of science lab/classrooms** to provide adequate science education, thereby resulting in students missing the necessary hands-on science experiments. The increase in student population and science course requirements increased the demand for science facilities, but Texas provided only $200 million for entire state and only a few districts met the qualification to access the miniscule amount. Some individual districts needed $300 million based on TEA's formula to determine the amount for which a district could apply.
3. **Lack of science equipment and supplies** to meet needs for increased student population growth.
4. **Decline in Professional Development** and travel for it. What discipline requires more updates with current content and safety information in PD than science?
5. **College students are beginning to state their doubts about whether they want to enter the STEM teaching profession** with the ongoing attacks on education and funding cuts. Indeed, too many have stated that they have already made a decision to choose another profession.

As a nation and state, we must provide adequate STEM education for our future workforce. STEM education has essential components that must be attended to including rigorous STEM teacher certification standards, long-term and intense professional development, high quality administrative leadership, adequate facilities, equipment and supplies and a profession that entices high quality students who are the "future of the franchise."

If we can spend $45 million on one athletic complex, surely we can adequately fund STEM education.

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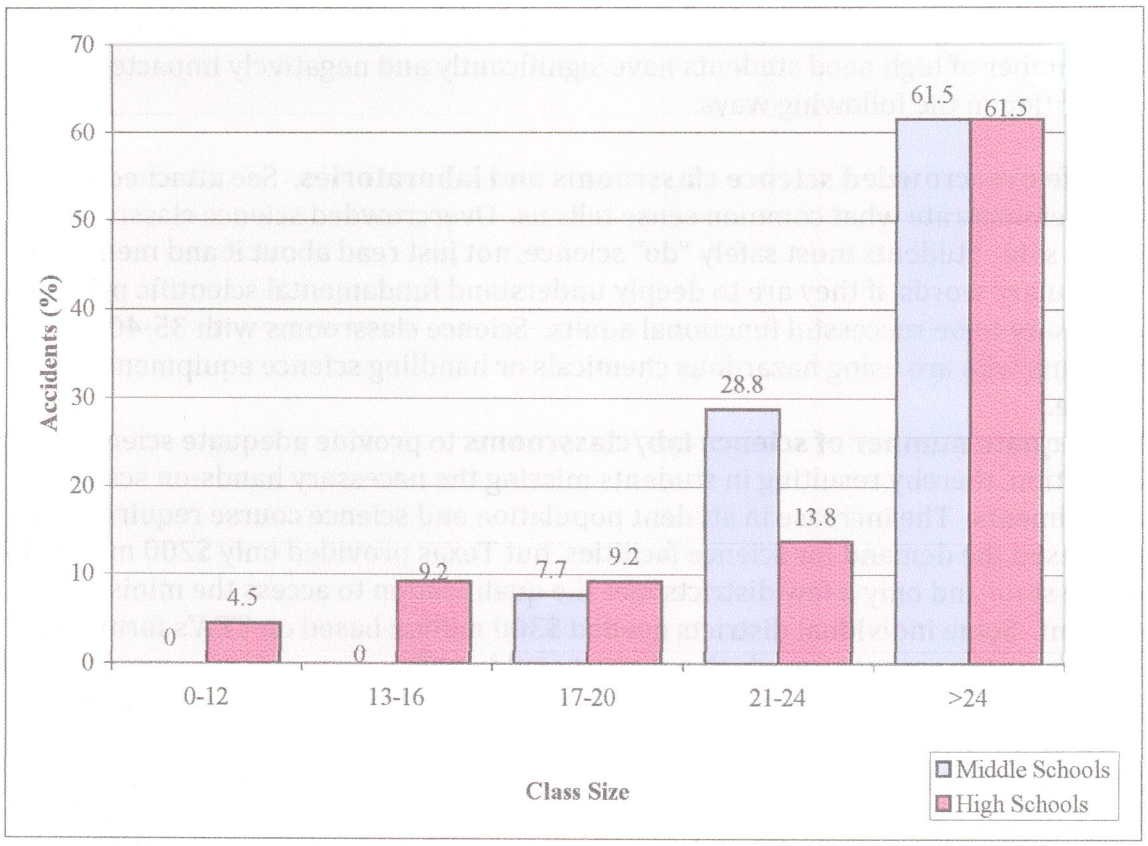
Mishaps Increase as Class Size Increases ($p<0.05$) " Supervision factor"



Mishaps Increase as Space per Student (Elbow Space factor) Decreases ($p<0.05$)