

***Position Statement
of the
Science Teachers Association of Texas
on
SCIENCE CLASS SIZE and LABORATORY SAFETY***

(Adopted 5/02)

The Board of Directors of the Science Teachers Association of Texas supports safe science instruction. STAT represents over 5,500 Texas science educators who provide instruction for Texas students, early childhood through college level. Laboratory and field investigations and classroom demonstrations are important parts of science education. For these experiences to be safe, adequate science laboratory and classroom space and supervision of students are essential.

Science is one of the core subject areas. Science is assessed on the TAKS in Grades 5, 10, and Exit Level Grade 11. The Grade 10 and Exit Level Grade 11 science assessments ensure that Texas graduates are scientifically literate. Effective science instruction in elementary and secondary levels includes laboratory and field activities. These activities are required to develop a student's mastery of the Texas Essential Knowledge and Skills, and safe laboratory and classroom facilities must be provided for these laboratory experiences.

Science laboratories and classrooms in Texas high schools must meet the minimum of 58 net square feet of floor space per student (41 square feet per student in elementary and 50 square feet per student in middle school) to provide safe laboratory conditions. The number of students assigned to a science laboratory or classroom must not exceed the number of built-in laboratory stations. Additionally, research shows that one science teacher should supervise no more than 24 students in a laboratory situation. No more than 24 students should be scheduled into any individual science class. It is important for the teacher and students to have immediate access to each other for safe and appropriate learning to take place. The type of course and the age and maturity level of students should also determine class size. Class size should be reduced by two students for each special needs student added to the class. If three or more special needs students are assigned to the same class, appropriate professional or paraprofessional assistance should be provided. Studies show that serious laboratory accidents are more likely when class size increases (Research available through National Science Education Leadership Association www.nsela.org and Science Teachers Association of Texas www.statweb.org). It is imperative that administrators keep these guidelines in mind when scheduling science classes to avoid risks. Safety of science students and teachers is compromised when these guidelines are not followed.

Science teachers and students must have safety training and access to appropriate safety equipment, such as eye/face wash stations, splash-proof safety goggles, emergency blankets, safety showers and fire extinguishers. Eye/face wash stations should be activated weekly. Risks are reduced and liability can be minimized when these steps are taken. Texas Safety Standards, Science Facilities Standards, two publications of the Texas Education Agency and the Charles A. Dana Center at The University of Texas at Austin, and the NSTA Guide to School Science Facilities and NSTA Exploring Safely: A Guide for Elementary Teachers are excellent resources for laboratory safety and facility requirements.

The Board of Directors of the Science Teachers Association of Texas urges science teachers, instructional leaders and administrators to adhere to these guidelines to insure that safe conditions are provided for science instruction by making appropriate science class size a priority.