

STAO/APSO Position Statement Regarding Class Size

It is widely recognized that Science is a process and an activity fully as much as it is an organized body of knowledge and that, therefore, it cannot be learned in any deep and meaningful way by reading and discussion alone. The Ontario Ministry of Education and Training reiterates the need for all science courses to stress the importance of both process and content in its recently published "Ontario Curriculum Grades 9 and 10 Science, 1999" and "Ontario Curriculum Grades 11 and 12 Science, 2000". Science teachers are directed to include certain teaching approaches when implementing the science program, including the following:

The expectations in science courses call for an active, experimental approach to learning, with all students participating regularly in laboratory activities. Laboratory activities can reinforce the learning of scientific concepts and promote the development of skills of scientific investigation and communication.

STAO/APSO concurs that student experimentation is central to all science education. Further, STAO/APSO believes that in the interests of safety (and indeed for good educational reasons also), it is of paramount importance that science should be taught in reduced-size classes in laboratory facilities which are adequate for student practical work.

It is recognized that the optimum number of students in any science class depends on a number of factors including the age, ability and degree of responsibility of the students and the type of work being attempted. However, for most science classes, to increase the number above that recommended is to jeopardize the educational value of the science experimentation and inquiry. Furthermore, STAO/APSO believes that the risk to student safety and to expensive equipment escalates rapidly as the number of students in the laboratory at one time increases.

IT IS STAO/APSO'S POSITION REGARDING SCIENCE CLASS SIZE THAT

1. Science classes in Grades 7 to 12 should be strictly limited to a maximum of 24 students per teacher.
2. Identified Exceptional Students, as defined in the Education Act, placed in regular science classes should be regarded as the equivalent of two mainstream students.
3. New and renovated school laboratories must meet the Ontario Building Code and Ontario Fire Code regulation of 4.60 m² space per person. However, no matter how large an existing lab shall be, no more than 24 students shall be assigned to it at any one time.

The amount of space needed to carry out student investigations depends on such variables as the nature of the course, whether or not the laboratory is also used for classroom discussion, and how much the laboratory is used for student independent investigation. Common sense says that overcrowding in science laboratories creates potential safety hazards. These hazards may be reduced by adhering to the Ontario Building Code and Ontario Fire Code regulations.