



Tips for Parents: Schools and Science

The quality of life for most of this century will rest on the talents of the children in our schools today. Food, energy, and the survival of the planet depend on science and technology. If children are to discover whether they have an aptitude for science they must have the opportunity to demonstrate it.

We're number one?

The United States can no longer afford to take for granted that it will always be among the world's science leaders. According to the US Department of Education, we've lost a lot of ground and have a lot of work to do.

Students. The nation's report card, published in May of 2006 by the National Assessment of Educational Progress, reports:

- 4th grade science scores rose for all student groups, with minority and lower-income students making significant gains
- 8th grade science scores remained unchanged overall, with scores lower than in 1996 and unchanged since 2000. Only black students made a small increase. However, "significant score gaps still persisted between white and minority students, and between students eligible and not eligible for the school lunch program."
- 12th grade science scores report that overall performance in science has *declined* since 1996. Score gaps between white and minority students, and males and females did not narrow.

Curriculum. Students rarely develop an interest in science because entrenched practices in American school ignore the obvious connections between the sciences and other subject areas.

Hands-on approaches. Lecturing and the use of textbooks remains a mainstay in many science classrooms. Covering the material is stressed at the expense of gaining insight. Not enough time is spent on experiments or investigations that would arouse students' interest and build understanding.

Testing. The National Center for Education Statistics reports that for grades 4-12, low level thinking and knowledge are mutually reinforced by both standardized and textbook tests. Such testing influences math and science instruction across the nation, especially in minority classrooms.

Teachers. A large percentage of elementary school teachers do not feel confident teaching science and admit to science being a low priority in the curriculum.

Gender and race. Socioeconomic conditions and a bias against girls in math and science classrooms mean too few women and minorities are enrolled in undergraduate and graduate math and science programs.

Work force. The small percentage of research scientists and engineers in the work force reflects the lack of students pursuing a higher education in science. Major technical corporations recruit graduates from overseas because they score significantly higher in science and math.

What you can do

To make sure science education gets the attention it deserves, try starting a discussion with the principal at your neighborhood school by asking the following questions:

- Do you teach science everyday?
- Are up-to-date science materials provided in the classroom and accessible to students?
- Do students have the opportunity for hands-on/heads-on science activities?
- Are science projects displayed in the classroom?
- Do you integrate science with other subjects?
- How are you making sure that children enjoy science? Are teachers' efforts to learn new science techniques being supported?

For more information:

[The National Center for Education Statistic's Nation's Report Card](#)

["Key Things Parents Can Do to Make Sure Their Children are Prepared for the 21st Century"](#)

[The US Department of Education's "Mathematics and Science Initiative"](#)

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