

"Women will not reach full social equality until they are equally represented in the sciences. Science has become a powerful social force in the last fifty years; those who 'do' science have political power and influence, along with economic opportunity."

Billy E. Frye  
Vice President/Academic Affairs  
Professor/Biological Sciences  
The University of Michigan

"Until that time when high school girls enroll in and complete the rigorous sequence of mathematics courses in the same proportions as the boys, there will continue to exist an inequity for women in education, vocational, and career options."

Dora Helen Skypek  
Mathematics Professor  
Emory University

"The United States needs all the best minds possible in the scientific fields."

Ann W. Reynolds  
Provost of Ohio State University  
Biological Scientist

Above quotations from Concerns, October 1982

## CONNECTICUT STATE DEPARTMENT OF EDUCATION

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# MATHEMATICS AND SCIENCE

## *CRITICAL SUBJECTS FOR WOMEN AND MEN*





## ENCOURAGING GIRLS (AND BOYS) TO TAKE MORE MATH AND SCIENCE

"Why do we have to study this?" This is a question many high school students ask. Many students, especially females, fail to see the importance of taking math and science courses

A look at a list of the occupations in demand in the United States provides an answer to the students' question. Many of the fields that are growing most rapidly, and therefore providing many job opportunities, require knowledge of math or science.

For example: Health Services Occupations

- biomedical engineering
- eye care
- medical technology
- home health care

"High Tech" Occupations

- robotics
- computer science
- electrical engineering
- laser technology

Although science and math are critical areas needed to prepare for high demand careers, too few students, especially females, are enrolling in upper level courses.

## CONNECTICUT ENROLLMENT PATTERNS IN MATH AND SCIENCE

In the Fall of 1983, the Connecticut Project on Equal Education Rights conducted a statewide research project to learn more about the participation of females and males in math and science courses in Connecticut high schools. The following chart summarizes the findings.

<u>Course</u>	<u>% Males</u>	<u>% Females</u>
Geometry	47	53
Algebra I	49	51
Calculus	58	42
Computer Science I	56	44
Computer Science II	62	38
Biology	48	52
Physics	59	41

These statistics show two trends:

- Male and female enrollments are in balance in entry level math and science classes.
- There is a disproportionate percentage of males in upper level classes and in computer science classes.

## WHAT CAN YOU DO?

- Parents, teachers, and counselors can provide information to help convince students of the importance of math and science and encourage them to take more math and science courses.
- Schools should provide positive role models for female students by inviting women in math and science careers to come in and speak to students.
- Schools can organize career days which feature people in nontraditional careers.
- Schools should examine the enrollment patterns in their math and science courses and move to change any biased patterns.

## WHAT CAN THE STATE DEPARTMENT OF EDUCATION DO FOR YOU?

- Assist schools in setting up a "Multiply Your Options" conference to promote the importance of math and science for females.
- Provide training for elementary school teachers in activities that promote equal opportunity in math.
- Provide other training, resource materials, and referrals to other agencies.