

Softer Physics Teaching

Since 1948 the percentage of high school seniors taking physics has decreased from 29 percent to less than 20 percent. And a new gentle approach to physics education is needed to keep students in the field.

So said Gerald Holton, professor of physics at Harvard University and co-director of Harvard Project Physics, a program to develop a more personal approach to the high school subject. Holton, along with his codirectors, F. James Rutherford and Fletcher G. Watson, gave the first progress report on the two-year-old project at the convention of the American Association for the Advancement of Science in Washington.

Key targets of the new approach to physics teaching are the two million high school seniors (80 percent of the total) who are not interested in pursuing the subject in college.

Essential to the new approach is a minimal use of mathematics, according to the Harvard group. Math is what drives most students away from physics. Instead, Watson proposes quotations from literature, examples from art and the home life of physicists.

It is too early to be sure, but the technique may be working.

The main lesson learned in the past two years of experimental teaching of

the program has been that teachers must be allowed flexibility in deciding how fast to go and what to emphasize.

Early reaction to the project, which has two more years to run, has been favorable. In the 10 schools which have teachers who participated in the program in 1965, enrollment in the project course increased 50 percent in 1966. Fifty-five teachers are now teaching in the program.

POPULATION CONTROL

Urbanites Less Fertile

Women living under the strain of urban life are less fertile than their country cousins. Because the United States is fast becoming a universally urbanized country, it will probably never face the same population crisis India is experiencing, Dr. Ulla H. Olin told the American Association for the Advancement of Science.

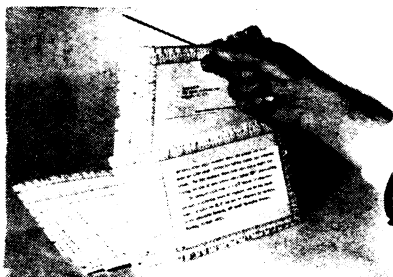
There is a universal difference between the number of children born to city and country dwellers which can be explained by the fact that tension may interfere with fertility, she said.

One participant at the meeting pointed out that women who are extremely concerned and anxious about their ability to conceive often turn out to be infertile—possibly as a result of their anxiety rather than a biological disorder.

In animal studies at the National Institute of Mental Health and elsewhere, psychologists have reported rats living in crowded conditions bear fewer offspring than those living in more open surroundings.

It is quite appropriate to derive principles from animal studies and apply them to humans, Dr. Olin said, because man's "reproductive physiology is the same as other mammals." The only peculiarity lies in man's enlarged central nervous system and ability to create instead of just adapting to an environment, she added.

AUTOMATE YOUR FILES for instant data retrieval



Now you can use the latest Punch Card System to keep your data in thousands of categories at one time. This inexpensive system provides extraordinary possibilities for classification and selective sorting and yet requires no expensive machines or complicated methods. Speeds up cross-filing, inter-correlation and data retrieval for anyone who must keep basic information on file for use in a variety of categories. Information can be written, typed, or actually pasted on the cards. The information is then coded onto each card by notching away that portion of the card between the hole and edge. The notches allow the coded cards to be separated from un-notched cards when a sorting rod is inserted in one of the holes of a group of cards. Since the notched cards have nothing to support them when the sorting rod is lifted upwards they will fall from the group—leaving the un-notched cards intact and separated. A sorting operation takes just a few seconds and you never have to put the cards back in any particular order. This system is widely used for scientific data, literature searching, new product files, market research, hobbies, etc.

The punch cards are 5" x 8" with 120 holes around the four margins. A standard code for the holes is printed on the cards which can be adapted to the widest variety of sorting operations. Each system consists of • 200 Punch Cards • Notching Punch • Sorting Rods • Coding and Sorting Instructions • Storage Box.

All for only **\$12.85**

Add 80¢ for postage and handling
SATISFACTION GUARANTEED

DYNA-SLIDE COMPANY

1566 Sherman Ave. Evanston, Ill. 60201

IQ test

Know your IQ. Mail \$1 for nationally used "self-scoring" adult IQ test to Test Company of America, Dept. SN-2 100 Pine St., Verona, N.J. 07044. Superior quality & accuracy 100% guaranteed.

Develop A Powerful Memory?

A noted publisher in Chicago reports there is a simple technique for acquiring a powerful memory which can pay you real dividends in both business and social advancement and works like magic to give you added poise, necessary self-confidence and greater popularity.

According to this publisher, many people do not realize how much they could influence others simply by remembering accurately everything they see, hear, or read. Whether in business, at social functions or even in casual conversations with new acquaintances, there are ways in which you can dominate each situation by your ability to remember.

To acquaint the readers of this publication with the easy-to-follow rules for developing skill in remembering anything you choose to remember, the publishers have printed full details of their self-training method in a new book, "Adventures in Memory," which will be mailed free to anyone who requests it. No obligation. Simply send your name, address and zip code to: Memory Studies, 835 Diversey Parkway, Dept. 540-011, Chicago, Ill. 60614. A postcard will do. (Adv.)



With artificial satellites already launched and space travel almost a reality, astronomy has become today's fastest growing hobby. Exploring the skies with a telescope is a relaxing diversion for father and son alike. UNITRON's handbook contains full-page illustrated articles on astronomy, observing, telescopes and accessories. It is of interest to both beginners and advanced amateurs.

CONTENTS INCLUDE:

Observing the sun, moon, planets and wonders of the sky • Constellation map • Hints for observers • Glossary of telescope terms • How to choose a telescope • Astrophotography

UNITRON

INSTRUMENT COMPANY • TELESCOPE SALES DIV.
66 NEEDHAM ST., NEWTON HIGHLANDS 61, MASS.

Please rush to me, FREE of charge,
UNITRON'S OBSERVER'S GUIDE and TELESCOPE
CATALOG #5-D

Name _____

Street _____

City _____ State _____