

Student Evaluation

Students are evaluated on cognitive learning for each lesson by means of oral and written quizzes. Two taped lessons usually are combined into one set of quizzes, which the student can take whenever he feels he is ready. If he has not taken the quizzes one week after the lesson started, however, an instructor asks him about it. If he is unable to demonstrate some progress for the week's work, either a P.I. is provided for him or else he is restricted to the supervision of one of the instructors.

A student is entitled to a grade of C if he shows proficiency in cognitive learning by passing all oral and written quizzes for the unit. No one is allowed to receive a grade of D or F; instead, the student who does not complete all quizzes will be asked to return next year when the unit is being studied. The student who does not complete a unit will be asked to complete only that unit, not the whole semester's work, to receive his grade. During the 1969-70 school year only eight of 224 students received an incomplete for the year.

The decision to work above a C rests solely with the student. The format for obtaining points toward an A or a B is the same for each unit and is based on a point total. The student has considerable latitude in choosing ways to obtain these points.

Each inquiry may earn up to 10 points, each value write-up may earn up to 10 points, each successful attempt at performance instruction will earn 10 points, and each A-B test has a maximum of 40 points. Accumulation of half the total available points for a unit by any combination of activities will earn a B grade. An A is earned by accumulating two-thirds of the total available points. Each unit has its own make-up of activities and potential points.

Bonus points may be obtained by exceptional response on oral quiz questions or by doing special work, such as a BSCS film loop with write-up.

All points are cumulative over a semester; this seems to add to incentive. Each semester has found more than 65% of all students receiving As and Bs.

Course Evaluation

We have used the Nelson Biology Test to weigh our progress against national norms. All biology students enrolled are included in our data. In the 1969-70 school year, pre-test data indicated a mean at the 19th percentile. The post-test mean was at the 69th percentile of the national norm—a significant change.

Currently we are studying the students' attitudes toward this system. Data will be collected during the entire school year. Analysis will be done in cooperation with the educational psychology department of Purdue University. An attitude scale instru-

ment developed during the 1969-70 school year is being used to obtain data. In addition, we are attempting studies of correlation of biology achievement, IQ, past science achievement, and attitude.

We hope the findings of these studies will support the intuitive feeling of the instructors that AT biology benefits the students.

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DDT, PCB IN THE OCEAN

Scientists have found concentrations of DDT in most specimens and polychlorinated biphenyls (PCB) in practically all specimens of plants and animals they collected on extensive cruises throughout the Atlantic Ocean.

The cruises, by vessels of the Woods Hole Oceanographic Institution, were part of the continuing United States program for the International Decade of Ocean Exploration. Scientists aboard the vessels were conducting projects designed to obtain baseline data for the study of marine pollution as part of the Environmental Quality Program of the IDOE.

Plants and animals sampled include *Sargassum* weed, zooplankton, flying fish, triggerfish, dolphin-fish, sharks, and many animals, including small fishes, that daily migrate from the surface to as deep as 900 m. Polychlorinated biphenyls are used as an insulator in electrical capacitors, as transformer oil, as a heating medium, and as a plasticizer; and they are present in hydraulic fluids and lubricating oils.