



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
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## **Introducing Computer Programming in a Traditional Classroom**

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by Laretta J. Fox

Extensive use of the computer has created a new industry that employs large numbers of people. Thus, the present generation of school children must be educated to be able to fill the new and different job market. In the large urban high school limited facilities make it impossible for all students to enroll in a formal computer programming course. Yet, all students should have the opportunity to see how a computer works, even if they do not enter the field. This unit of study presents an alternate method of acquainting young people with the computer. It introduces some simple computer programming techniques in an informal manner to the students in the traditional classroom.

The mathematical topic included in the unit is the area of plane figures. Computer programs, of varying degrees of difficulty, are written in the BASIC language to enable students to calculate areas of plane figures by using the computer. Each program introduces a new technique, yet it is simple enough to be presented informally and to be understood by any student who has no prior knowledge of computers or programming. The material developed here may be used at several levels of instruction for the following purposes: (1) to teach the concept of area along with simple computer programming to middle school students, (2) to reinforce the concept of area and to introduce simple computer programming techniques to students enrolled in applied mathematics, consumer mathematics and basic geometry courses in the high school, (3) to teach the concept of area and computer programming in greater detail to high school students enrolled in a college preparatory geometry course. The unit is not intended to be a complete course in computer programming, but merely an informal introduction to it in a traditional mathematics classroom setting. Hopefully, the unit will ignite a spark of interest and arouse the curiosity of the students. They will be encouraged to explore the field in greater depth by visiting nearby computer centers, watching how the computer is used, and talking with the people who run it.

(Recommended for 7th and 8th grade General Mathematics, 9th grade Applied Mathematics, and 10th grade Consumer Mathematics and Plane Geometry.)

### **Key Words**

*Mathematics Computers Area Plane Figures Basic Programming Geometry*

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