



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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Bicycles

Guide for Curriculum Unit 87.06.01
by John P. Crotty

The primary objective of this unit is to demonstrate through a collection of applications how you can effectively use bicycles to teach mathematics and science. The unit emphasizes easy to do experiments. The appendix discusses approximate numbers and significant digits.

In teaching, I try to actively involve the student. Last year, my Yale-New Haven Teachers Institute seminar leader Dr. William Kessen, Professor of Psychology and Pediatrics, stressed using data that was drawn from the students' life experiences. All my students can ride a bicycle. My students and I are involved with a practical concrete object. Hopefully, the team attitude will produce a "Yes, I can" in learning the physics and mathematics of a bicycle; the success in performing on a bicycle can be replicated in the classroom.

If you teach mathematics or science, in either junior high school or high school, you can use this unit. This unit contains applications to program in a computer class. This unit would also be helpful to anyone who is preparing for the Armed Services Vocational Aptitude Battery Test, as that test has sections on mathematics, general science and basic mechanics.

I use this unit in computer classes. I am always looking for more problems for my students. This unit has problems that are fun, practical and as challenging as you want to make them.

(Recommended for Algebra classes, grade 9; Junior High School Mathematics classes, grades 7-9; Physical Science classes, grade 9)

Key Words

Mathematics Graphs Construction Motion Problem Solving Physics Machines

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