



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
1990 Volume VI: Genetics

Basic Human Genetics

Guide for Curriculum Unit 90.06.06
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This interdisciplinary set of mini-units on basic human genetics is designed to be taught during the course of a school year as a theme of focus for integrating curriculum in a self-contained sixth grade class. Alternatively, the various components of the unit could be shared by single-discipline teachers working with the same groups of students. Individually, the mini-units readily adapt to being taught separately as interest and need dictate.

The introduction to the unit, which explores traits, defining traits, and diversity, may begin early in the school year and develop as the mathematical skills needed to carry out activities are taught. Metric tape measures are used to gather physical data on students; with subsequent recording, graphing, establishing ranges, and determining averages. The graphs can then be used as the basis for word problems. In studying patterns of inheritance, probability and ratios come into use. Although the scientific explanations are simplified to serve only as an introduction to the topic, the process of meiosis in the production of sex cells and its role in contributing to the diversity of a population is covered. Social studies content includes current event interest and career exploration. The usefulness of genetic technology is illustrated by citing applied examples of genetic engineering and introducing the role of the genetic counselor. Other careers in the science of genetics are introduced.

A comprehensive student bibliography is provided to facilitate reading and writing activities. Listed resources include films, video-tapes, and computer programs. Also listed are suggestions for contacting professionals in genetics and related areas for consultation, in-classroom visits, and field trips.

(Recommended for Self-contained Class and Mathematics, grade 6; and Science, grades 6-7)

Key Words

Mitosis Meiosis Cells Biology Basic Genetic Heredity

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