



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

Creation, Evolution and the Human Genome

Guide for Curriculum Unit 90.06.09
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The primary scientific focus of this unit is the Human Genome Mapping Project which is sponsored by the U.S. Government. Within the next 15 years, the entire sequence of base pairs in human DNA will be determined. Since various sections of this DNA comprise specific genes, a great deal of information will be readily available for diagnosis and treatment of human diseases and ailments previously not understood. Students will need to be familiar with genetic terminology and basic concepts in molecular biology in order to make informed, ethical decisions in the future. Study of the human genome in secondary school offers exceptional opportunities for interaction with the academic and technical resources in the New Haven area.

Of equal interest in this unit is the development of student understanding about evolution and its long history of examination in the world of science. Two main camps are emerging in the debate about human evolution, centered on the type of research and evidence they choose to pursue. On the one hand are the paleontologists, paleoanthropologists, and geologists who work in the field with fossil and stone clues; on the other hand are the new molecular biologists and geneticists who explore the life code of organisms and who have developed a fascinating array of new techniques and technologies to aid their sub-microscopic search.

Questions about evolution and origins often touch upon deeply rooted, possibly unexamined beliefs of students. Part of this unit is devoted to opening up ways to look at creation myths and stories for their intrinsic value and yet to not confuse scientific theory with creationist beliefs.

Videos, slides, teaching kits, and lab exercises have been compiled by members of the 1990 Genetics seminar to offer a wide variety of teacher resources.

(Recommended for Biology and a Research Seminar in Science, grades 10-12; Advanced Biology and Genetics, grades 11-12; and Life Science, grades 7-8)

Key Words

Evolution Biology Genetics Human General

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