



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
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## **A Look into the Past**

Guide for Curriculum Unit 90.06.08  
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When some boys look at their parents who are well over six feet tall, they feel quite comfortable in the assumption that they too will grow to be at least six feet tall and hence be able to control the basketball “hoop.” Occasionally they don’t quite measure up and look to their parents and teachers for some answers. Girls, too, fantasize about being that perfect “10.” Lots of money is spent on special diets and surgery every year. Finally, when they face the reality that things are not working out as dreamed, they too turn to their parents, teachers, and doctors for some answers.

There is a growing concern among the students as to why their physiological make-up is what it is. They are also asking such questions as, why did this illness have to happen to me? The answer to many of their questions lies in the genes, dominant and recessive traits. Therefore, we must take a look into the past in order to find the answers.

Human beings are what they are because of the genes that they inherited from their parents. The basic heredity principal discovered by Mendel, applies to humans as well as to plants. This unit will be used in a seventh-grade Life Science class and can be used in grades six through eight. By looking into the past, students can learn from this unit:

1. Genetics has to do primarily with the passing of traits from generation to generation. This is done through the passing of genes which are located on the chromosomes. Each individual inherits 23 pairs of chromosomes from each parent.
2. Some genes are dominant and others are recessive. The dominant genes mask the recessive genes, therefore the dominant characters are more noticeable.
3. Meiosis has to do with the duplication of the chromosomes and the division of the nucleus.
4. DNA deals with the production of sex cells and the effect of mutation; a change in a gene that causes a change in inherited traits, whether it is good, bad, or indifferent. It is also referred to as the code of life because it contains all of the information to make and control every cell of an organism.
5. Mitosis has to do with duplication of the chromosomes and the division of the nucleus and the cytoplasm. It is through mitotic cell division that organisms grow and develop.
6. Inherited diseases can and will occur because of errors in the genes.

This unit also includes a vocabulary list, lesson plans, teacher and student reading list, hands-on activities, resources, and a bibliography.

(Recommended for Life Science, grade 7; General Science, grades 6-8; and Health, grades 6-7)

**Key Words**

*Heredity Biology Genetics*

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