



A PILOT DVD PROJECT

WHY THE Y?

WHAT MAKES A MALE?

AND

EVOLUTION OF THE Y CHROMOSOME

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Lesson Plan Title Why the Y? Evolution of the Y Chromosome
HHMI Lecture The Meaning of Sex: Genes and Gender (November 2001)
Course: Biology 1, Biology 1 Honors, AP Biology
Goals: To develop an understanding of the important differences between male and female by exploring physical and chromosomal differences between the sexes and the evolution of the sex chromosomes.
Standards: Students should understand the molecular basis of heredity. Most of the cells in a human contain two copies of each of 22 different chromosomes. In addition, there is a pair of chromosomes that determines sex: a female contains two X chromosomes and a male contains one X and one Y chromosome. Transmission of genetic information to offspring occurs through egg and sperm cells that contain only one representative from each chromosome pair. An egg and a sperm unite to form a new individual. The fact that the human body is formed from cells that contain two copies of each chromosome – and therefore two copies of each gene – explains many features of human heredity, such as how variations that are hidden in one generation can be expressed in the next..
Objectives: Student will be able to: <ol style="list-style-type: none"> 1. describe the biological differences between males and females. 2. describe how the sex of an individual can be ascertained via a karyotype. 3. explain current theory on the evolution of the Y chromosome.