

Human Karyotyping

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Audience: 10th grade biology

Objective: To prepare and analyze a karyotype of human chromosomes.

Scope of lesson: Introduce the lab activity by describing the use of a karyotype in studying human chromosomes and analyzing genetic disorders. Use the diagram from the DVD of *The Meaning of Sex: Genes and Gender*, chapter 15 of Lecture 4, “Sexual Evolution: From X to Y.” This is used as a model of a prepared human karyotype. Cut and match pairs of chromosomes to prepare a human karyotype. Using the karyotype, determine the sex of the individual.

Assessment/Follow up: Internet lab on Karyotyping and Genetic Disorders:

http://www.biology.arizona.edu/human_bio/activities/karyotyping

Use the animation from *The Meaning of Sex: Genes and Gender*, Lecture 4, Chapters 13-15, to show the possible evolution of variations in chromosomes.

Student feedback on DVD items: Have students submit a “one-minute paper” on the value of the DVD in clarifying the concept of human karyotyping.