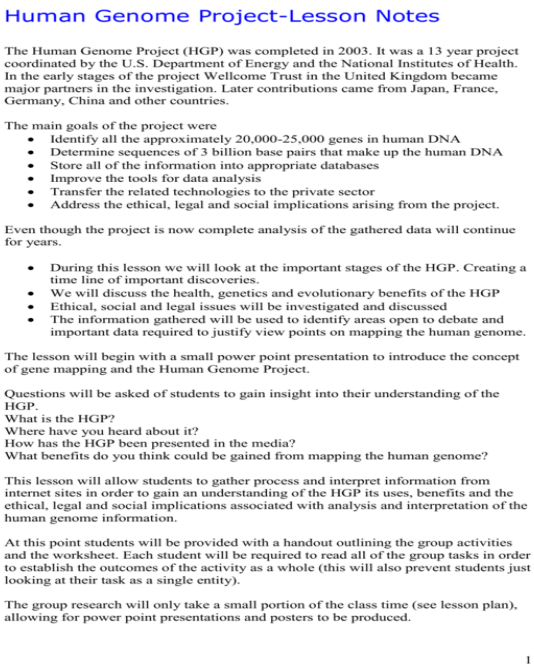
Human Genetics Notes



Human Genome Project-Lesson Notes

The Human Genome Project (HGP) was completed in 2003. It was a 13 year project coordinated by the U.S. Department of Energy and the National Institutes of Health. In the early stages of the project Wellcome Trust in the United Kingdom became major partners in the investigation. Later contributions came from Japan, France, Germany, China and other countries.

The main goals of the project were

- Identify all the approximately 20,000-25,000 genes in human DNA
- Determine sequences of 3 billion base pairs that make up the human DNA
- Store all of the information into appropriate databases
- Improve the tools for data analysis
- Transfer the related technologies to the private sector
- Address the ethical, legal and social implications arising from the project.

Even though the project is now complete analysis of the gathered data will continue for years.

- During this lesson we will look at the important stages of the HGP. Creating a time line of important discoveries.
- We will discuss the health, genetics and evolutionary benefits of the HGP
- Ethical, social and legal issues will be investigated and discussed
- The information gathered will be used to identify areas open to debate and important data required to justify view points on mapping the human genome.

The lesson will begin with a small power point presentation to introduce the concept of gene mapping and the Human Genome Project.

Questions will be asked of students to gain insight into their understanding of the HGP.
What is the HGP?
Where have you heard about it?
How has the HGP been presented in the media?
What benefits do you think could be gained from mapping the human genome?

This lesson will allow students to gather process and interpret information from internet sites in order to gain an understanding of the HGP its uses, benefits and the ethical, legal and social implications associated with analysis and interpretation of the human genome information.

At this point students will be provided with a handout outlining the group activities and the worksheet. Each student will be required to read all of the group tasks in order to establish the outcomes of the activity as a whole (this will also prevent students just looking at their task as a single entity).

The group research will only take a small portion of the class time (see lesson plan), allowing for power point presentations and posters to be produced.

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Basic Concepts of Human Genetics. The genetic information of an individual is contained in 23 pairs of chromosomes. Every human cell contains the 23 pair of.Ms. Knight attached human genetics codinginflipflops.com to Human Genetics notes Ms. Knight moved Human Genetics notes lower. Ms. Knight added Human Genetics.Start studying Human Genetics Notes. Learn vocabulary, terms, and more with flashcards, games, and other study tools.Human Genetics. Printer Friendly. gene disorders - mostly very rare, recessive. mutations - source of all new alleles; Tay-Sachs disease - causes lysosomes to.Human genetics, study of the inheritance of characteristics by children from parents. Inheritance in humans does not differ in any fundamental way from that in.MOLECULAR CHARACTERIZATION OF HUMAN GENETICS DISORDERS Human Genome, Identification of Genetic Disorders, Recombinant DNA, DNA.Notes also include information about blood types and human genetic disorders and has an associated powerpoint presentation, intended for high school biology .Genetics is the study of how genes bring about characteristics, or traits, in living For example, human cells have a double set of chromosomes consisting of Human genetics is the study of inheritance as it occurs in human beings. Human genetics encompasses a variety of overlapping fields including: classical.A genetic disorder is a genetic problem caused by one or more abnormalities in the genome. Over human diseases are caused by single-gene defects.The chromosomes are made of DNA. This is the genetic code the blueprint for a human being. DNA is a bit like an instruction manual for building the body and.A list of some symbols commonly used in human pedigree analysis Most human genetic disorders are determined by recessive alleles. Albinism is a rare.Several complex genetic concepts, described in this section, explain such distinct genetic An example of polygenic inheritance is human skin color. Genes for.