GENETIC DISORDERS

Inheritance of Genetic Traits
Brief History

- First there was Gregor Mendel, a monk who studied inherited characteristics. This was followed by Francis Crick and James Watson who unraveled the DNA molecule. This has led us to understanding the human genome sequence.
Gregor Mendel

- 1866
- Gregor Mendel published the results of his investigations of the inheritance of "factors" in pea plants.
Rosalind Franklin

- 1950's.
Watson and Crick

- Watson and Crick made a model of the DNA molecule and proved that genes determine heredity.
Arthur Kornberg

- 1957
- Arthur Kornberg (1918-) of the U.S. produced DNA in a test tube.
Genetic code

- 1966
- The Genetic code was discovered; scientists are now able to predict characteristics by studying DNA. This leads to genetic engineering, genetic counseling.
Barbara McClintock

- 1983
- Barbara McClintock (1902-1992) of the U.S. was awarded the Nobel Prize for her discovery that genes are able to change position on chromosomes.
DNA Fingerprinting

- The late 1980's.
- An international team of scientists began the project to map the human genome.
- The first crime conviction based on DNA fingerprinting, in Portland Oregon.
Gene Therapy

- 1990.
- Gene therapy was used on patients for the first time.
Dr. Kary Mullis

- 1993
- Dr. Kary Mullis discovered the PCR procedure, for which he was awarded the Nobel prize.
DNA Testing

- 1995.
- DNA testing in forensics cases gains fame in the O.J. Simpson trial.
Cloning Begins

- 1997.
- Dolly the sheep - the first adult animal clone.
Imagine a world in which we will be able to treat diseases by altering our very genes, giving us new ones if ours are non-functional, changing bad genes for good ones. For the first time in our existence, we are closer to understanding just what we are. We now have the tools to make the whole world better through science, the science of the human genome.