Blackline Master # 1, Pre-Test

1. True
2. False
3. True
4. True
5. True
6. False
7. True
8. False
9. True
10. True

Blackline Master # 2b, Word Match

Solution to: Connect the word with the proper definition:

Chromosomes	containing DNA and proteins
Dominant traits	dominant inherited factors
DNA	deoxyribonucleic acid
Enzymes	catalyst of chemical reactions
Genes	codes of hereditary information
Genetics	the study of heredity
Meiosis	process of sexual reproduction
Mitosis	cell division
Mutations	genetic errors
Recessive traits	recessive inherited factors

2b: Word Search



Blackline Master 5:
Solution to "Connected and Not Connected"

1. Cloning and ethics are connected because it is a moral issue.

2. Bacteria and multi-cellular organisms are NOT connected because one is a single celled organism.

3. Cytosine and guanine are connected because both are chemical compounds that make up nucleotides.

4. Sexual reproduction is NOT connected to prokaryotic cells because single celled organisms only reproduce used the process of mitosis.

5. Mitosis and meiosis are connected because both are processes of cellular reproduction.

6. Mutations are NOT connected to enzymes because they are errors in the genetic replication of cells.

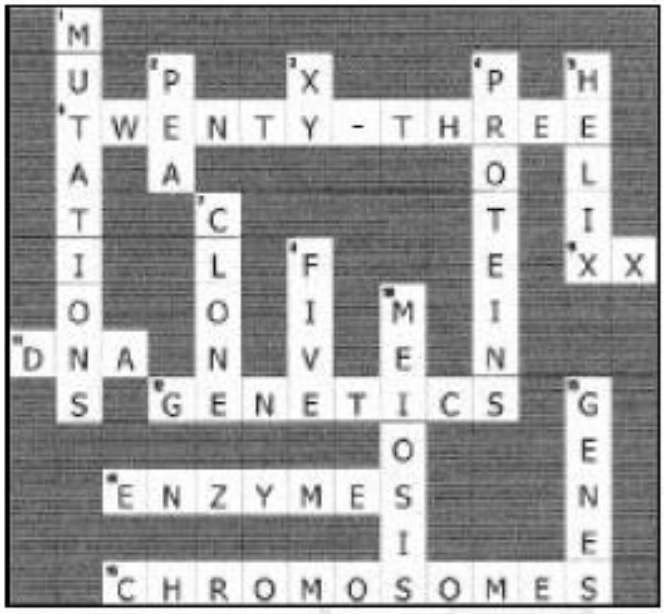
7. Interphase and metaphase are connected because both are stages in the process of cell division.

8. Goldfish are NOT connected to shrimp because they have a different number of chromosomes.

9. Genes are connected to DNA because they are contained within the molecule.

10. The Human Genome Project is NOT connected to the study of plants because it focuses on the genetic make up of humans.

Blackline Master # 4, Crossword Puzzle



Blackline Master # 6, Video Quiz

1. In the DNA (Deoxyribonucleic Acid)
2. True
3. 31,000
4. True
5. False
6. father...mother
7. False
8. When cancer cells divide, each cell will carry the disease.
9. Stem cells
10. In order to develop treatments for a variety of genetic diseases.

Blackline Master # 7, Post-Test

1. Chromosomes
2. genes
3. meiosis
4. mutations
5. false
6. true
7. true
8. false
9. false

Answer Key (cont.)

10. The scientific discoveries in heredity and genetics have deepened our understanding of nature. It has helped to explain how the characteristics of a species are passed from one generation to the next and how new species evolve and change. It has also given a greater understanding of the functioning of cells and the spread of some diseases.

11. Genetic mutations are usually harmful to organisms. They can lead to serious problems like downs syndrome, cystic fibrosis, schizophrenia, and sickle-cell anemia. Cancer, one of the great scourges of humans, is the result of genetic mutations. But not all mutations are destructive. Over the course of evolutionary time, mutations in the cells of organisms have led to genetic diversity and the rise of new and more competitive species better adapted to their environment.

12. The goal of the Human Genome Project was to identify and map the sequence of DNA in human chromosomes. As a result of this work, scientists now have a detailed blueprint of our genetic code which will be of great benefit in the quest to fight genetic diseases such as cancer.