

Topical Outline DNA and Heredity

Name _____

I. History

A. Mendel

1. Experiments (Scientific Method)
2. Laws
 - a. first law
 - b. second law

B. Theory of the gene

1. T.H. Morgans' summation

II. Current View of Gene Action

A. Transcription

1. DNA template
 - a. sense strand
 - b. introns
 - c. exons
2. RNA
3. mRNA Splicing

B. Translation

1. mRNA codons
2. rRNA
3. tRNA
 - a. anticodons
 - b. amino acids
4. Peptide bond

III. New Genetics

A. Recombinant DNA

1. Methods
2. Uses

B. Gene Therapy

1. Somatic cell therapy
2. Germline therapy

C. Ethical Considerations

IV. Conclusion

Topical Outline

Type I Diabetes Mellitus

I. Historical Context

- A. Discovery of the disease
- B. Discovery of insulin
- C. Discussion of the disease before and after the discovery of insulin

II. Etiology

- A. Genetics
- B. Viral
- C. Other

III. Symptoms

IV. Diagnostic parameters

- A. Urine testing
- B. Blood testing

V. Treatment

- A. Insulin
- B. Diet
- C. Control Studies (Displays scientific method)

V. Scientific Method/Research

- A. Recombinant technology
- B. Transplants
- C. Other

VI. Ethical Issues. Stem cell research.

VII. Conclusion