

Family Reunion

- I. Scenario and Introduction
- II. Cancer and Regulation of Cell Growth and Division
 - a. What is cancer?
 - b. What regulates growth and cell division (mitosis)?
- III. Information Flow
 - a. What is DNA and how does it store information?
 - b. How is DNA used to make proteins?
 - i. Transcription
 - ii. Translation
 - c. How is DNA organized?
- IV. Mendelian Genetics/Inheritance
 - a. How much genetic information is enough?
 - b. Genotype and phenotype
- V. Sexual Reproduction: What's So Great about Sex?
 - a. Introduction: What promotes genetic diversity?
 - b. Meiosis
 - c. Genetic diversity in plants and prokaryotes
- VI. Probability of Inheritance
 - a. Cystic fibrosis
 - b. Incomplete dominance
 - c. Codominance
 - d. X-linked inheritance
- VII. Biotechnology
 - a. Genetic testing
 - b. Agricultural applications
 - c. Engineered microbes
 - d. DNA fingerprinting
 - e. PCR