ADVANCED BIOLOGY: MEIOSIS AND SEXUAL LIFE CYCLES

(USE CHAPTER 13 AS A RESOURCE)

Heredity

Variation

Genetics

OFFSPRING ACQUIRE GENES FROM PARENTS BY INHERITING CHROMOSOMES

1. Inheritance of Genes
2. Genes
3. The Language of DNA
4. Gametes
5. Somatic Cells
6. Locus
7. Comparison of Asexual and Sexual Reproduction
8. Asexual Reproduction
9. Clone
10. Sexual Reproduction

FERTILIZATION AND MEIOSIS ALTERNATE IN SEXUAL LIFE CYCLES

Life cycle

1. Sets of Chromosomes in Human Cells



1. Homologous chromosomes
2. Sex Chromosomes
3. Autosomes
4. Diploid Cell
5. Haploid Cell
6. Behavior of Chromosome Sets in the Human Life Cycle
7. Fertilization
8. Zygote
9. Germ Cells
10. Meiosis
11. The Variety of Sexual Life Cycles



MEIOSIS REDUCES THE NUMBER OF CHROMOSOME SETS FROM DIPLOID TO HAPLOID





A Comparison of Mitosis and Meiosis



1. Synapsis and crossing over
2. Homologous pairs at the metaphase plate
3. Separation of Homologs

GENETIC VARIATION PRODUCED IN SEXUAL LIFE CYCLES CONTRIBUTES TO EVOLUTION

1. Origins of Genetic Variation Among Offspring
2. Independent Assortment of Chromosomes 
3. Crossing Over

 

1. Random Fertilization
2. The Evolutionary Significance of Genetic Variation Within Populations