

Chapter 5 DNA and Chromosomes

I. Structure and Function of DNA

A. Structure

1. double helix
2. bases
3. complementary base pairing

B. How structure relates to heredity

1. sequence
2. genetic code
3. genome

II. Eucaryotic Chromosome Structure

1. chromosomes

A. Multiple chromosomes

1. chromatin
2. homologous chromosomes
3. sex chromosomes
4. karyotype

B. Long strands of genes

1. gene

C. Cell cycle & Chromosome structure

1. interphase chromosomes
 - a. replication origin (ori-rep)
 - b. telomeres
2. mitotic chromosomes
 - a. centromere

D. Nuclear organization

1. nucleolus

E. Condensed

1. nucleosome
2. histones
3. multiple levels

III. Regulation of Chromosome Structure

A. Chromatin-remodeling complexes

B. Chromatin forms

1. heterochromatin
2. euchromatin