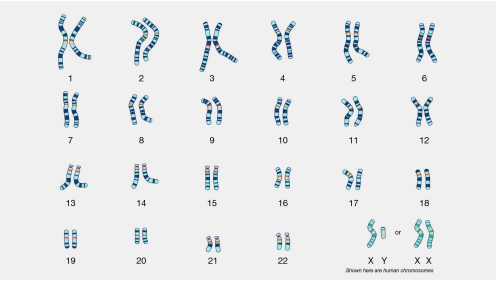
Chapter 13

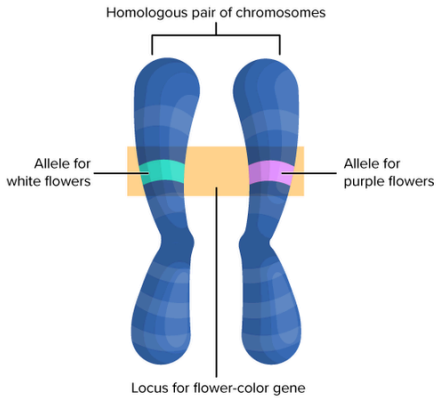
Gamete (配子): A reproductive cell (sperm or egg) that carries half the genetic material of an organism.
一种生殖细胞（精子或卵子），携带生物体一半的遗传物质.

Somatic Cell (体细胞): Any cell of the body except reproductive cells, containing the full set of chromosomes.
除生殖细胞外的任何身体细胞，包含完整的染色体组.



Karyotype (核型): The number and visual appearance of chromosomes in the nucleus of a cell.
细胞核中染色体的数量和外观.

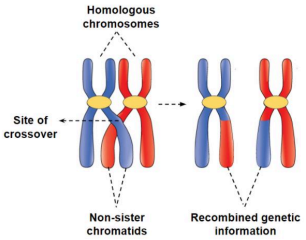
Locus (基因座): The specific location of a gene or DNA sequence on a chromosome.
基因或DNA序列在染色体上的特定位置.



Trait (性状): A characteristic or feature of an organism, determined by genes.
生物的特征或特性，由基因决定.

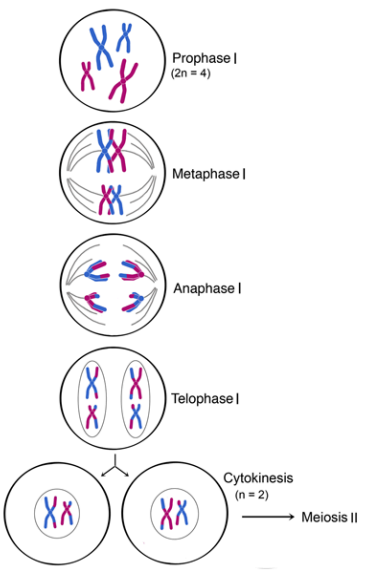
Allele (等位基因): Different forms of a gene that can exist at the same locus.
在同一基因座上存在的基因的不同形式.

Homozygous (纯合): Having two identical alleles for a specific gene.
指某一特定基因具有两个相同的等位基因.



Heterozygous (杂合): Having two different alleles for a specific gene.
指某一特定基因具有两个不同的等位基因.

Sex Chromosomes (性染色体): Chromosomes that determine the biological sex of an organism (e.g., X and Y in humans).
决定生物体性别的染色体（如人类的X和Y染色体）.



Autosomes (常染色体): Chromosomes that are not sex chromosomes; they carry genes for traits unrelated to sex.
不是性染色体的染色体，携带与性别无关的性状基因.

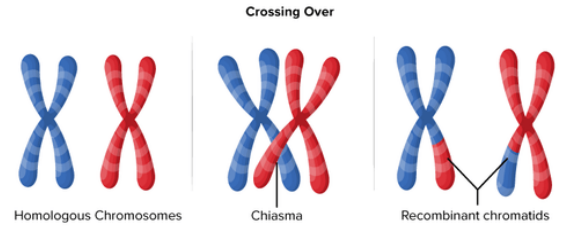
Chapter 13

Recombination (重组): The exchange of genetic material between chromosomes during meiosis, creating genetic diversity.

在减数分裂过程中染色体之间进行遗传物质交换，从而产生遗传多样性.

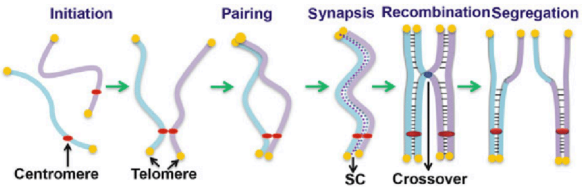
Chiasmata (交叉点): The point where two homologous chromosomes exchange genetic material during recombination.

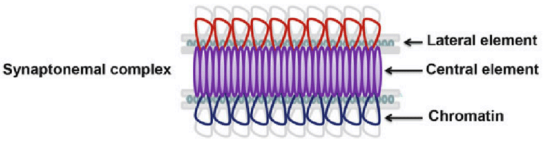
两个同源染色体在重组过程中交换遗传物质的位置.



Synaptonemal Complex (联会复合体): A protein structure that forms between homologous chromosomes during meiosis, facilitating pairing and recombination.

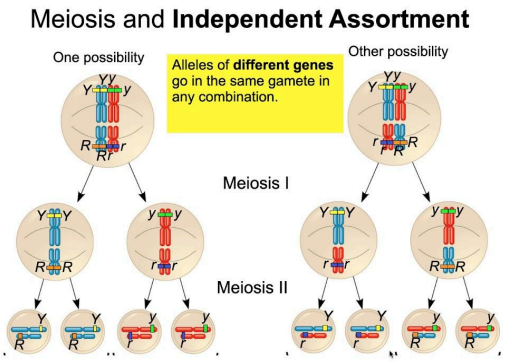
在减数分裂过程中形成在同源染色体之间的蛋白质结构，有助于配对和重组.





Independent Assortment (独立分配): The principle that genes for different traits are distributed to gametes independently of one another.

不同性状的基因彼此独立地分配到配子中的原则.



Law of Segregation (分离定律): Mendel's law stating that each organism inherits two alleles for a trait, which separate during gamete formation.

孟德尔定律指出，每个生物体继承了性状的两个等位基因，在配子形成时分离.

Nondisjunction (染色体不分离): An error during cell division where chromosomes fail to separate properly, leading to abnormal chromosome numbers.

细胞分裂过程中染色体未能正常分离，导致异常的染色体数量.