7.4 NOTES

How are chromosomes, genes, and inheritance related?

**Chromosomes & Inheritance**

A scientist by the name WALTER SUTTON expanded the work of Mendel by discovering that paired alleles are carried on paired chromosomes. \*\*\*Remember, Mendel discovered each allele was inherited by each parent. Sutton realized the same was true for chromosomes.

**\*\*\*This is known as the chromosomes theory of inheritance in which genes pass from parents to their offspring on chromosomes.**

**Lineup of genes**

The body cells of humans contain 46 chromosomes that form 23 pairs.

Chromosomes are made up of many genes joined together like beads on a string. \*\*Genes control traits.

What happens during Meiosis?

Explain: “meiosis is a kind of cell division that produces cells with only half the chromosomes as the other cells in the organism.”

**Meiosis**- the process by which the number of chromosomes is reduced by half as sex cells forms.

\*\*Requires 2 divisions forming a total of 4 cells.

During meiosis, the chromosome pairs separate into two different cells. The sex cells that form later have only half as many chromosomes as the other cells in the organism.

**Look at figure 3 pg. 300**, how would you describe the shape of a chromosomes? (looks like an X)

The 2 sides of the X are called CHROMATIDS, which are held together by the CENTROMERE.

Complete pg. 298 assess your understanding 300 figure 3 & assess your understanding

Complete review pg. 302-304