11-4 Meiosis

Chromosome Number

* Mendel noticed 2 things
* 1) An organism from inherits a copy of every gene from each parent
* 2) When that organism produces , the two sets of genes are so that each gamete contains
* Chromosomes are the carriers of and are in a

Diploid Cells

* As an organism receives the sets from each parent they are combined into
  + How many homologous chromosomes does the Fruit fly have? (page 323)
* A cell that contains of chromosomes is considered
* Symbol is – N represents the single set of found in a cell
* For the Fruit Fly, 2 N =

Haploid Cells

* Haploid – meaning – cells contain only a set of chromosomes
* Gametes of sexually producing organisms are (sperm & egg)
* Fruit fly number N=

Phases of Meiosis

* Meiosis is the process of which the per cell is cut in – divisions
* Meiosis 1
* During , the chromosomes undergo chromosome
* The replicated chromosome consists of chromatids
* Prophase 1
* Each replicated chromosome pairs with its corresponding
* This forms a (4 chromatids)
* Through , sections of the chromatids are exchanged
  + This is how different are produced
* Describe what you see in the crossing over part on page 324

Phases of Meiosis

* Metaphase 1
* form and are connected to each
* The homologous chromosomes are lined up in the
* Anaphase 1
* Cell begins to and the homologous chromosomes move away from each other by the spindle fibers
* Telophase 1
* Nuclear forms around the
* Cytokinesis
* Cell splits forming
* The information has been and sorted
* Different sets of are different than the beginning parent cell

Phases of Meiosis 2

* Unlike the first Meiosis, daughter cell undergoes chromosome replication
* Prophase
* Each chromosome has , so no tetrad is formed
* Metaphase 2
* Chromosomes line up in the
* Anaphase 2
* The paired chromatids
* Telophase 2
* Nuclear membranes form around the
* Cytokinesis
* The result is daughter cells that are

Gametes to Zygotes

* Male gametes in animals are cells, in plants they are
* Female gametes are the
* When the egg is by the sperm, the egg is now called a
* The zygote undergoes cell division and and becomes a

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