Cell Division Vocabulary

Cell division – the process of a cell dividing into 2 daughter cells

Cell cycle – the timeline a cell goes through in it process of cell division

Mitosis – the process of making 2 identical daughter cells by replicating the DNA in the cell then dividing

Interphase – the step in mitosis when the cell grows and DNA is replicated.

Prophase – the 2nd step in mitosis when the chromosomes pair up

Metaphase – the 3rd step in mitosis when chromosomes line up

Anaphase – the 4th step in mitosis when the chromosomes are pulled apart

Telophase – the 5th step in mitosis when the cell begins to divide into two

Cytokinesis – the splitting of the cytoplasm during the division of the cell into 2.

Daughter cells – 2 identical cells with the exact copies of DNA in them

Diploid – a cell having a complete set (or a pair of each) chromosome in its nucleus

Haploid - having only one of each pair of chromosomes in the cell

2n – diploid

n – haploid

S – phase – part of the cell cycle when DNA is synthesized (replicated)

M phase – part of the cell cycle when “mitosis” occurs (PMAT)

G phase – part of the cell cycle when the cell grows

Asexual reproduction – producing another organism (involves only 1 parent) and makes an exact copy.

Sexual reproduction – making an organism (with 2 parents), the child has genetic variation.

Budding - a type of asexual reproduction used by yeast.

Vegetative propagation - asexual reproduction used by plants

Binary fission – asexual reproduction used by bacteria

Cell plate – when a new cell wall begins to form between a dividing plant cell

Cleavage furrow – the separation of the cell membrane during the splitting of an animal cell

Homologous chromosomes – they are the pairs of chromosomes that have the same genes on them

Autosome – any chromosome that is not a sex chromosome

Sex chromosomes – chromosomes that give an individual its gender (sex)

Sex cells – haploid cells that are used in sexual reproduction – (sperm and egg)

Gamete – sex cells

Sperm – male gamete

Egg – female gamete

Ova – female gamete or egg

Fertilization – the combining of the sperm and the egg during reproduction. Produces a new organism (zygote)

Zygote – a fertilized egg (the new baby)

Meiosis – the process of making haploid sex cells

Oogenesis – the process of making haploid eggs in the female ovary

Spermatogenesis – the process of making haploid sperm in the male gonads.

Genetic variation – getting differences in one’s offspring because of meiosis and sexual reproduction

Crossing over - the switching of sister chromatids during meiosis. Increases variation in the offspring

Chromatid – the arm of a chromosome

Segregation – the separation of chromosomes during meiosis that allows sperm and eggs to have differences

Independent assortment - the placement of chromosomes in sperm and egg are random and allow for more variation

Non-disjunction – the failure of chromosomes to separate during anaphase. Results in too many or not enough chromosomes in a cell.