

CORNELL NOTES

Name: _____ **Period:** _____

Class: _____ **Date:** **6-7 Jan 2014**

Topic: Chapter 11, Section 1 Genetics

Question Column

Notes Column

Heredity	The passing of traits (genes) from parent to offspring. All organisms have a collection of traits (genes) passed on by its parents.
Alleles	Genes on chromosomes control the organisms form and Function. Different forms of a trait that a gene may have are Called alleles. See figure 2 in your book.
Genetics	The science and study of how traits are inherited through the interactions of alleles.
Gregor Mendel	Austrian monk who experimented with pea plants in 1856. For 8 years observed and studied the traits passed down To many generations of pea plant offspring by cross Breeding them –using scientific methods.
Hybrids	Two organisms of the same species with different traits Expressed, cross bred, and the offspring look like one of the Two parents. This happens because they receive different Genetic information, or different alleles, for a trait from each Parent.
Dominant factor	The dominant trait is expressed and it covers up another trait (the recessive trait).
Recessive factor	The trait that is not expressed and is covered up by the dominant trait.

Mendel's Experiments in Figure 3: Proof to understand dominant and recessive Traits. Cornell Notes Continued:

Predicting what traits are passed on to offspring using Probability:

By working with a lot of plants, Mendel increased his Chances to see repeatable traits in the offspring.

Punnett Squares:

Is a tool to predict results. Letters represent dominant and Recessive alleles (traits). Uppercase letters are dominant, And lowercase letters are recessive. Letter form a code.

Genotype:

Genetic makeup of an organism.

Phenotype:

The way an organism behaves as a result of its genotype. The expression of the genotype – if you have blue eyes, The phenotype for your eye color is blue.

Alleles determine Traits in organisms: Most cells in your body has two alleles For every trait, and they are located on the chromosomes in The nucleus of the cell.

Homozygous:

An organism with two alleles that are the same. An Example would be the tall dominant homozygous trait in Peas as written as TT. Or for short recessive homozygous Trait written as tt.

Heterozygous:

An organism that has two different alleles for a trait. An Example would be the hybrid pea plants that are heterozygous for height as Tt.

Math Skills Activity page 305: Calculating Probability using a Punnett Square.

Principles of Heredity:

1. Traits are controlled by alleles on the chromosomes.
2. An alleles effect (expressed) is dominant or recessive.
3. When a pair of chromosomes separate during meiosis, the different alleles for a trait move into separate sex cells.

Cornell Notes Continued:

