**Mendel and genetic terms**

“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” = the passing of DNA info from one generation to another.

“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” = Different forms of characteristics that make up an organism.

 Ex: Big, or little ears, Hairy or bald head, presence or absence of a birth mark are all different traits.

In the mid-1800’s, a monk named \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ began breeding pea plants together to study how traits were passed from parents to offspring.

The traits he studied were:

seed shape, seed color, seed coat color, pod shape, pod color, flower position, flower color, stem height.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Generation: The original two organisms in a study that are crossed/mated.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Offspring: The first generation that is created during a controlled experiment.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Offspring: The generation created by mating the F1 generation.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-The different version of the same gene or trait. Ex: Gene/Trait: Nose Length-

One allele for nose length might be “short nose”, meaning that if an organism shows that allele, they will have a short nose. Another allele for nose length might be “long nose”, meaning that if an organism shows that allele, they will have a long nose.

**Dominant and Recessive** Since you have two copies of each allele- one from mom, and one from dad- your body must decide which one to “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” or show.

The “stronger” of the two alleles will be the one that is expressed. This is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gene.

The allele that is not expressed, and is essentially hidden inside someone, is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gene.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means “different” \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ means “same”

“Homozygous” = an organism with two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ alleles- two dominant or two recessive. Ex: AA or aa

“Heterozygous” = an organism with one mismatched alleles- one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Ex: Aa

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: An organism is a result of many generations that show the same dominant and recessive traits. They are HOMOZYGOUS Ex: a poodle that came from 10 previous generations of all poodles.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: An organism that shows the allele for one trait (furry toes), while also carrying the recessive trait (bald toes) hidden inside their genes. They are HETEROZYGOUS.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the way a person’s DNA is arranged. Ex: a person has the gene for brown or blond eyes.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the way a person is physically put together. Ex: A person has brown hair.