**Genetics Guided Notes Part 1**

Heredity-

Genetics-

**Meet Gregor Mendel!**

Gregor Mendal- “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”

What did he study?

Character-

*Example- flower color*

Trait-

*Example- purple flowers*

Peas can self-pollinate, but you can also \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_by removing the

male part of the flowers.

True-breeding-

Hybrid-

Mendel’s 7 Characters

1.

2.

3.

4.

5.

6.

7.

**Mendel’s first cross**

**The parents (also known as the \_\_\_\_ generation)**

They were \_\_\_\_\_\_\_\_\_\_\_\_\_-breeding and had \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ traits.

Example- He cross- pollinated plants with purple flowers with plants that had white flowers

**The offspring of the first cross (also known as the \_\_\_\_\_\_\_ generation)**

They only showed the trait of \_\_\_\_\_\_\_\_\_\_ parent.

\*\*\* See table below for the traits that were seen in the offspring.



**What we Know Today (Principle of Dominance)**

Gene-

Allele-

Each organism gets \_\_\_\_\_\_\_\_\_\_\_ alleles for a trait, one from its mother and one from its father.

*Types of Alleles*:

Dominant alleles (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_case letters)-

Recessive alleles (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ case letters)-

Genotype-

Phenotype-

Homozygous-

Heterozygous-

**Practice:**

In Mendel’s cross between ***tall plants and short plants***, what were the genotypes of the parents?

\_\_\_\_\_\_\_\_\_\_\_x \_\_\_\_\_\_\_\_\_\_\_\_.

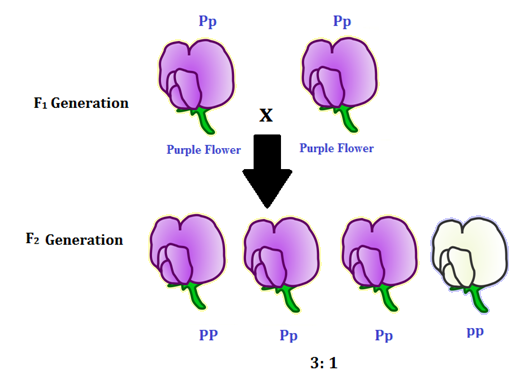
What were the phenotypes of the parents?

Were the F1 generation peas homozygous or heterozygous?

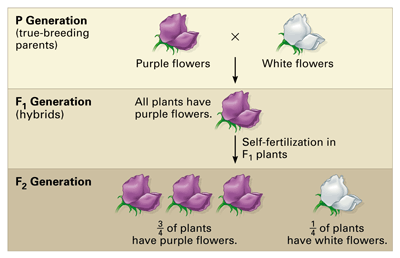
**Mendel’s 2nd cross**

Parents-

What are the offspring called?

****What traits were present in the offspring and at what ratio \_\_\_\_\_:\_\_\_\_\_\_?

**Mendel’s Crosses Summary**



**Principal of Segregation**

Segregation-

In meiosis when do homologous chromosomes separate?

Review: What are genes?