Genetics Guided Notes Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gregor Mendel

One of the first to study***\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

Started his observations with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ plants

Created \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_-bred plants then crossbred

Genetics - study of heredity

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – passing of traits from one generation to another

Trait – distinguishing quality or characteristic

Genes- working subunits of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Genome- all of an organisms genes; all of an organisms DNA

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- mating of two organisms

Each trait has two \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; one from each parent.

There are two forms of a gene; dominant and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Dominant factors make recessive traits disappear.

Recessive traits will appear when there are two recessive alleles.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ determines which factor the offspring will inherit.

Dominant Traits

Covers/hides the recessive trait.

Represented by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ letter.

Example: Red flowers are dominant, R would be the allele for Red.

Rr would mean the dominant trait is visible.

Recessive Traits

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the dominant trait.

Represented by a lowercase letter.

Example: Red flowers are dominant (R). White flowers are recessive (r).

For a recessive trait to show, the offspring must inherit \_\_\_\_\_\_\_\_\_\_ recessive alleles (rr).

Genotype

Gene/allele \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for a trait (RR, Rr, rr)

Homozygous genotype - 2 dominant or 2 recessive genes (RR or rr);
also called pure  or purebred

Homozygous dominant- RR

Homozygous recessive- rr

Heterozygous genotype - gene combination of 1 dominant &
1 recessive allele (Rr);
also called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Phenotype

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ feature resulting from a genotype (red, white)

GENOTYPE PRODUCES PHENOTYPE

Possible Alleles:

R = red flower
r = white flower

Genotypes RR Rr rr

Phenotypes RED \_\_\_\_\_\_\_\_\_\_\_ WHITE

Co-Dominance

Sometimes an organism has heterozygous alleles and both show up.