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|  HeredityGregor Mendel\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Mendel’s StudiesExperiment 1Law of Segregation | 46* The \_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_ from parent to offspring
* \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ “Father of Genetics”
* late 19th century
* experiments with \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_
* Austrian monk
* described the \_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_
* significance of work recognized in 20th century
* \_\_\_\_\_\_\_\_ know “\_\_\_\_\_\_\_\_\_\_”
* transferring \_\_\_\_\_\_\_\_\_ from the \_\_\_\_\_\_\_\_ part of one flower to the \_\_\_\_\_\_\_\_\_\_\_ part of another flower.
* \_\_\_\_\_\_\_\_\_\_\_ will grow into plants with a desired trait

Example: yellow flowers.* What people thought during Mendel’s time
* Offspring are a "\_\_\_\_\_\_" of their \_\_\_\_\_\_\_\_\_\_\_\_\_
* Example: if a pea plant had one \_\_\_\_\_\_\_ parent and one \_\_\_\_\_\_ parent, that pea plant would be of \_\_\_\_\_\_\_\_\_\_\_\_ height. The offspring would then pass on heritable factors for medium sized offspring.

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| **Flower Color** | **Flower Position on Stem** | **Stem Length** | **Pod Shape** | **Pod Color** | **Seed Shape** | **Seed Color** |
| Violet-red (Purple) | Axial | \_\_\_\_\_\_\_\_ | Inflated | Green | Round | Green |
| White | Terminal | Short | Constricted | \_\_\_\_\_\_\_\_\_\_\_ | Wrinkled | yellow |

• \_\_\_\_\_-characteristic \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ • \_\_\_\_- characteristic \_\_\_\_\_\_\_\_\_ \_\_\_ again (75%) • There are two factors controlling a given characteristic • One \_\_\_\_\_\_\_\_\_\_\_\_\_• These factors separate and go to different gametes• Are different characteristics \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_?• example, are purple flowers and tall stems always inherited together? |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Law of independent assortmentProbabilityLinked Genes\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Genotype and phenotype | http://iws.collin.edu/biopage/faculty/mcculloch/1406/outlines/chapter%2013/13-7.JPG* factors controlling different characteristics are \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ of each other.
* If a parent has one \_\_\_\_\_\_\_\_\_\_\_ and one \_\_\_\_\_\_\_\_\_\_\_\_ factor for a trait, then \_\_\_\_\_the time the dominant factor will be \_\_\_\_\_\_\_\_ \_\_\_, and \_\_\_\_\_\_ the time the \_\_\_\_\_\_\_\_\_\_\_ factor will be passed on.
* Mendel observed \_\_\_\_ dominant: recessive in his \_\_\_\_ generation
* \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_- genes that are \_\_\_\_\_\_ \_\_\_\_\_\_\_ on a chromosome, and are packaged into the \_\_\_\_\_\_\_\_\_\_\_\_ together.
* tend to be inherited together because they are located on the same chromosome.
* a chart that allows you to easily determine the \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ of different genotypes in the offspring of two parents.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ means that there is one dominant allele and one recessive allele.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ means that the alleles are the same; either both are dominant or both are recessive.
* A dominant \_\_\_\_\_\_\_ shows up ¾ of the time.
* A \_\_\_\_\_\_\_\_\_\_\_ allele shows up ¼ of the time.
* The gametes produced by the male parent are at the\_\_\_\_\_ of the chart, and the gametes produced by the female parent are along the \_\_\_\_\_\_.
* The different possible combinations of alleles in their offspring are determined by filling in the \_\_\_\_\_\_\_\_\_\_\_\_square with the correct letters (alleles).

* \_\_\_\_\_\_\_\_\_\_- genes that are inherited from parents

represented by\_\_\_\_\_\_\_\_\_, one letter for each gene* \_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ of the genotype

Example: a phenotype would be \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_.* You can \_\_\_\_\_\_\_\_\_ the percentages of phenotypes in the offspring of this cross from their \_\_\_\_\_\_\_\_\_\_\_.
* B is dominant so \_\_\_\_ or \_\_\_\_\_ genotype will have the purple-flower phenotype.
* \_\_\_\_ genotype will have the white-flower phenotype.

three out of four (75 percent) have purple flowers and one out of four (25 percent) have white flowers. * These are the same percentages that Mendel got in his first experiment.

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