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| Heredity  Gregor Mendel  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Mendel’s Studies  Experiment 1  Law 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.  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **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 assortment  Probability  Linked 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. |