

Our lady of mercy school

Science, Genetics



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Biology Grade: 11th A Teacher: Ms. Braga Concept: _____

Human Traits Introduction: The study of genes, Genetics, is a branch in Medicine that studies how genes are formed, distributed and how they change the organisms' characteristics. The pioneer in the field of Genetics, Mendel, was able to formulate various laws based on genes, such as the law of segregation. Even though Mendel did not know about the existence of DNA, he was able to show that some traits are carried to offspring, even though the parents did not appear to have the gene. There are two types of genes, the dominant and the recessive genes. The dominants, often represented by a capital letter, are that when present, the living thing will have the characteristic. Recessive genes, represented by a lower case letter can be together with a dominant gene or another recessive gene. For example: suppose that in bees, the shape of their body is dominant when shaped as a cone (S), and recessive when shaped as a sphere (s). In this case the genotype would be S or s and the phenotype would be the shape of the bee. If a bee has SS or Ss, it will be shaped as a cone, but if it is double recessive ss, it will be shaped as a sphere. Even though the probability of having double recessive genes is lower, some traits, even in humans, the percentage of double recessive is greater than dominant. Objective: The objective was to observe some human traits among the students. Materials: * Volunteer * PTC Procedure: 1. Ask the students to answer about the following traits. 2. Take notes. Results: | Dominant Students | Recessive Students | Percentage of Dominant Students | Percentage of Recessive

Students | Tongue Rolling | 12 | 3 | 80% | 20% | Free Earlobe | 13 | 2 | 86. 7% | 13. 3% | Widow's Peak | 4 | 11 | 26. 7% | 73. 3% | Med digital Hair | 5 | 10 | 33. 3% | 66. 7% | Cleft Chin | 3 | 12 | 20% | 80% | Straight Thumb | 10 | 5 | 66. 7% | 33. 3% | Dimples | 3 | 12 | 20% | 80% | PTC | 13 | 2 | 86. 7% | 13. 3% | Freckles | 4 | 11 | 26. 7% | 73. 3% | Conclusion: This experiment consisted of 15 volunteers, in which 10 were females, and 5 were males. Since the amount of people tested is really small, it cannot be considered as a depiction of society as a whole. By the results we can see that the traits that occur the most are Free Earlobe, being able to taste the PTC paper, and being able to roll your tongue, while the least occurring traits are Cleft chin, and Dimples, with only 3 out of 15, and; Freckles and Widow's Peak, with 4 out of 15 people. Even though the test group was small, it can be assumed that less than 50% in the world have those dominant traits. Majority of people having recessive genes is pretty common, for example having six fingers and having blood type A, B or AB, is dominant over five fingers and blood type O, but that doesn't mean that most people have those dominant traits.