**PEDIGREE PROJECT**

DUE Jan 3 2014

You will complete a pedigree of your family. You will pick 5(five)traits that have at least one person with the recessive phenotype and one person with the dominant phenotype. Each family member will have their own box with the traits you tested.. You will try to determine the genotype based on phenotype and the offspring produced. You may only be able to determine one allele with certainty in the case of individuals with the dominant phenotype. It is important to not fill in allele if it is impossible to determine that from the offspring produced. Remember that dominant phenotype can be a result of either the homozygous dominant or heterozygous genotype. Any individual with the recessive phenotype you will know the complete genotype.

Instructions:

* Each chart will have the person’s name. you will follow the rules you have learned for creating pedigrees. All lines must be created using a ruler, all circles must be made with a stencil or compass. You can hand write the names and alleles, or you may print out the keys (on J drive)
* If the person has the recessive phenotype, color the boxes for the alleles in the color indicated below for that trait. If the color is too dark to read the alleles, you will not receive credit for that genotype
* You must have at least 3 generations to complete this project, with at least one person demonstrating one recessive phenotype for each trait, otherwise you must use the fake family
* You must use paper between the sizes of 11X14 and 24X28.You may use photos for extra credit. If you choose to use photos, you will need a poster sized paper.
* You will be graded on neatness and completeness. Please consult your notes (ch 12) for correct symbols used in a pedigree. Do not hand in anything drawn without a ruler

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | Dominant |   | Recessive | COLOR ON PROJECT |
| T | Tongue rolling | t | No tongue roll | pink |
| M | Second toe shorter | m | second toe longer | yellow |
| E | Brown eyes,green & hazel | e | blue,  | brown |
| P | PTC tasters | p | No taste | orange |
| H | Straight thumb | h | Hitch-hikers thumb | purple |
| W | Widows peak | w | Straight hairline | grey |
| C | Cleft chin | c | No cleft in chin | green |
| D | Dimples | d | No dimples | red |
|  F | Free earlobes | f | Attached earlobes | Blue |

 Z Not color blind z Color blind turquoise

\*\*\*If you have less than 8 people in your family, you MUST use the fake family. There are 10 to 15 alleles in the fake family that you will not be able to determine.\*\*\*\*\*\*

NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_SCI#\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- | --- |
|   | yes= 5 ponts | no= zero |
| phenotypes are colored correctly | x2 |   |
| genotypes are correctly given | x2 |   |
| ruler is used for all lines | x2 |   |
| family name is on front and names for each person are given |   |   |
| proper lines are used for pedigree | x2 |   |
| 6 appropriate traits are chosen |   |   |
| all genotypes that could not be determined are left blank | x2 |   |
| proper size paper is used |   |   |
| rubric with name and science number is stapled to front with rubric facing out |   |   |
| 3 generations are shown | x2 |   |
| proper shapes are used for individuals |   |   |
| project is neat, well presented | x2 |   |
| at least 8 people are on tree or fake family is used |   |   |
| total = 100 points |  |  |
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**THIS IS WORTH 3 TEST GRADES.**

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