**PEDIGREE PROJECT**

Worksheet due January 4th PROJECT DUE Jan 11, 2013

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. See PP 295. 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:

* You will complete the pedigree worksheet on Monday January 4th. A family tree created on the following site must be submitted with the worksheet. All names must be on the chart along with proper lines for a pedigree. This will count as a TEST grade. It is either a 100% or a zero!!! You must save the pedigree as a PNG and past that in the Google draw assignment for the pedigree project
* <http://www.pedigreedraw.com/>
* Each project will have the person’s surname. You must replicate the pedigree drawn using the program above. You may cut out the shapes or draw using a stencil and ruler 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 the hw website)
* 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 both the dominant and recessive phenotypes, otherwise you must use the fake family. You need only chose 4 of the eight traits- be sure to choose the appropriate traits that have dominant and recessive phenotypes.
* You will be submitting your pedigree using Google classroom. Do not email it or share the document. You MUST hit the “Hand in” icon when you are finished with the work.
* You will be graded on neatness and completeness. Please note that if you can not determine an allele, you must leave it blank or you will lose points

\*\*\*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.\*\*\*\*\*\*

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| --- | --- | --- | --- | --- |
|  | Dominant |  | Recessive | COLOR ON PROJECT |
| R | Tongue rolling | r | 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 |
| T | Straight thumb | t | Hitch-hikers thumb | purple |
| W | Widows peak | w | Straight hairline | grey |
| N | Cleft chin | n | No cleft in chin | green |
| D | Dimples | d | No dimples | red |
| F | Free earlobes | f | Attached earlobes | Blue |

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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 2 TEST GRADES.**

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