

Family Tree (Pedigree) Project

Name _____

Project Overview: How many times have you heard from a relative, "You look just like your mom?" Or you might hear, "You're grandfather had the same nose as you." It's obvious to us that traits are passed down from generation to generation. A pedigree is like a map that shows how traits are distributed through a family's generations.

In this project, you will create four different pedigree charts for at least ten members of your own family. You will chart the passing of four different traits for three generations of your family. Clearly indicate and label the traits you are tracing. You will need a key on each pedigree chart. Use the letters below to indicate a particular allele (upper case letters for the dominant allele and lower case letters for the recessive allele). For example, for tongue rolling, use the letter "R" for family members who can roll their tongue and "r" for family members who cannot roll their tongue (use different letters for different traits).

You will need to ask questions of your parents, grandparents, or any other family member with an in-depth knowledge of your family tree. You can use your creativity in the design of the pedigree chart, but proper pedigree symbols must be used. Make sure that you number each generation and individual.

● = female with trait ○ = female without trait

■ = male with trait □ = male without trait

Pedigree requirements:

- I. Choose 4 traits to investigate in your family (thus, you will turn in four different pedigree charts - each on a separate sheet of paper). OR you may make up a fictitious organism and traits for that organism. If you choose to do this you must draw the organism and the traits.
- II. Each pedigree should contain at least 10 people
- III. Each pedigree should go back at least 3 generations. (Grandparents, Parents and you)
- IV. Each pedigree should be on an 8.5 x 11 in. piece of paper.
- V. Each pedigree should have a key; use appropriate pedigree symbols.
Also note for each individual:
 - A. Genotype (when able)
 - B. Phenotype
 - C. Name of relative

List of possible traits: (choose four)

Tongue rolling (RR or Rr = roller, rr = non-roller)

Attached earlobes (EE or Ee = unattached, ee = attached)

Mid-digital hair [hair between the first two knuckles] (MM or Mm = hair, mm = no hair)

Hitch-hiker's thumb (TT or Tt = hitch-hiker, tt = non-hitch hiker)

Widow's peak (WW or Ww = widow's peak, ww = no widow's peak)

Dimples (cheeks) (DD or Dd = present, dd = no dimples)

Freckles (FF or Ff = present, ff = no freckles)

Bent little finger (AA or Aa = bent, aa = straight)

Dominate Hand (HH or Hh = right handed, hh = left handed)

Folded Hands (GG or Gg = Left thumb over right, gg = right over left)

(if there is another trait you would like to do - please see me)

Grading Guidelines and Rubric for Family Pedigrees and Analysis

Please turn this sheet in with your project!

Name: _____

4 Traits analyzed in pedigrees:

Grading of this project will be based upon five main topic areas:

Pedigrees	Points Possible for EACH Pedigree	X 4 Pedigrees	Points Earned
A. 4 traits investigated in your family (thus, four different pedigrees). Tell which trait is dominant and which is recessive.	4	16	
B. Each pedigree should contain at least 10 people (or made up organisms). You must include the following for each individual:	30	120	
Genotype (when able)	(10)		
Phenotype	(10)		
Name of relative	(10)		
C. Each pedigree goes back at least 3 generations.	4	16	
D. Each pedigree should be 8.5 x 11 inches or larger.	4	16	
E. Each pedigree should have a key; use appropriate pedigree symbols and have proper set-up	4	16	
F. Neatness	4	16	
TOTAL	50 Points	200 Points	

Earn up to 20 bonus points for creativity.