

Family Pedigree Project

Project Overview:

In this project, you will create a pedigree chart for *at least* ten members of your family. You will track two different traits for three generations (or more).. Clearly indicate and label the traits you are tracing using a key. You may do 1 pedigree as long as the traits being tracked are clearly marked. As you research, ask questions of your parents, grandparents, or any other family member with knowledge of your family tree. You can use your creativity in the design of the pedigree chart, but proper pedigree symbols must be used.

We will (when we get to this point in class) use 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).

Pedigree requirements:

- I. 2 traits
- II. At least 10 people and 3 generations. (Grandparents, Parents and you) (if not possible, see me for modifications).
- III. 8.5 x 11 in. piece of paper. (If you need more room, tape two pieces of paper together to make a longer sheet)
- IV. Use appropriate pedigree symbols for: Genotype (when able) - Phenotype - Name of relative

Traits: (choose two) (if there is another trait you would like to do – please check with me first)

Possible traits:

Trait

Eyelash length	long (1 cm or more)	short (less than 1 cm)
Hair texture	Curly wavy	straight
Widow's peak	widow's peak	straight hairline
Dimples	Dimples	No dimples
Freckles	Freckles	No freckles
Ear lobes	Free ear lobes	Attached
Hair	Hair on middle digit	No hair on middle digit
Roman nose	Roman nose (bent)	straight nose
Toe length	2 nd toe longer	Big toe longer
Hand use	Right-handed	Left-handed
Tongue roller	Tongue roller	Non-tongue roller
Height	Short	Tall

** Females: less than 5'7 5'7 or above*

** Males: less than 5'10 5'10 or above*

Curved Thumb	Hitchhiker thumb	Straight Thumb
Cleft Chin	No cleft Chin	Cleft Chin
Twins		
Type I Diabetes		
Cancer (specific type)		

Organization
X4

Below Standard

A pedigree was attempted but cannot be easily followed. Student did not include all required generations, and the same generation can be found in multiple rows. Vertical and horizontal connections are not properly made and do not accurately convey relationships. Few to no affected persons are identified. There are gaps in family members and no legend is present.

Approaching Standard

Student includes 2-3 generations of family members, with the I generation at the top & the III at the bottom. Most members are on the same row & some are labeled. Some symbols are correctly drawn. Some logical connections are clearly made, with most vertical lines connecting parents to offspring & most horizontal lines connecting spousal relationships. Most affected persons are clearly identified. Legend/Key may not present & some persons may be omitted, or gaps may appear in family members.

Meets Standard

Student includes & labels 3 generations of family members, with the I generation at the top & the III at the bottom. Each generation has its own row. Vertical lines logically connect parents to offspring & horizontal lines logically connect spousal relationships. All symbols are correctly drawn and connected. Affected persons are clearly identified. A complete legend/key of symbols is included. There are no gaps in family members. All possible persons are included and appropriately spaced.

Aesthetics
X2

Below Standard

Pedigree is disorganized and sloppy. Relationships are not evident. Student did not use color or creativity to make their pedigree unique. Student uses multiple colors inappropriately when identifying affected individuals. No title or legend are evident.

Approaching Standard

Pedigree is somewhat neat, and shows relationships between persons. Student uses some color, pictures, etc. to make the pedigree unique. Student may have chosen more than one color to represent affected individuals. Title is included, but may not be prominent.

Meets Standard

Pedigree clearly and neatly shows relationships between persons. Student creatively uses color, pictures etc. to make the pedigree unique. Student chooses a single color to represent affected individuals. Title is included and easily distinguished.

Presentation
X2

Below Standard

Student does not speak clearly, avoids eye contact with the audience and reads directly from the poster. Student does not explain or identify relationships or affected persons. No explanation of key is provided, and student offers no information about what shapes and lines represent.

Approaching Standard

Student frequently looks at poster as a guide, but does not read directly off of it. Student explains most relationships present and identifies most affected persons. Some or little key explanation is provided, and student offers little information about what shapes and lines represent.

Meets Standard

Student makes eye contact with the audience. Student clearly explains all relationships and persons present in the pedigree, including all affected persons. Student explains the key, including what shapes and lines represent.