

Create A Baby Lab

PURPOSE: To demonstrate that gene, and traits, are passed on from generation to generation. The concepts of dominance, genotype, phenotype, and incomplete dominance will be illustrated.

MATERIALS:

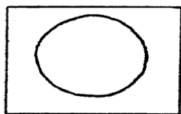
Colored pencils/Crayons Two pennies

PROCEDURE:

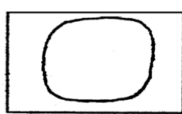
1. **Determine your genotypes** as closely as you can. Sometimes, if you have a dominant *phenotype* (brown hair), it may be hard to determine whether you are Homozygous or Heterozygous for the characteristic, based on your parent=s and/or grandparent=s phenotypes. If so, for the purposes of this lab, flip a coin to see if you=re Homozygous -BB (*HEADS*) or Heterozygous-Bb (*TAILS*.)
2. **Record your genotypes and phenotypes** in Table 1.
3. **Choose a mate!** For the purposes of this lab, everyone in the class is a *hermaphrodite* (an organism having both male and female organisms.) Because of this, it will be possible for you to Amate≡ with any other classmate, regardless of their phenotypic sexual characteristics. Remember, this lab is FUN and we want everyone to be able to participate, regardless of whether we have a perfect match between male and females in the room!
4. **Make a baby** (hypothetically, that is!) Each partner should flip a coin to see whether they are going to donate a Dominant (*HEADS*) or Recessive (*TAILS*) allele for each characteristic. If you are Homozygous Dominant or Homozygous recessive for a characteristic, you need not flip a coin (you only have ONE possible allele you can donate.) Record your baby=s genotypes and phenotypes in Table 1.
5. **The sex of the baby** is determined by the father. For this characteristic only the Afather,≡ flips the penny. If heads comes up, the baby is a boy. If tails is flipped, the baby is a girl. Now, you have the responsibility of naming the child.
6. Using the phenotype for each characteristic you recorded in Table 1, **DRAW the head of your baby** with colored pencils or crayons on a sheet of 8 2 by 11 paper. It is important that you remember to draw **BABY**, not a child or adult. You can NAME your child and include any pertinent birth statistics on the sheet with your drawing, including your baby=s parentage.

DOMINANT/RECESSIVE TRAITS:

Face Shape:



Round (RR or Rr)



Square (rr)

Chin Shape:

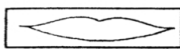


Very Noticeable (NN or Nn)

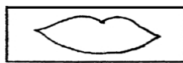


Less Noticeable (nn)

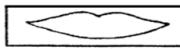
Mouth Size:



Long (LL)

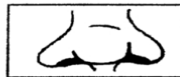


Small (ll)

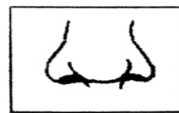


Medium (Ll)

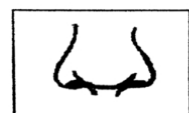
Nose Size:



Big (NN)



Medium (Nn)



Small (nn)