Name _____

Period ___

Your Future Baby Lab

Background: Different people have different forms of traits (dominant and recessive). Even the same person may have some dominant traits and some recessive traits, which make us unique. In this lab you will use your trait inventory activity results to predict the possible traits that your future baby may have.

Purpose: In this activity, students will use Punnett Squares to determine the genotypes, phenotypes, and percentages of parents and children with certain traits.

Procedure:

- You will work with a partner for this activity.
- Partners can decide who wants to be partner 1 and who wants to be partner 2. Be consistent throughout the activity.
- Use your trait inventory activity results.
- Each partner will check his/her own traits on table #1.
- Partners will decide
- Each partner will give his/her own traits' form to one parent.
- If you have a recessive trait, you should know your genotype, so record it on table #2.
- If you have a dominant trait, use your last two digits of your phone numbers. Consider even digit as a dominant allele and odd digit as recessive allele. Now you can record your genotype in table #2.
- Flip a coin to figure out the sex of the baby. Head is X chromosome and tail is Y chromosome.
- At the end of this lab you will **look at the higher phenotypic percentage of each trait**.
- **Shade that trait's form in table #2 (with any color).**

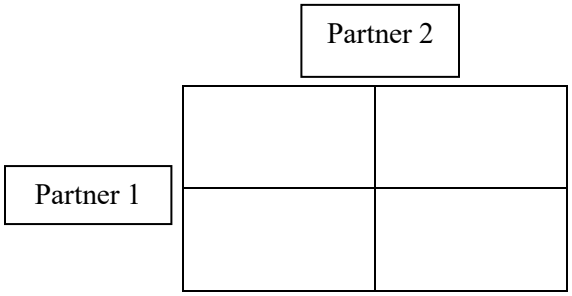
Table #1: Record your traits:

Dominant Traits			Recessive Traits		
Partner #1	Partner#2		Partner #1	Partner #2	
		Widows' Peak (W)			Straight line (ww)
		Free Ear Lobes (E)			Attached Ear Lobes (ee)
		Freckles (F)			No freckles (ff)
		Right-Handed (R)			Left-Handed (rr)
		Straight thumb (S)			Hitch-hikers thumb (ss)
		Tongue Roller (Tt)			Non-tongue Roller (tt)

Table #2: Record your genotypes

Trait	Partner #1 genes	Partne#2 genes
Hair line		
Ear lobes		
Freckles		
Handedness		
Thumb		
Tongue		

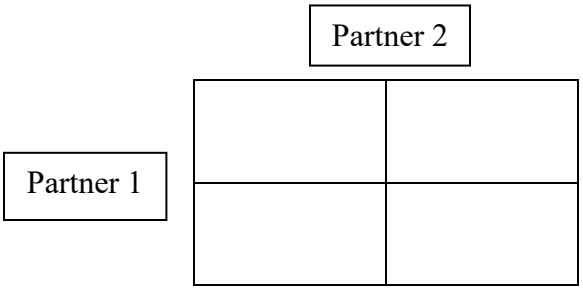
1. Hair line trait
   Partner 1 _____ x Partner 2 _____



Baby's possibilities:

Genotypes	Percentage	Phenotype	Percentage
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

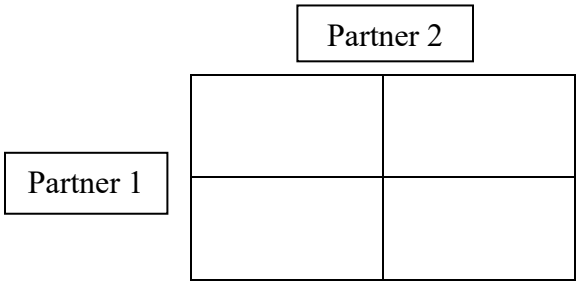
2. Ear lobe trait.
   Partner 1 _____ x Partner 2 _____



Baby's possibilities:

Genotypes:	Percentage:	Phenotypes	Percentage
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

3. Freckles trait
   Partner 1 ____ x Partner 2 _____



Baby's possibilities:

Genotypes:	Percentage:	Phenotypes:	Percentage:
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

4. Handedness trait
   Partner 1 _____ x Partner 2 _____

Partner 1 \ Partner 2		
	1	2
	3	4

- What is the genotype of child #1?
- What is the phenotype of child #1?
- What is the percentage of heterozygous right-handed baby?

5. Thumb extensibility trait
   Partner 1 _____ x Partner 2 _____

Partner 1 \ Partner 2		
	1	2
	3	4

- What is the genotype of #3?
- What is the phenotype of #3?
- What is the percentage of the babies with hitchhiker thumb?

6. Tongue rolling trait.
   Partner 1 _____ x Partner 2 _____

Partner 1 \ Partner 2		
	1	2
	3	4

- What is the genotype of #4?
- What is the phenotype of #2?
- What is the percentage of the babies with tongue rolling ability?