


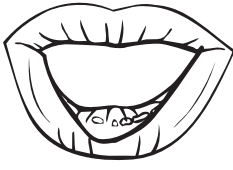



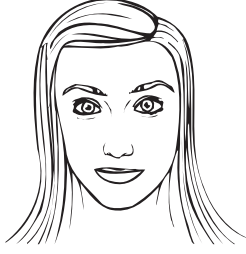





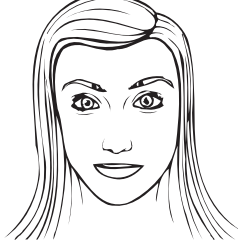

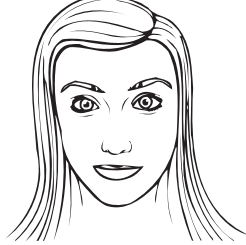
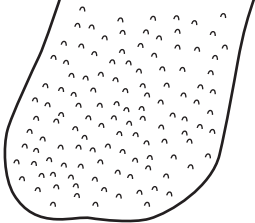
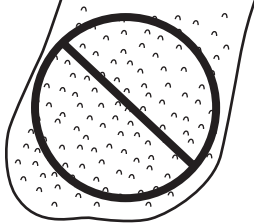
# Student Data Table

Trait	Group Total	Class Totals	D = dominant R = recessive
Tongue roller			D
Non-roller			R
Widow's peak			D
Straight hairline			R
Free earlobe			D
Attached earlobe			R
Freckles			D
No freckles			R
Hitchhiker's thumb			D
Straight thumb			R
Mid-digital hair			D
No mid-digital hair			R
Curly hair			D
Straight hair			R
PTC taster			D
PTC Non-taster			R

Write a + in the box if agglutination is observed and a - if no change occurs.

Person	Anti-a sera	Anti-b sera	Anti-Rh sera	Blood Type

# Dominant vs. Recessive Traits Chart

			
Tongue roller	Non-tongue roller	Hitchhiker's thumb	Straight thumb
			
Widow's peak	Straight hairline	Mid-digital hair	No mid-digital hair
			
Free earlobe	Attached earlobe	Curly hair	Straight hair
			
Freckles	No freckles	PTC Taster	PTC Non-taster

## Post-Lab Questions

1. A mother and father both have a phenotype of attached earlobes (a recessive trait). Is it possible for them to give birth to a child with free earlobes (a dominant trait). Explain. Draw the Punnett square, if needed.

2. Use the Hardy-Weinberg equation to find the probable genotypes of your classmates for the trait of PTC tasting.

q =

p =

Homozygous dominant: \_\_\_\_\_%

Heterozygous: \_\_\_\_\_%

Homozygous recessive: \_\_\_\_\_%

3. Complete the following Punnett square for blood types.

		Father	
		$I^A$	$i$
Mother	$I^A$		
	$I^B$		

**Square 3** (*Hint: Remember co-dominance.*)

Square 3

Homozygous dominant = \_\_\_\_\_%

Heterozygous = \_\_\_\_\_%

Homozygous recessive = \_\_\_\_\_%

Do these percentages add up to 100%?

4. For the blood types shown above, what will be the observed phenotype for each genotype?

**Genotype**

**Phenotype**

5. The person from which the unknown blood sample came from is having a child. Is there any possibility this person could have a child with type O blood? Explain.