Celebrity Babies

Dear future Genetic Counselors –

A famous couple has come to you for help. They are expecting a baby and they want your help before he or she arrives. They have asked you to help them determine the possible traits of their baby. Good luck!

Traits Key

| Eye Color	Brown Eyes (B)	Hazel Eyes (b)
Earlobes	Free Ears (D)	Attached Ears (d)
Nose	Wide Nose (N)	Narrow Nose (n)
Chin	Pointy Chin (H)	Round Chin (h)
Cheeks	High Cheekbones (E)	Low Cheekbones (e)
Lips	Full Lips (F)	Thin Lips (f)
Forehead	Large Forehead (A)	Small Forehead (a)
Hair	Straight Hair (T)	Curly Hair (t)

Celebrity Couple: _____

Mother's Genetic Information		
	Genotype	Phenotype
Eye Color		
Earlobes		
Nose		
Chin		
Cheeks		
Lips		
Forehead		
Hair		

| Father's Genetic Information		
	Genotype	Phenotype
Eye Color		
Earlobes		
Nose		
Chin		
Cheeks		
Lips		
Forehead		
Hair		

Punnett Square Predictions

Using your parental genotypes, create 8 Punnett Squares to predict all the possible allele combinations that your celebrity baby could inherit. Make sure to include the probabilities (percentages) for genotypes and phenotypes.

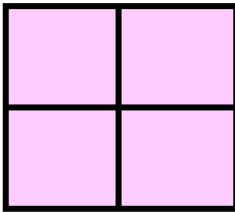### EYE
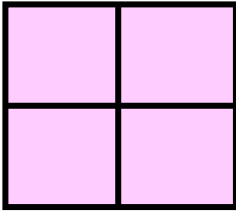
Possible Genotypes	
Possible Phenotypes	

EAR
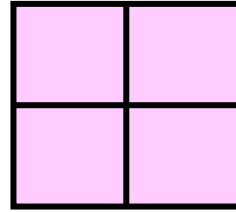
Possible Genotypes	
Possible Phenotypes	

NOSE

Possible Genotypes	
Possible Phenotypes	

CHIN
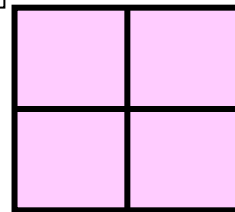
Possible Genotypes	
Possible Phenotypes	

CHEEKS
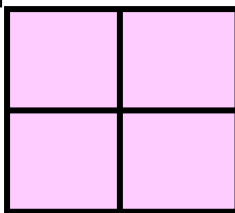
Possible Genotypes	
Possible Phenotypes	

LIPS
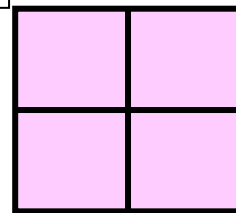
Possible Genotypes	
Possible Phenotypes	

FOREHEA
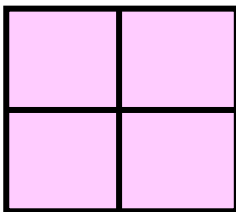
Possible Genotypes	
Possible Phenotypes	

HAIR
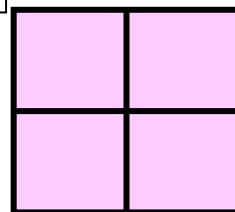
Possible Genotypes	
Possible Phenotypes	

Creating Your Celebrity Baby

Use a coin to determine the genotype of your couples' baby. You will flip once for the mother and once for the father. To determine the gender of the baby, flip one coin (heads = female tails = male)

Heads = Dominant   Tails = Recessive

Celebrity Baby Genetics Chart

Trait	Mother's allele	Father's allele	Genotype	Phenotype
Example	*B*	*b*	*Bb*	*Brown Eyes*
Eye Color				
Earlobes				
Nose				
Chin				
Cheeks				
Lips				
Forehead				
Hair				

NOW IT'S TIME TO CREATE A HAND DRAWN PORTRAIT OF YOUR COUPLES' BABY

Criteria for Success
- ☐ 8 completed Punnett Squares using parental genotypes
- ☐ 8 completed genotype/phenotype percentage charts
- ☐ Completed baby genotype chart
- ☐ Completed celebrity baby portrait with genotypes, phenotypes, and name
  - Make sure your portrait is neat, colorful and eye catching
- ☐ Completed analysis questions

Analysis Questions (Answer in complete sentences)

1. What percentage does each parent contribute to a child's genotype?

2. Explain HOW/WHAT part of your procedures represent the process of meiosis. **HINT:** *Remember what meiosis determines.*

3. Using examples from this simulation, explain your understanding of the following genetic concepts:

    a. Dominant Gene –

    b. Recessive Gene –

    c. Homozygous Alleles -

    d. Heterozygous Alleles -