

Genetics with a Smile

Name _____

Part A: Smiley Face Traits

- Obtain two coins from your teacher. Mark one coin with a "F" and the other with a "M" to represent each of the parents. The parents are heterozygous for all the Smiley Face traits.
- Flip the coins for parent for each trait. If the coin lands with heads up, it represents a dominant allele. A coin that lands tails up indicates a recessive allele. Record the result for each person by circling the correct letter. Use the results and the Smiley Face Traits page to determine the genotype and phenotype for each trait.

Trait	Female	Male	Genotype	Phenotype
Face Shape	C c	C c		
Eye Shape	E e	E e		
Hair Style	S s	S s		
Smile	T t	T t		
Ear Style	V v	V v		
Nose Style	D d	D d		
Face Color	Y y	Y y		
Eye Color	B b	B b		
Hair Length	L l	L l		
Freckles	F f	F f		
Nose Color	R Y	R Y		
Ear Color	P T	P T		

Part B: Is it a boy or girl?

To determine the sex of your smiley face, flip the coin for the male parent. Heads would represent X, while tails would be Y.

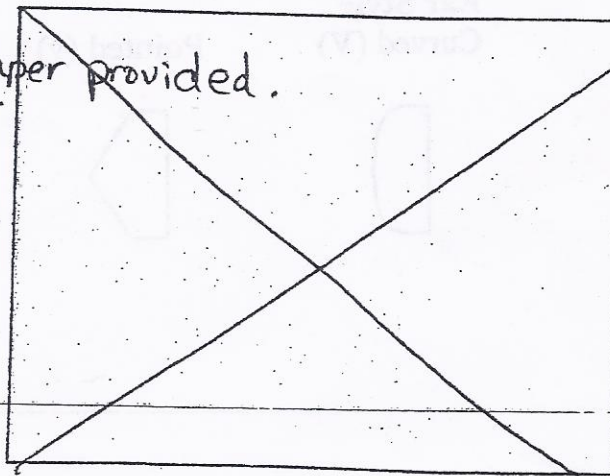
	Female	Male	Genotype	Phenotype
Sex	X	X Y		

Part C: Create Your Smiley Face!

Use the Smiley Face Traits chart and your results from Part A to create a sketch of your smiley face ^{on the paper} ~~in the box~~. ~~Once you have completed the sketch, use the drawing tools in Microsoft Word to create your smiley face!~~

Two things to remember ...

- ✓ ~~Do not add color on the computer! Print a black and white copy and then use crayons or colored pencils to finish it.~~
- ✓ Don't forget to give your smiley face a name! You will also need to include your name as parent and your class hour.



Handwritten scribble in green ink.

Smiley Face Traits

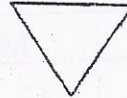
Face Shape
Circle (C)



Oval (c)



Nose Style
Down (D)



Up (d)



Eye Shape
Star (E)



Blast (e)



Face Color
Yellow (Y)
Green (y)

Eye Color
Blue (B)
Red (b)

Hair Style
Straight (S)



Curly (s)



Hair Length
Long (L)
Short (l)

Freckles
Present (F)
Absent (f)

Smile
Thick (T)



Thin (t)



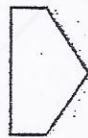
Nose Color
Red (RR)
Orange (RY)
Yellow (YY)

Ear Color
Hot Pink (PP)
Purple (PT)
Teal (TT)

Ear Style
Curved (V)



Pointed (v)



Sex

To determine the sex, the flip the coin for the male parent. Heads equals X and tails equals Y.

XX - Female - Add pink bow in hair
XY - Male - Add blue bow in hair