

Group Data Table: Marshmallow Babies

Names of Group Members:

Characteristic	Phenotype	Genotype
Antennas		
# of Humps		
Color of Humps		
Color of Nose		
Shape of Tail		
Color of Legs		
# of Body Segments		
Gender		

Name of Baby:

Hobbies/Interests: _____

3. Are there any twin marshmallow babies in the class? **Ans will vary, but likely NO.** Would a twin have the same phenotypes as your baby, or would they have to also have the same genotype? Explain. **Two marshmallow babies may look alike, but their genotypes may be different. For example, They may both have red legs, but one got it with a LL, and the other with a Ll. A true identical twin would have the exact same genotype as well.**

Teacher Instructions for the Envelopes:

1. Make one envelope per group.
2. For 10 groups, duplicate 15 to 20 copies of this page on blue paper, and 15-20 copies on pink paper.
3. Cut out all of the chromosomes and sort by color and letters, mixing the capitals with the lower case letters. Keep the X and Y chromosomes separate for now.
4. Randomly draw one letter, either capital or lower case, from each pile, pink and blue and place in an envelope.
5. Each group envelope should contain a blue and a pink of each letter, either capital or lower case.
6. **FOR GENDER:** You made twice as many X chromosomes as you did Y to simulate accurate probability of gender. Sort the pink from the blue, mixing the X and Y together. Draw one pink and one blue and add them to the envelopes.
**** Keep the extra chromosomes. They come in handy as replacements over the years.**
7. For 10 groups, make 10 copies of the Decoder Key on regular white paper.
8. Place one copy of the Decoder Key in each envelope. These are the instructions for the students.

A	a	H	h	
G	g	N	n	
T	t	L	l	
B	b	X	x	X

Decoder Key

Trait:

A = 2 antennae
a = 1 antenna

H = 1 hump
h = 2 humps

G = green hump
g = orange hump

Materials to use:

use nails for antenna

use green/orange marshmallows

X

N = pink nose
n = yellow nose

use pink/yellow marshmallows

T = curly tail
t = straight tail

use pipe cleaners, you pick your own
color here

L = red legs
l = blue legs

use the red/blue push pins

B = 2 body segment
b = 3 body segments

use the large white marshmallows;
grab an extra one for the head

XX = female
or

for female, tie the string either in tail

XY = male

on antenna
for male, tie string around neck like
a bowtie

***use thumbtacks for the eyes

***break toothpick in half and use to connect the marshmallows
