

GOAL: 1. To observe how parents randomly pass on genes to their offspring. 2. To be introduced to new genetics vocabulary in context. 3. Use the key to determine which combination of genes will produce different traits.

Procedure: 1.) Each person in a pair has a coin. One person flips the coin for male, and the other for female. If the coin lands on 'Heads' then chose the allele (a version of a gene) that is dominant (capital letter). If the coin lands on 'Tails' then chose the allele (a version of a gene) that is recessive (lower case letter). 2.) Record the results by writing each letter in the column 'Offspring Genotype'. Genotype means 'the genetic make-up'. 3.) Then use the descriptions on the handout to determine the traits (phenotype) of the offspring. 4.) Draw in the space below.

Trait	Female	Male	Baby Monster Genotype (genes)	Baby Monster Phenotype (traits)
Eye	Ee	Ee		
Eye Color	Rr	Rr		
Skin Color	Gg	Gg		
Skin Type	Bb	Bb		
Tail Shape	Cc	Cc		
Tail Color	Pp	Pp		
Teeth	Ss	Ss		
Feet	Ff	Ff		
Horn Color	Bb	Bb		
Ear Shape	Yy	Yy		
Claws	Ll	Ll		

Eyes: EE and Ee = two small eyes/ ee = one large eye

Teeth: SS and Ss = Sharp / ss = round

Eye Color: RR and Rr = red/ rr = yellow

Feet: FF and Ff = four toes / ff = three toes

Skin Color: GG and Gg = green / gg = blue

Horn Color: BB and Bb = blue / bb = pink

Skin Type: BB and Bb = bumpy / bb = smooth

Ear Shape: YY and Yy = Pointy /yy =round

Tail Shape: CC and Cc = curly / cc = straight

Claws: LL and Ll = Long/ ll = short

Tail Color: PP and Pp = purple / pp = orange

Now draw your monster below!



Punnett Squares:

Your baby monster is now all grown up and has met the monster of their dreams. They are having their own baby monster and are curious which traits it will have:

- a. Fill in the GENOTYPE of your monster for the traits below. You will see the GENOTYPE of their ‘monster of their dreams’ next to it.
- b. Use the information to make punnett squares. Then write down the genotype and the phenotype probability for grandbaby monster.

1. Your monster: Genotype for Eye _____, Monster of their dreams Genotype = EE

Genotype ratio:

Phenotype ratio:

2. Your monster: Genotype for Skin Type _____, Monster of their dreams Genotype = bb

Genotype ratio:

Phenotype ratio:

3. Your monster: Genotype for Tail Color _____, Monster of their dreams Genotype = Pp

Genotype ratio:

Phenotype ratio:

4. Your monster: Genotype for Claws _____, Monster of their dreams Genotype = ll

Genotype ratio:

Phenotype ratio: