

Biology

Name: _____

Punnett Square Virtual Lab

Date: _____ Hour: _____

Please find the virtual lab at the following address:

http://www.glencoe.com/sites/common_assests/science/virtual_labs/E09?E09.html

Prelab Questions:

1. What is a trait?

2. What are genes? How are they related to traits?

3. How are gene pairs written out?

4. What is a genotype?

5. What are dominant and recessive alleles? How are they written differently? _____

6. What is a phenotype?

Procedure:

1. Click the Video button. Watch the video about Punnett squares. Write your observations in the data section.
2. Select a trait from the list of six traits (eyes, ears, nose, mouth, fur and feet)
3. Click the Perform the Genetic Cross button to cross the pairs of alleles. This will set up the Punnett square showing the four possible genotypes
4. Click and drag Possible Phenotypes into the boxes of the Punnett square. If you want to change your selection, first drag the previous phenotype out of the Punnett square

5. After you have filled all four boxes of the Punnett square, click the Check button to check your matches.
 - a. Incorrectly matched phenotypes will be highlighted in yellow.
 - b. Correct your matches and click the Check button again
6. When the Punnett square is correctly filled in, select one of the four boxes to apply that trait to the mystery animal
7. Repeat steps 2-6 for EACH of the six traits. Record your findings in your Table
8. You can reset your mystery animal by clicking Reset button. This will erase all your data and give you a new mix of genes to work with

Data:

Observations from video -

Data Table -

Trait	Selected Genotype	Selected Phenotype

Post Lab Questions:

1. What are the genotypes behind each phenotype in your mystery animal?

2. What is the difference between a genotype and a phenotype? _____

3. How are alleles and traits related? Explain using an example.

4. In pea plants, purple flowers (P) is a dominant allele, while white flower color (p) is recessive. IF a pea plant has the genotype Pp, what is it's phenotype? Explain your answer.

5. Draw your mystery animal in the space provided. Label each phenotype and genotype shown (that is a total of six!)