

Name _____

The Gee in Genome -- http://nature.ca/genome/index_e.cfm

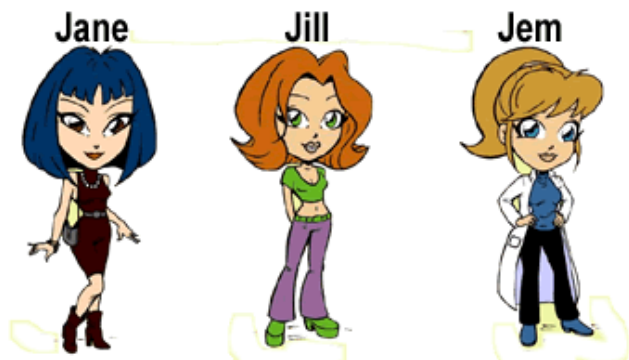
Go to "Try it" and then "Online Games" ' go to "Mix Those Genes"

Click on "More Information" to answer the following questions

1. What are the genes that control eye color called? _____ and _____
2. Which color is always recessive? _____
3. Identify the colors for each of the genotypes:
 BBGg = _____ bbGg = _____
 Bbgg = _____ bbgg = _____

----- Go to "Choose Parents"

4. What are the genotypes of your three potential mothers and their eye colors (phenotypes)



Name	Genotype	Color
Jane		
Jill		
Jem		

Choose a mother, to go to the next page:
 You chose _____ (name)

5. What are the genotypes of your three potential fathers and their eye colors (phenotypes)



Name	Genotype	Color
Rick		
Ron		
Rex		

Choose a father, to go to the next page:
 You chose _____ (name)

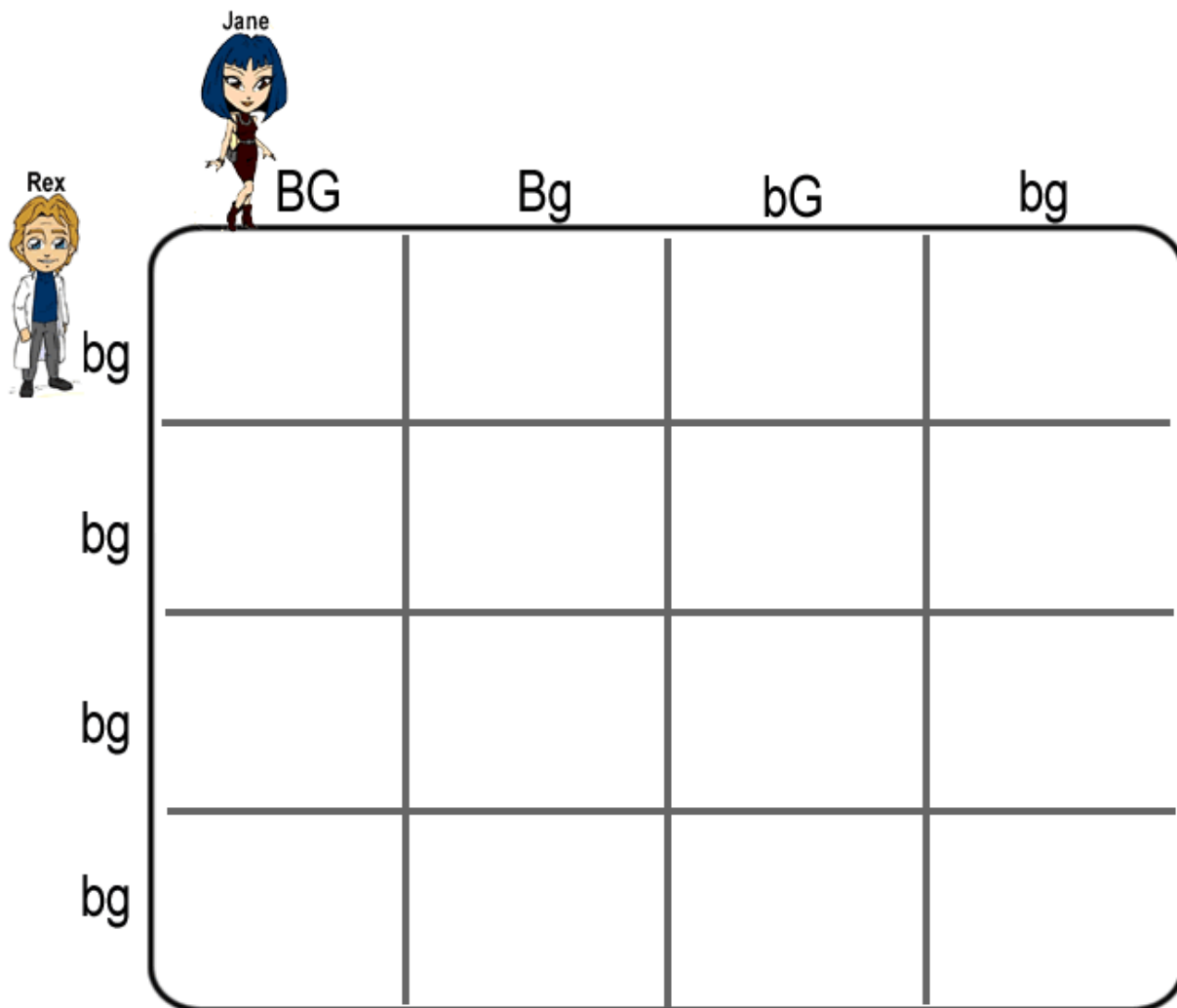
What is your parents genotypes _____ x _____

6. Click on the "Make Babies" to show your offspring. -> Click on "More Babies" to see all 12
 How many babies of 12 have: Brown eyes _____ Blue eyes _____ Green eyes _____

7. Follow the same procedure to pick new parents. You chose: _____ and _____
 How many babies of 12 have: Brown eyes _____ Blue eyes _____ Green eyes _____

8. Follow the same procedure to pick new parents. You chose: _____ and _____
 How many babies of 12 have: Brown eyes _____ Blue eyes _____ Green eyes _____

9. Now do the squares! What will happen if you cross Jane (BbGg) and Rex (bbgg) ?
 FILL OUT THE PUNNETT SQUARE to make your prediction.



10. Run the simulation to see their offspring. How many Jane and Rex babies out of 12 have:
 Brown eyes _____ Blue eyes _____ Green eyes _____

11. Compare Punnett data to Simulation Data - reduce the fractions from the sim and punnett data.

	Simulation (program) -out of 4	Punnett Square (above) - out of 4
Blue		
Green		
Brown		

12. In your own words, describe how the Punnett square is a useful tool for genetics.