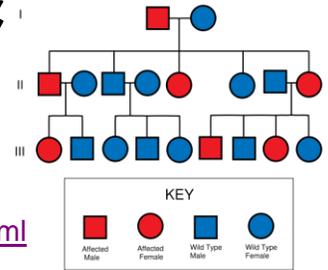


# Pedigree Webquest

Name: \_\_\_\_\_



## Part One

1. Go to the following link: <http://www.saburchill.com/IBbiology/chapters03/006.html>
  1. Why do scientists use pedigree charts?
  2. Draw the symbol that represents a male.
  3. Draw the symbol that represents a female.
  4. What does a line in between two individuals represent?
  5. How is an individual that is affected by the trait shown?
  6. Describe how a pedigree chart differentiates between parents and offspring.
  7. What is a generation? How many generations are depicted in the pedigree at the bottom of the page?
  8. Look at the top pedigree. How many children does that couple have? What are the sexes of the children?
  9. Look at the bottom pedigree. How many children does the original couple have? Are any of these children affected individuals? Explain.
  10. In the bottom pedigree, in the fourth generation, list the sex of each child from oldest to youngest.

## Part Two

1. Draw a pedigree chart for the following family. Charlie and Renee are grandparents. They have 3 children, Jessica, Crystal, and Gina. Jessica is married to Gale and they have a daughter named Rue. Crystal is married to John and they have 3 children, Alice, Mark, and Ian. Gina is divorced and has 2 daughters, Kate and Rose. Please refer back to the two links if you are not sure about how to depict this information.

2. Answer the following questions using the next website:  
<http://www.ygyh.org/hemo/whatisit.htm> and go to “How is it inherited?”

1. How does a boy get hemophilia?
2. How does a girl become a carrier?
3. If a woman is a carrier and the male does not have hemophilia, draw a Punnett Square and indicate the possible outcome (phenotype and percentages).


Phenotypes and percentages:
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Part Three: Now use the information that you learned about Hemophilia to complete your pedigree chart from Part two of this lesson. Indicate that Charlie, Gina, Ian, and John have hemophilia by shading in the symbols that represent them in the Pedigree Chart.

1. Explain in a sentence or two how hemophilia is inherited. Describe which parent gave Ian the defective allele for hemophilia and explain how you know.
2. Indicate how hemophilia is passed from generation to generation. Include the genotypes and phenotypes of his parents, Crystal and John, as well as his grandparents, Charlie and Renee.