





Tour of the Basics Web Quest



Log on to: http://gslc.genetics.utah.edu/units/basics/tour/. Explore this activity to find the answers to the questions below.

1. What is DNA? 2. What does "DNA" stand for? 3. What is the four-letter DNA alphabet and what are the special rules by which the alphabet pieces bond together? 4. What is a gene? 5. What are genes made of? 6. How many genes do humans have? 7. For what molecule do genes contain the instructions for building? 8. What is a chromosome? 9. How many chromosomes does a human cell hold? 10. How are the human sex chromosomes labeled? 11. How many different kinds of proteins does one cell contain?



Name	Date

- 12. Why do scientists use computer programs to model protein structure and function?
- 13. What provides the "blueprint" for making a protein?
- 14. What is heredity?
- 15. Why aren't children identical to either one of their parents?
- 16. In humans, how many chromosomes does each parent pass on to their offspring?
- 17. Does the second baby in the What is Heredity? animation inherit the exact same chromosomes as the first? Do both babies have a complete set?
- 18. What is a trait?
- 19. List the types of traits that exist.
- 20. Give an example of how an environmental factor can influence a trait.
- 21. Briefly explain how the Hitchhiker's Thumb trait is determined using the following words: allele, dominant, recessive, homozygous, heterozygous. You may draw pictures if you wish.