

# Genes by Nye

Name \_\_\_\_\_

Period \_\_\_\_\_ Assignment # \_\_\_\_\_

**Directions:** Answer the following questions as you watch "Genes" by Bill Nye Productions.

1. DNA—the \_\_\_\_\_ for life.
2. If the DNA molecule were as wide as a string, it would be \_\_\_\_\_ km long.
3. The DNA molecule is a \_\_\_\_\_ times *longer* than it is *wide*.
4. Thousands and thousands of genes are joined together to form \_\_\_\_\_.
5. A gene is a specific piece of \_\_\_\_\_.
6. A gene from a sea jelly can be inserted into bacteria to make the bacteria:  
\_\_\_\_\_.
7. Your genes tell your cells \_\_\_\_\_.
8. **Complete the Analogy:** Your chromosomes are like 23 pairs of \_\_\_\_\_; chapters are like \_\_\_\_\_. Humans have \_\_\_\_\_ chapters.
9. Most species have fewer than \_\_\_\_\_ chromosomes.
10. How many cells does it take to make a whole person? \_\_\_\_\_
11. Why is there only ONE form of life on Earth? (or what do all living things on Earth have in common?) \_\_\_\_\_
12. Human genes can combine in about 70 \_\_\_\_\_ different combinations.
13. How much paper would it take to print out all the genes for a person? \_\_\_\_\_
14. What must have happened if you CAN'T roll your tongue? \_\_\_\_\_  
\_\_\_\_\_
15. When you have "mixed up" genetic information, you have a \_\_\_\_\_
16. A mule is the offspring of a female \_\_\_\_\_ and a male \_\_\_\_\_.
17. A mule is a hybrid. A mule has \_\_\_\_\_ (number) chromosomes. How does this compare to its parents? \_\_\_\_\_  
\_\_\_\_\_
18. What is the advantage of producing a mule? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
19. What is the name of the music group? \_\_\_\_\_

