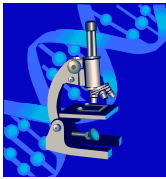


Biology 1

Journey into DNA



Name _____

Date _____ Hr _____

We are going to take a trip from the outside of a human body all the way to a single nucleotide of DNA. Along the way you will stop to answer the following questions. Begin by visiting the following website:

http://www.pbs.org/wgbh/nova/genome/dna_flash.html

To advance into the body, click the ' + ' magnifying glass.

JOURNEY QUESTIONS

1. Approximately how many cells are in the human body? _____
2. How many A's, C's, G's and T's are in EACH and EVERY cell? _____
3. Body cells are specialized. What are the squarish cells of the small intestine design to do?
4. If cells didn't specialize, what would every cell in the body be like? _____
5. What controls the production of new types of cells?
6. Which cells in the human body do not have a nucleus? _____
7. How many different chromosomes are in the human genome (DNA set)? _____
8. What percentage of DNA codes for... nothing?! _____
9. How many different genes are within the human genome? _____

10. During what process are chromosomes visible? _____
11. What causes the banding patterns on chromosomes?
12. How many bases might be in a single gene (provide a range)? _____
13. How many feet of DNA are in a single cell nucleus? _____
14. How does the cell fit so much DNA in such a small space?
15. What is chromatin?
16. What protein structures is DNA wrapped around? _____
17. What charge does DNA have? _____ What charge do histones have? _____
18. Who took the first photo of DNA? _____
19. Which base always pairs with A? _____ Which always pairs with C? _____
20. What 3 things comprise a nucleotide? _____
Sketch and label it below.