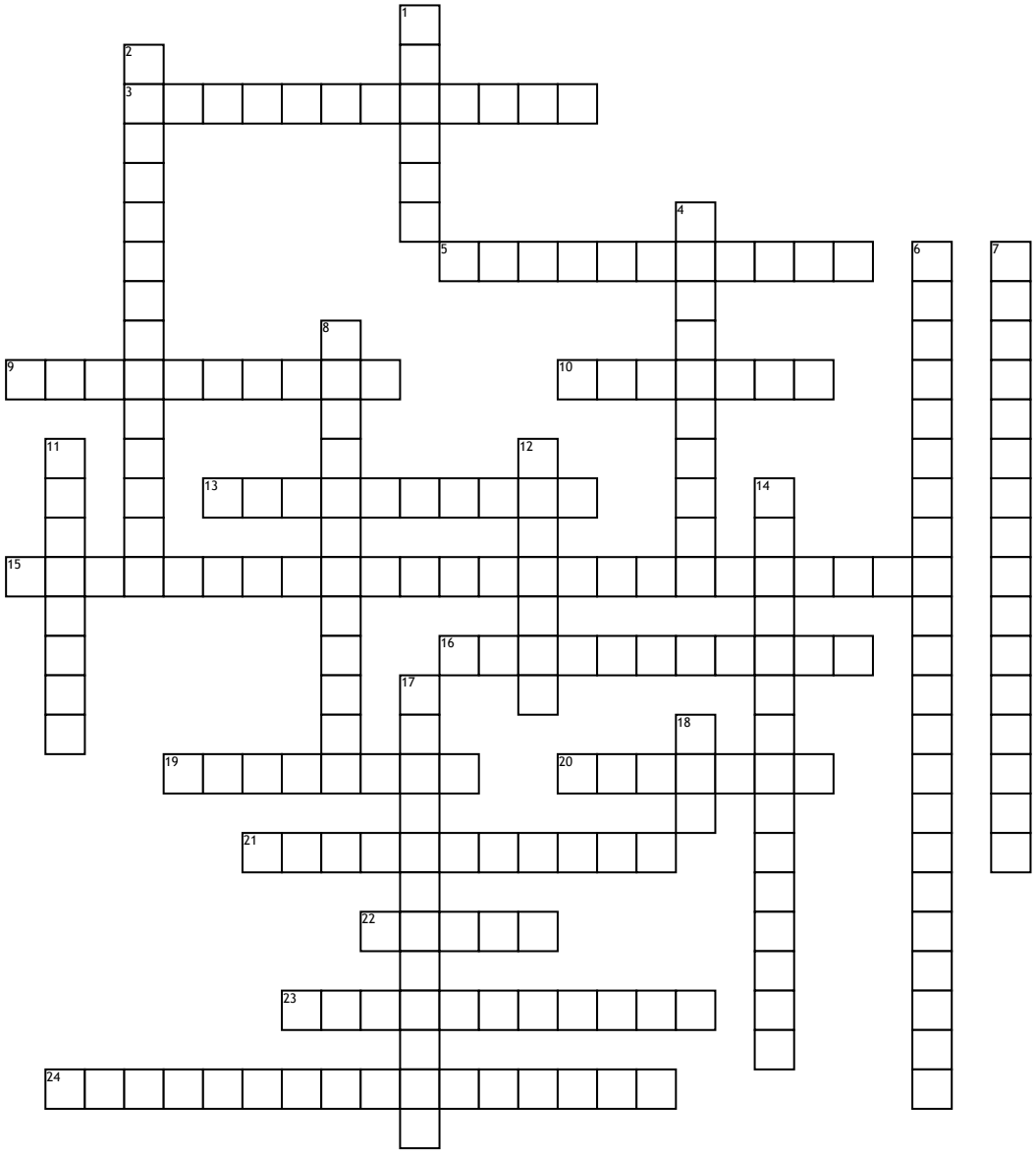
Name: _____ Date: _____

DNA



Across

3. The chemical bond between two polar molecules where hydrogen (H) is attracted to a highly electronegative atom such as oxygen (O) or nitrogen (N)
5. The spiral shape of DNA
9. A single step in natural descent of a species
10. Nitrogenous base "T"; connects to adenine
13. The monomer of DNA; made of 3 parts - deoxyribose sugar, phosphate, nitrogenous base
15. Another term for base pair but includes the sugar and phosphate groups
16. A, T, C, and G; all living organisms use the same 4-letter code to make proteins
19. The passage of genetic instructions from one generation to the next generation
20. Nitrogenous base "G"; connects to cytosine
21. The rule of how nitrogenous bases are paired: A-T, G-C (- = hydrogen bond)
22. A characteristic of an organism that is determined by specific proteins coded in the DNA
23. A biomolecule that stores and transmits genetic information such as DNA
24. Who discovered DNA?

Down

1. All of the chromosomes of a species (ex. humans have 2 pairs of 23 for a total of 46)
2. Group that covalently bonds to the deoxyribose sugar along the sides
4. A long strand of DNA all coiled up
6. The "sides" of a DNA molecule; sugar-phosphate-sugar-phosphate, etc.
7. The sugar in DNA that is covalently bonded to both a phosphate group and a nitrogenous base
8. Chemical bond where electrons are shared between atoms (ex. sugar to phosphate group)
11. Nitrogenous base "C"; connects to guanine
12. Nitrogenous base "A"; connects to thymine
14. A, T, C, G in the middle of DNA; the order determines traits, or characteristics
17. One side of DNA is upside down and the other is right side up (3' to 5', 5' to 3')
18. Called deoxyribonucleic acid; holds the code to make proteins