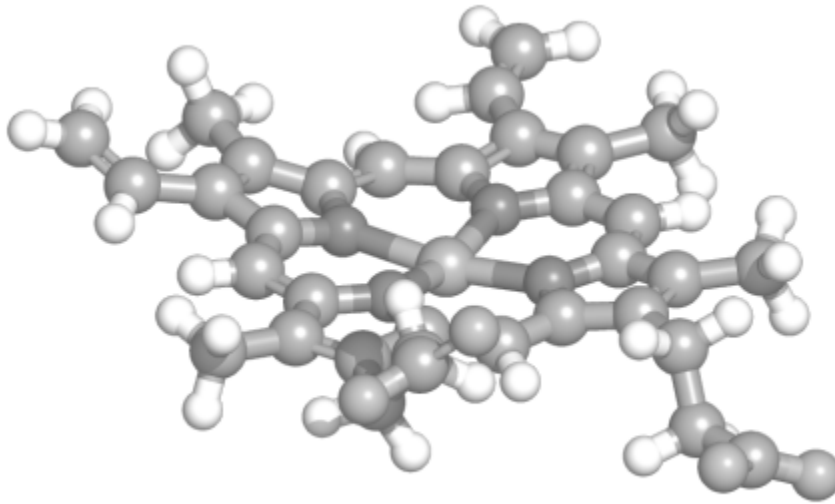


Biochemistry Literacy for Kids Course Content

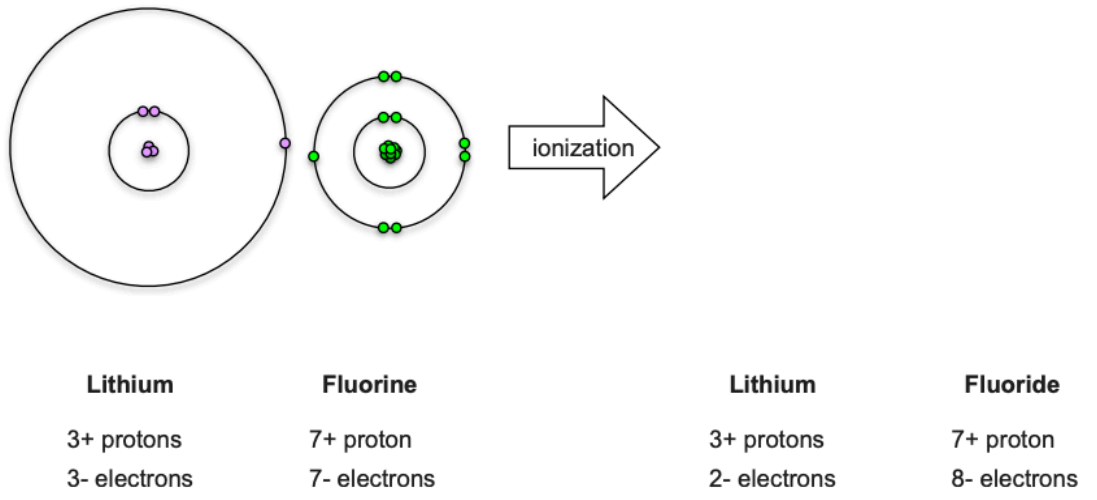
1. Gases and Hemoglobin
2. Formulas and Reactions
3. Electron Orbitals
4. Covalent bonding
5. Plastics and flavors
6. Acids, bases, and charge
7. Amino Acids
8. Peptides
9. Hydrogen bonds
10. Avogadro's number and the mole
11. Functional groups
12. Protein Folding
13. Electron Configurations
14. Hypervalency
15. Ionic bonding
16. Salts and biominerals
17. Fats and Oils
18. Biological Membranes
19. Sugars
20. Polysaccharides
21. Nucleotides
22. DNA and RNA
23. Isotopes
24. Radioactive elements

Sample problems:

- I. Oxygen binds to the central iron of hemoglobin's heme. Sketch in the oxygen O₂ molecule.



- II. Complete the following ion diagram and calculate the charges noting how they change due to "stolen" electrons.



- III. Draw the completed phosphatidylcholine in the blank space beside the broken-up structure. Add in the charges to both the left and right structures. Remember that 4 water molecules are removed to complete the structure. Circle where those water molecules came from in the broken-up structure on the left. Label the hydrophobic and hydrophilic areas of the completed phosphatidylcholine molecule.

