

Name \_\_\_\_\_ Date \_\_\_\_\_

Complete the following table. You may want to look at the periodic table.

Element	Atomic Number	Atomic Symbol	Number of Protons	Number of Shells	Number of Outer Electrons
Carbon	6	C	6	2	4
Hydrogen	_____	_____	_____	_____	_____
Nitrogen	_____	_____	_____	_____	_____
Sulfur	_____	_____	_____	_____	_____
Sodium	_____	_____	_____	_____	_____
Chlorine	_____	_____	_____	_____	_____

- How can you tell from the Periodic Table how many outer shell electrons an atom will have?  
\_\_\_\_\_
- How can you tell from the Periodic Table how many shells an atom will have?  
\_\_\_\_\_
- Look at Calcium. What charge ion would this atom make, and why?  
\_\_\_\_\_
- Look at Oxygen. What charge ion would this atom make, and why?  
\_\_\_\_\_
- Explain why water is polar.  
\_\_\_\_\_
- How is this related to its ability to hydrogen bond?  
\_\_\_\_\_
- Explain the difference between hydrophilic and hydrophobic molecules.  
\_\_\_\_\_
- List a functional group that you would expect to be attracted to water.  
\_\_\_\_\_
- List an R group that you would expect to be attracted to water.  
\_\_\_\_\_