

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	_____	_____	_____	_____	_____

1. How can you tell from the Periodic Table how many outer shell electrons an atom will have?

\_\_\_\_\_

2. How can you tell from the Periodic Table how many shells an atom will have?

\_\_\_\_\_

3. Look at Calcium. What charge ion would this atom make, and why?

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4. Look at Oxygen. What charge ion would this atom make, and why?

\_\_\_\_\_

5. Explain why water is polar.

\_\_\_\_\_

6. How is this related to its ability to hydrogen bond?

\_\_\_\_\_

7. Explain the difference between hydrophilic and hydrophobic molecules.

\_\_\_\_\_

8. List a functional group that you would expect to be attracted to water.

\_\_\_\_\_

9. List an R group that you would expect to be attracted to water.

\_\_\_\_\_