

Name _____ Class _____

Who Am I?

The following chart contains clues about the identities of some of the elements in the periodic table. Read each description and then identify the area of the periodic table in which the element would most likely be found. Fill in the appropriate space in the chart using the name of the family or general category of elements. Then, in the next column, write the symbol for the possible identity of the element being described.

Description	Area	Element
1. I have very good ability to conduct electricity. I am never found alone in nature. When I combine with other elements, I usually give up my one valence electron. I am the only element in my group with a one-letter symbol.		
2. I do not conduct electricity and am usually found in the gaseous state. I do not bond well with other elements. I can be found in some bulbs used in signs.		
3. I am a gas, but I combine very easily with many other elements. I usually form ionic bonds. I frequently form a -1 ion in those ionic bonds. I am the lightest element in my group.		
4. I am a very tough, durable element. I can give up two electrons, but I sometimes give up more than two when bonding. I am the main element found in steel.		
5. I am never found alone or unbonded in nature. I most commonly form a $+2$ ion when bonding. I have the second highest number of protons in my family.		
6. In my family the elements are all metals except for me. I have three valence electrons.		
7. Although I am in a family of nonmetals, I am found as a solid. If I combine with calcium, two atoms of me but only one atom of calcium are required.		
8. I usually form covalent bonds. I have five valence electrons. I have the highest atomic mass in my group.		
9. In my family there are nonmetals, metalloids, and metals. I have the same number of protons as the sum of the protons in the two elements directly above me in the periodic table.		
10. Elements in my family usually form covalent bonds. We have two fewer valence electrons than noble gases. I am almost twice as heavy as the lightest element in my group.		