

## Chapter 6 Reading Guide

Name \_\_\_\_\_

### Section 6.1

1. How is the picture of the jeans like the periodic table?
2. How is it like the grocery store opened in 1916?
3. Why didn't scientists know about more elements in the 1700's?
4. What were Dobereiner's triads?
5. What pattern did he notice about the triads?
6. What are the two reasons Mendeleev gets more credit than Meyer for the periodic table?
7. What approach did Mendeleev take to organizing the elements?
8. How did he eventually organize the elements?
9. What were the question marks on Mendeleev's table?
10. How did he know to leave spaces?
11. What convinced scientists that the periodic table was a powerful tool?
12. Why did they rearrange iodine and tellurium?
13. What didn't Mendeleev know?
14. How is the modern table arranged?
15. What does each period on the table correspond to?
16. What are the elements in the same period like?
17. Why are there three sets of numbers and letters on top of the periodic table in figure 6.5?
18. What are the properties of metals?
19. Where are metals on the periodic table?
20. What are the properties of nonmetals?
21. Where are nonmetals on the periodic table?
22. What are the properties of metalloids?
23. Where are metalloids on the periodic table?

### Section 6.2

1. What information is in the squares on the periodic table?
2. Where is the atomic mass?
3. What are the numbers like 2 8 and 1?
4. How is the state indicated?
5. What are alkali metals?
6. What are alkaline earth metals?
7. What are halogens?
8. Where are the noble gases on the periodic table?
9. Why are noble gases called inert gases?
10. What is the electron configuration like for the noble gases?
11. Where are the representative elements on the periodic table?
12. What is the electron configuration like for the representative elements?
13. How is this connected to the group number?
14. Where are the transition metals on the periodic table?
15. What is the electron configuration like for the transition metals?
16. Where are the inner transition metals on the periodic table?
17. What is the electron configuration like for the inner transition metals?
18. What groups make up the s block?
19. What groups make up the p block?
20. What groups make up the d block?
21. What groups make up the f block?
22. What does the period tell you about electron configuration?
23. How are the transition metals different?
24. How are the inner transition metals different?

### Section 6.3

1. What are molecules?
2. What is the atomic radius?
3. What is a picometer and why is it used?
4. What are the patterns to atomic size on the periodic table?
5. What was the book's example of a trend?
6. What effect does the increase in the charge of the nucleus have on the size?
7. How do orbitals act as shields?
8. Why does atomic size increase in a group?
9. What happens to the protons and electrons as you go across a period?
10. Why is the shielding constant as you go across a period?
11. What pulls the electrons in closer as you go across a period?
12. What is an ion?
13. How do metals form ions?
14. Why does losing an electron give you a positive charge?
15. How do nonmetals form ions?
16. Why does gaining an electron give you a positive charge?
17. What two things can happen to the electron when an atom absorbs energy?
18. Why do group 1A elements form 1+ ions?
19. How does ionization energy change within a group?
20. Why does ionization energy change within a group?
21. How does ionization energy change within a period?
22. Why does ionization energy change within a period?
23. How do metals and nonmetals behave in reactions?
24. What are the two reasons cations smaller than the atom they are made from?
25. Why are anions larger than the atom they are made from?
26. What is electronegativity?
27. What are the trends in electronegativity?