Section 6.2 Classification of the Elements

In your textbook, read about organizing the elements by electron configuration.

Use the periodic table on pages 156–157 in your textbook to match each element in Column A with the element in Column B that has the most similar chemical properties.

Column A	Column B
_____ **1.** arsenic (As)	**a.** boron (B)
_____ **2.** bromine (Br)	**b.** cesium (Cs)
_____ **3.** cadmium (Cd)	**c.** chromium (Cr)
_____ **4.** gallium (Ga)	**d.** cobalt (Co)
_____ **5.** germanium (Ge)	**e.** hafnium (Hf)
_____ **6.** iridium (Ir)	**f.** iodine (I)
_____ **7.** magnesium (Mg)	**g.** iron (Fe)
_____ **8.** neon (Ne)	**h.** nitrogen (N)
_____ **9.** nickel (Ni)	**i.** platinum (Pt)
_____ **10.** osmium (Os)	**j.** scandium (Sc)
_____ **11.** sodium (Na)	**k.** silicon (Si)
_____ **12.** tellurium (Te)	**l.** strontium (Sr)
_____ **13.** tungsten (W)	**m.** sulfur (S)
_____ **14.** yttrium (Y)	**n.** zinc (Z)
_____ **15.** zirconium (Zr)	**o.** xenon (Xe)

Answer the following questions.

16. Why do sodium and potassium, which belong to the same group in the periodic table, have similar chemical properties?

_____

_____

17. How is the energy level of an element's valence electrons related to its period on the periodic table? Give an example.

_____

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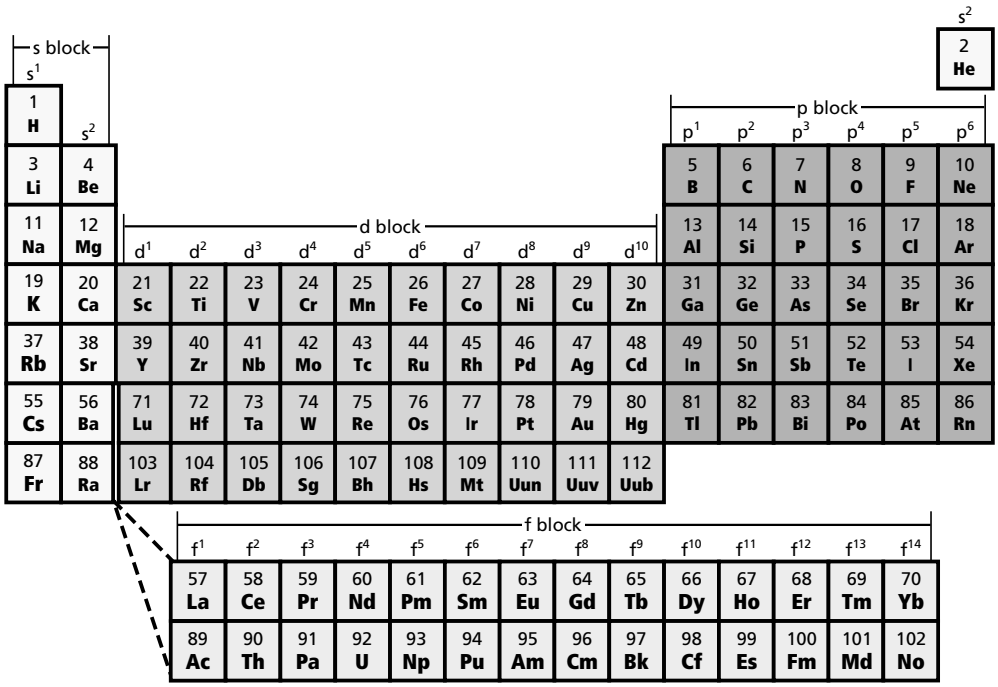
Section 6.2 *continued*

In your textbook, read about s-, p-, d-, and f-block elements.

Use the periodic table on pages 156–157 in your textbook and the periodic table below to answer the following questions.



18. Into how many blocks is the periodic table divided? _____

19. What groups of elements does the s-block contain? _____

20. Why does the s-block portion of the periodic table span two groups?

_____

21. What groups of elements does the p-block contain? _____

22. Why are members of group 8A virtually unreactive?

_____

_____

_____

23. How many d-block elements are there? _____

24. What groups of elements does the d-block contain? _____

25. Why does the f-block portion of the periodic table span 14 groups?

_____

26. What is the electron configuration of the element in period 3, group 6A? _____