

Use with textbook pages 52-57.

## Using the periodic table

### Vocabulary

average atomic mass  
atomic number  
electrons  
families  
good  
halogens  
ions  
ion charge  
metals

metalloids  
multiple ion charge  
noble gases  
non-metals  
periodic table  
periods  
poor  
properties

Use the terms in the vocabulary box to fill in the blanks. You can use each term more than once. You will not need to use every term.

- The periodic table organizes the elements according to their physical and chemical properties.
- The periodic table is divided into seven horizontal rows called periods and 18 vertical columns called families.
- metals appear on the left side of the periodic table. These elements are good conductors of heat and electricity.
- Non - metals appear on the right side of the periodic table. These elements are poor conductors of heat and electricity.
- The metalloids form a zigzag staircase arrangement on the periodic table. These elements have properties similar to both metals and non - metals.
- The atomic number refers to the number of protons that an atom has in the nucleus.
- The ave. atomic mass is the weighted average of the masses of the atoms of an element.
- A(n) ion charge is an electric charge that forms on an atom when it gains or loses electrons.
- Some metals, like platinum and cobalt, form ions in more than one way. In other words, they have a(n) multiple ion charge (multivalent) metals.

Use with textbook pages 52-57.

## What is in the box?

Test your knowledge how information is displayed for each element in the periodic table.

1. Use the vocabulary words listed to label the diagram.

Vocabulary	
ion charge	name
atomic number	symbol
average atomic mass	

(a) <u>atomic #</u>	22	4+	(e)
(b) <u>Symbol</u>	Ti	3+	
(c) <u>name</u>	Titanium		
(d) <u>ave. atomic mass</u>	47.9		

*most common*

*charge for ions formed.*

Examine the periodic table entry for each of the following elements and complete the blanks below.

2.

12	2+
<b>Mg</b>	
Magnesium	
24.3	

- (a) atomic number 12
- (b) average atomic mass 24.3
- (c) ion charge 2+
- (d) number of protons 12

3.

19	+
<b>K</b>	
Potassium	
39.1	

- (a) name of element potassium
- (b) ion charge +1
- (c) number of protons 19
- (d) average atomic mass 39.1

4.

8	2-
<b>O</b>	
Oxygen	
16.0	

- (a) atomic number 8
- (b) average atomic mass 16
- (c) ion charge 2-
- (d) symbol of element O

5.

15	3-
<b>P</b>	
Phosphorus	
31.0	

- (a) name of element phosphorus
- (b) average atomic mass 31
- (c) ion charge 3-
- (d) number of protons 15