

3. Making Study Notes

Now that you have identified headings, subheadings, and key terms, make study notes to help you reinforce main ideas by putting them in your own words. Read each paragraph and write point-form notes using these strategies:

- change each heading and subheading into a question
- list details that answer the question
- include the key terms that are boldfaced or italicized and give their definitions
- include examples

4. Comparing and Contrasting—Using Graphic Organizers

Comparing and contrasting using a Venn diagram helps you see how metals, non-metals, and semi-metals are similar to and different from each other. Place the letter of each description in the appropriate place in the Venn diagram.

A. brittle

B. ductile

C. not shiny

D. malleable

E. not ductile

F. not malleable

G. shiny and smooth

H. dull-looking solids

I. includes halogens

J. includes noble gases

K. includes alkali metals

L. gases at room temperature

M. includes alkaline-earth metals

N. mostly solids at room temperature

O. poor conductors of electric current

P. poor conductors of thermal energy

Q. good conductors of electric current

R. good conductors of thermal energy

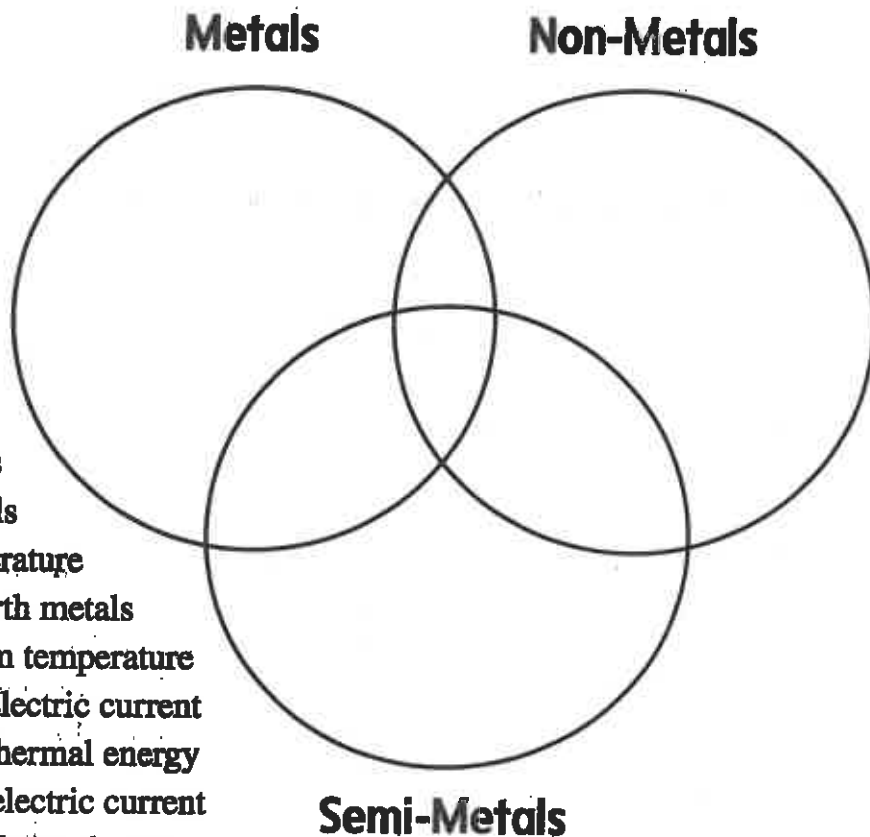
S. some elements are liquids at room temperature

T. has an atomic mass and a distinct atomic number

U. have physical and chemical properties of both metals and non-metals

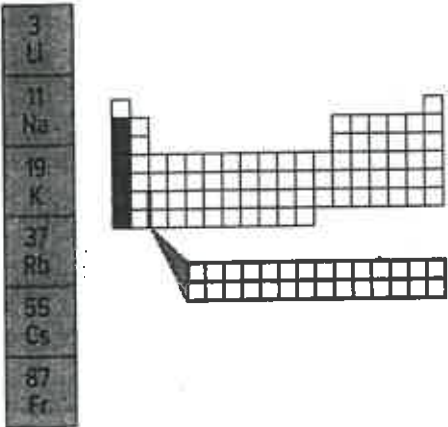
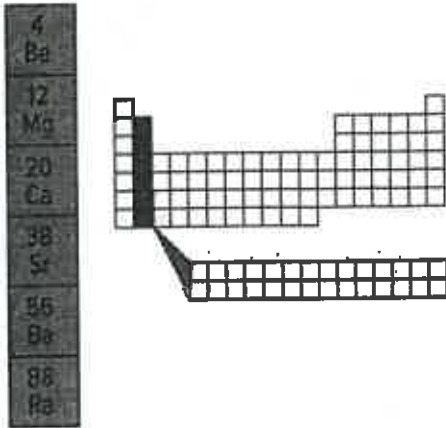
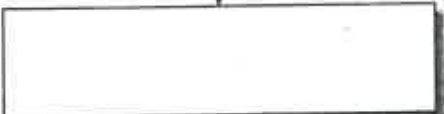
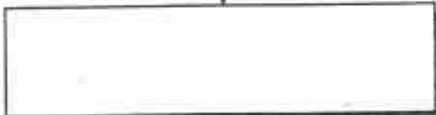
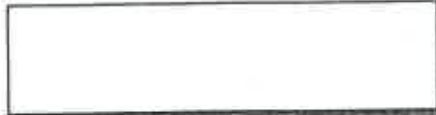
V. can react with other elements to form compounds (except most noble gases)

W. elements that are made of atoms consisting of protons, electrons and neutrons



Comparing Alkali Metals to Alkaline-Earth Metals*Use with textbook pages 110-114.*

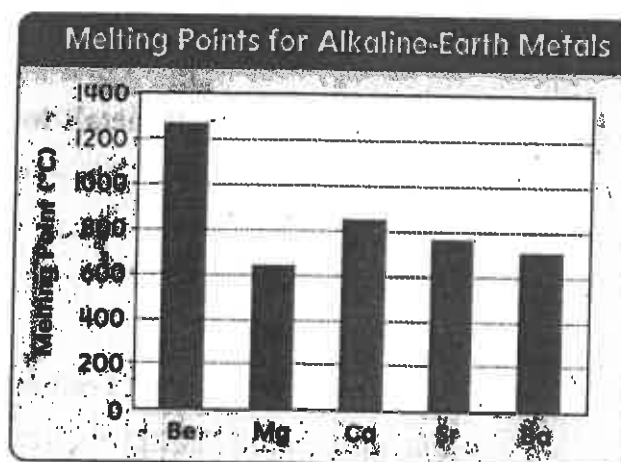
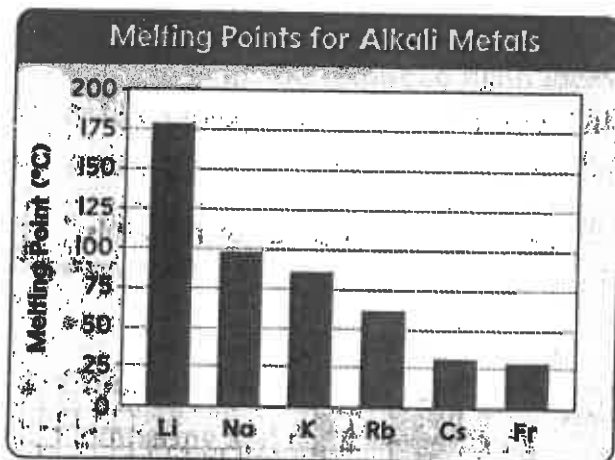
1. Compare and contrast alkali metals to alkaline-earth metals by completing the graphic organizer.

Alkali Metals		Alkaline-Earth Metals
	Similarities 1. _____ 2. _____ 3. _____ 4. _____	
	Differences with regards to:	
	Elements	
	Ion Charge	
	Reactivity	
	Properties	

2. Compared to sodium, is magnesium more or less reactive?

3. Name three physical properties that lithium and beryllium have in common.

Use the following graphs showing melting points to answer questions 4 to 6.



4. How is the change in melting points similar between alkali and alkaline-earth metals as you move down both groups?

5. Which group of metals has higher melting points? _____
6. Analyze both graphs. What are the states of these metals at room temperature?

Use the following tables to answer questions 7 to 9.

Group 1 (Alkali Metals)	Density (g/cm ³)
Lithium	0.53
Sodium	0.97
Potassium	0.86
Rubidium	1.53
Cesium	1.88

Group 2 (Alkaline-Earth Metals)	Density (g/cm ³)
Beryllium	1.85
Magnesium	1.74
Calcium	1.54
Strontium	2.54
Barium	3.51

7. Describe the trend in density as you move down Group 1 and Group 2.

8. How do alkali metals and alkaline-earth metals compare with respect to density?

9. Would any of the alkaline-earth metals float on water (density: 1 g/cm³)? Explain how you know from the data given.
