CHECK AND REFLECT

Key Concept Review

1. What is an ionic compound?
2. List three properties of all ionic compounds.
3. How is an ion formed?
4. What is the difference between Fe^{2+} and Fe^{3+} ?
5. If an element has more than one ionic charge, how is that piece of information represented in a chemical name?

onnect Your Understanding

. Outline the steps for writing the chemical formula of an ionic compound.

Write the formula for the following compounds:

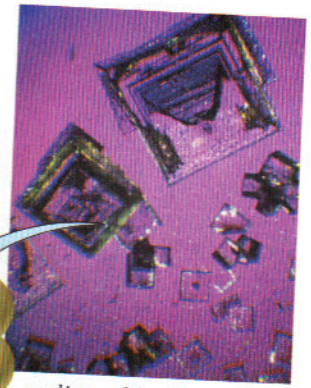
a) sodium fluoride
b) magnesium sulfide
c) lithium oxide
d) iron(III) chloride
e) copper(II) phosphide
f) magnesium iodide
g) iron(II) phosphide
h) aluminum nitride

Write the chemical name for the following formulas:

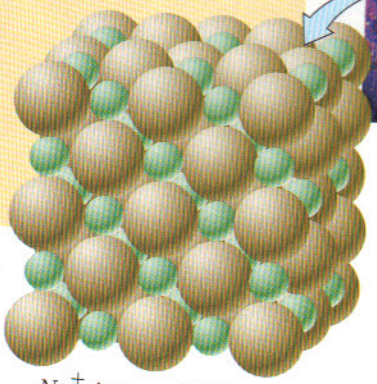
a) $LiCl_{(s)}$
b) $Ca_3P_{2(s)}$
c) $AlBr_{3(s)}$
d) $PbS_{2(s)}$
e) $Fe_2O_{3(s)}$
f) $Na_2O_{(s)}$
g) $CaS_{(s)}$
h) $CuSO_{4(s)}$

d Your Understanding

What ion charge patterns are there in the periodic able?



sodium chloride crystals



Na^+ ions and Cl^- ions arranged in a crystal of sodium chloride

gure 3.11 Each substance has a different crystal shape. Knowing e type of crystal a substance forms can help in identifying it. ctured here are sodium chloride crystals.