These notes are posted on my site for the following reasons:

- **for students to copy in their own hand-writing**
  - **in order to complete their class notes**
  - **if student did not have enough time in class**
  - **if student was away and missed this section**
- **for assistants and tutors to follow progress of the concepts taught**

Photocopied/printed notes can not be used during the Unit Notebook Check in class.

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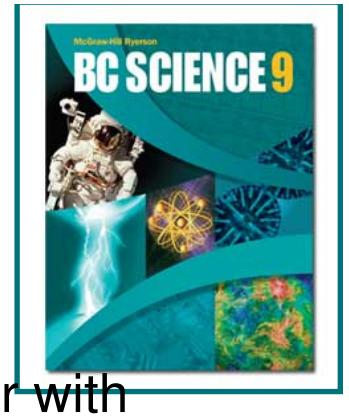
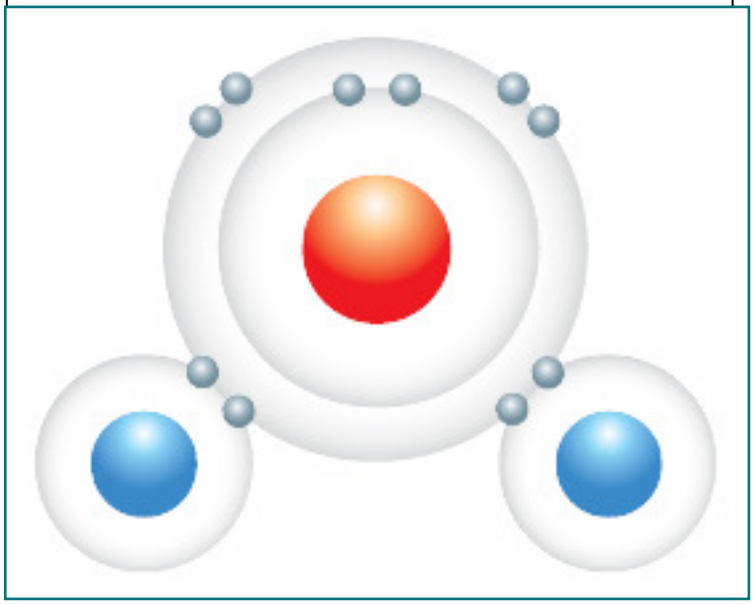


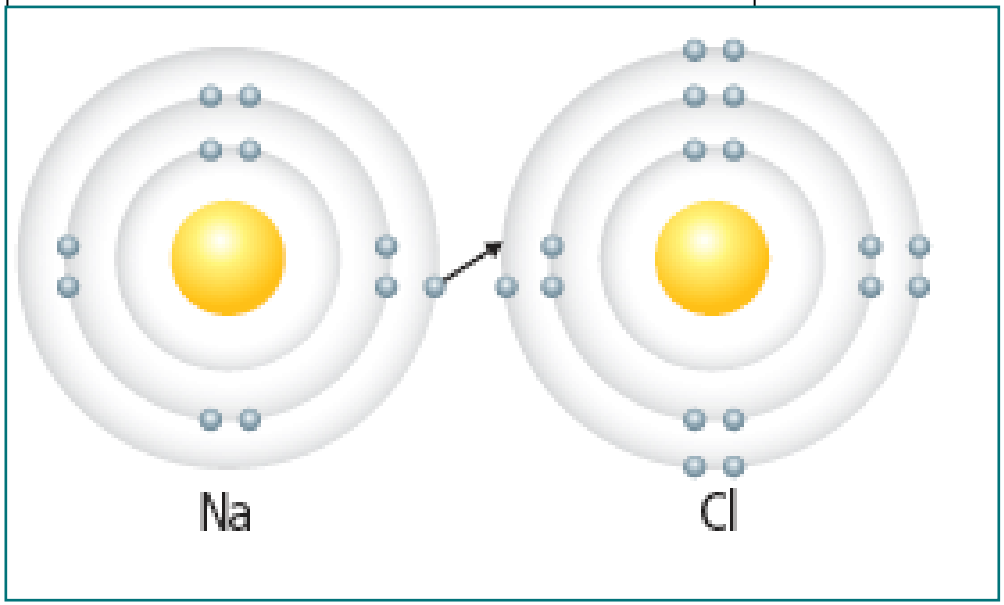
3.1 Compounds

- Compounds are pure substances made of more than one kind of atom joined together. The atoms are held together with chemical bonds.
- Compounds come in two basic types: **covalent** and **ionic**.

Covalent compounds share electrons to form molecules. Example: water H20



In ionic compounds, atoms gain or lose electrons to form ions. Example: NaCl



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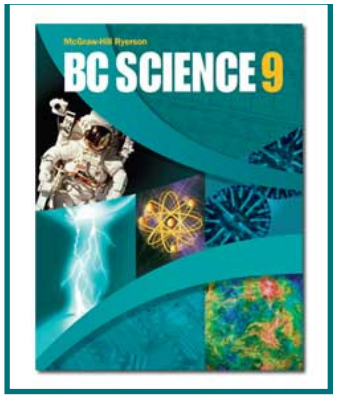
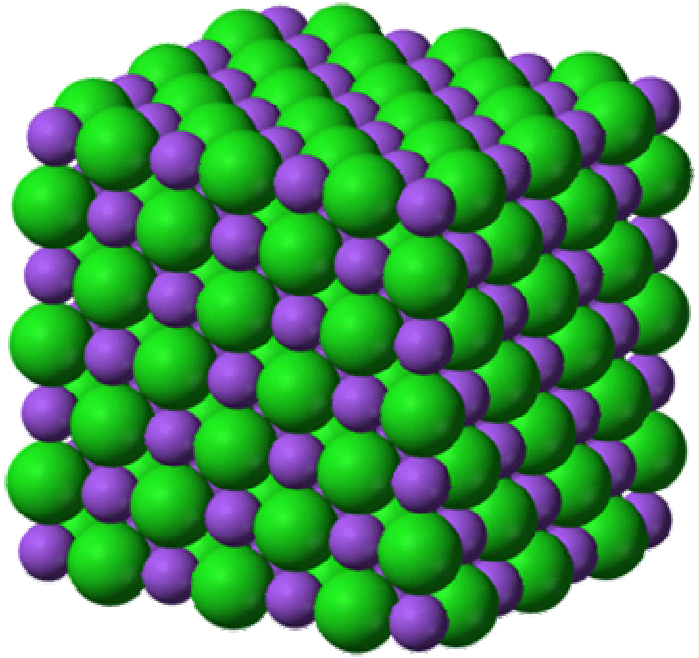
Ionic Compounds



- Ionic solids exist as a solid in the form of an ionic lattice.

- The positive ions attract all of the negative ions, and vice versa. In the example of table salt (NaCl) the one-to-one ratio of ions results in a simple square-shaped ionic cyrstal: (draw ¼ of this cube)



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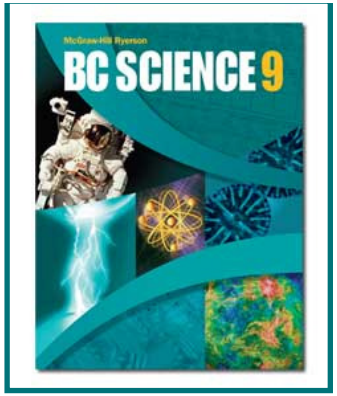
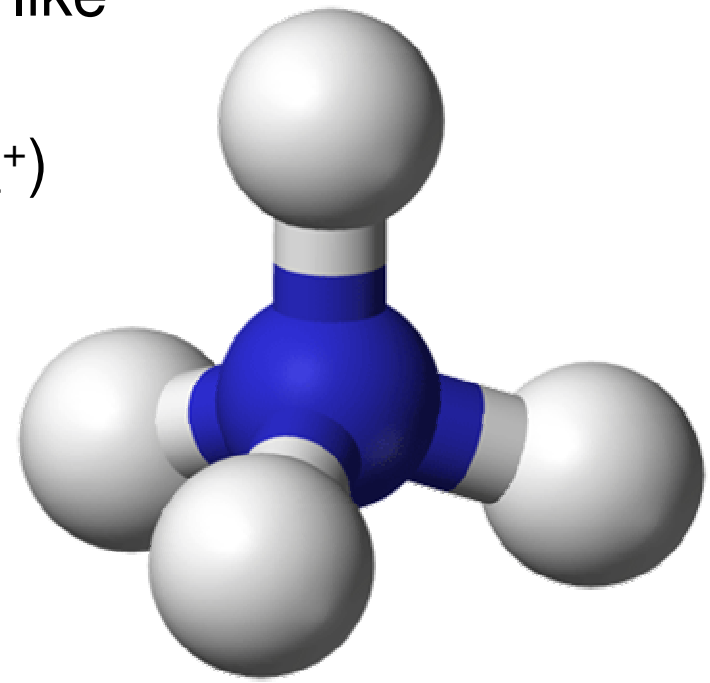


Polyatomic Ions

- Covalent and ionic bonds can occur together
- A molecule can gain or lose electrons to become charged, forming a polyatomic ion.
- Polyatomic ions form compounds like other ions.
  - Example: Ammonium ion (NH_4^+)
- There are many types of polyatomic ions, but they occur in a few basic shapes.



Take the Section 3.1 Quiz

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