

## Post-Laboratory Review Questions

- Covalent bonds may be classified as polar or nonpolar based on the difference in electronegativity between two atoms. Look up electronegativity values in your textbook:
  - Why are C—H bonds considered nonpolar?
  - Which is more polar, an O—H or N—H bond? Explain.
- To convert the following compounds from a solid to a liquid, what types of intermolecular forces must be overcome?
  - $I_2(s) \rightarrow I_2(l)$
  - $H_2O(s) \rightarrow H_2O(l)$
  - $NaI(s) \rightarrow NaI(l)$
  - $C_{16}H_{32}(s) \rightarrow C_{16}H_{32}(l)$
- In order for a substance to conduct electricity, it must have free-moving charged particles.
  - Explain the conductivity results observed for ionic compounds in the solid state and in aqueous solution.
  - Would you expect molten sodium chloride to conduct electricity? Why or why not?
  - Use the model of metallic bonding described in the *Background* section to explain why metals conduct electricity.