Name Date

Worksheet 7.1: Shapes of molecules molecular models practical

**1** Using molecular model kits, build the three following molecules: methane (CH4), boron trifluoride (BF3) and carbon dioxide (CO2).

**2** Draw the Lewis structures of these molecules.

**3** Draw the shapes of these molecules.

**4** Work out the bond angles and name the shapes of these molecules.

**5** Use molecular model kits to build the three following molecules: propane (C3H8), ammonia (NH3), water (H2O).

**6** Draw the Lewis structures for these molecules.

**7** Draw the shapes of these molecules.

**8** Work out the bond angles and name the shapes of these molecules.

**9** What difference do lone pairs of electrons make on the bond angle in a molecule?

**10** Using the molecular model kit, build carbon monoxide.

**11** Draw the Lewis structure for carbon monoxide.

**12** Describe what type of bond is formed in carbon monoxide.