***Chemistry*** Name: _____

Section _____ Separating Mixtures WS Date: _____

List the physical properties involved and then explain how you might use them to your advantage in separating the following mixtures.

1. Sand and water sand and water have very different particle sizes
   Pour the mixture through a filter paper. The water molecules will easily fit through the pores but the sand will be left in the filter paper.
2. Sugar and water sugar and water have very different vapor pressures (boiling points)
   Distill the water off and the sugar will stay behind
3. Oil and water Oil and water do not dissolve each other and have very different densities.
   Pour the mixture into a separating funnel and wait for them to settle. Open the valve to let the more dense water out.
4. Sand and gravel sand and gravel have different particle size
   Use a screen to sift the sand through leaving the gravel on the screen.
5. A mixture or heptane (boiling point 98ºC) and heptanol (boiling point 176ºC) _____
   Very different boiling points.
   Boil the heptane away leaving the heptanol in the flask.
6. A mixture of iodine and sodium chloride (Hint: Iodine is not soluble in water.) _____
   Solubility and particle size. Add water to dissolve the salt and filter out the iodine.
   Evaporate the water to recover the salt.
7. A mixture of lead and aluminum pellets Differences in color (lead is darker).
   Remove them based on color (inspection).
8. A mixture of salt and iron filings Iron is magnetic, salt is not.
   Use a magnet to remove the iron filings.