How Big is a Mole?
Supplemental Worksheet

Name: _____

Date: _____

Part 1: *Estimate* an answer for each question. State any assumptions, and show all work. Pay attention to units!

1. If you could string up a mole of xenon atoms like beads on a necklace, how many times would the necklace reach to the sun and back?

2. Compare the mass of a mole of eight year old children compare to the mass of the earth.

3. Compare the volume of a mole of coconuts to the volume of the earth.

4. What would be the radius of a planet whose surface area is equal to the area of a mole of notebook paper pages?

Part 2: ***Look up the necessary starting data***, then calculate the answer for each question. Report results to two (2) significant figures. Show all work. Pay attention to units! Once completed, compare your estimates from page 1 to your calculated answers.

5.   If you could string up a mole of xenon atoms like beads on a necklace, how many times would the necklace reach to the sun and back?

6. Compare the mass of a mole of eight year old children compare to the mass of the earth.

7. Compare the volume of a mole of coconuts to the volume of the earth.

8. What would be the radius of a planet whose surface area is equal to the area of a mole of notebook paper pages?