

### Activity #3 Moles in the Lab

Name \_\_\_\_\_

Date \_\_\_\_\_

It has been known for a long time that atoms and molecules interact in fixed whole number ratios. The unit of choice when measuring the number of particles is the mole. A mole of anything contains  $6.02 \times 10^{23}$  particles. That is there are  $6.02 \times 10^{23}$  atoms of helium in a mole of helium, and  $6.02 \times 10^{23}$  golf balls in a mole of golf balls.

Materials:

Lead

Copper

Water

Aluminum

Tin

Sucrose

Beakers

Graduated cylinders

Today we will be measuring out set numbers of atoms or molecules of various substances. Please measure out and return in the beakers provided:

Cu:  $1.85 \times 10^{23}$  atoms of copper

Pb: 1.75 moles of Lead

H<sub>2</sub>O:  $4.45 \times 10^{23}$  molecules of H<sub>2</sub>O

Al: 0.37 moles of Aluminum

Sn:  $1.25 \times 10^{23}$  atoms of tin

Sucrose:  $4.00 \times 10^{23}$  atoms

Show all calculations: