

Name:

What is a mole?

Moles (measurement):

- One mole =
- In chemistry, objects are _____ and _____.

How large is a mole?

- A mole of marshmallows would cover planet earth _____.
- A _____ would last longer than it will take for the universe to burn out.
- A mole of hockey pucks would have _____ to the moon.

Practice using moles.

- If we have a mole of pennies and divide them equally among the 6 billion people on earth, how much money would each person receive? Convert the answer into dollars.
- If that money was spent at a constant rate of 1 million dollars a day, how long would it take before you ran out of money? Express answer in years.

Practice using moles part 2.

- Get in a group of 2-3. Obtain 5-10 coins from the teacher and stack them one on top of the other. Measure the height of the stack in centimeters.
 1. What is the average height of one coin?
 2. Using the average height of one coin determine the height of a stack of 6.02×10^{23} coins.
 3. Convert the height to kilometers.
 4. How many light years (measured in seconds) is this? (Light speed = 3.00×10^8 km per second)
 5. How many round trips is this to the moon? (Round trip to the moon is 728,000 km)