**Chemistry 11: Study Guide for Mole Concept Test Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_**

**My “Mole Concept Test” will take place on: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!**

*Before I write my “Mole Concept Test”, I will be able to:*

* **explain why the mole is used in chemistry**
	+ know how to find *atomic mass* on the periodic table
	+ know the relationship between atomic mass and molar mass
	+ recognize that a mole is a unit for counting atoms, ions, and molecules
* **perform calculations involving the mole**
	+ determine the molar mass of an element or compound
	+ convert among particles, moles, and mass
* **understand the relationship between moles and gases at STP**
	+ know the volume of a mole of gas at STP (i. e. 22.4 L)
	+ convert among moles, mass, and volume of a gas at STP
* **perform calculations involving molecular and empirical formulae**
	+ distinguish between molecular and empirical formulae
	+ determine the percent composition by mass from the formula of a compound
	+ determine the empirical formula for a compound from its percent composition by mass
	+ determine a molecular formula from the molecular mass and empirical formula
* **Describe concentration in terms of molarity**
	+ Know that the units for molarity/concentration are mol/L or M
	+ Write a procedure for how to prepare a solution of known molarity (a standard solution)
* **Perform calculations involving molarity**
	+ Perform calculations relating mass, moles, volume, and molarity
* **Understand the meanings of the following vocabulary words:**
	+ atomic mass
	+ empirical formula
	+ molarity
	+ molar mass
	+ molar solution
	+ mole
	+ molecular formula
	+ molecular mass
	+ quantitative transfer
	+ percentage composition
	+ standard solution
	+ STP