


Chemistry Curriculum Bundle #8

Title		Suggested Dates
Moles		2/1 – 2/19 (13 days)

Big Idea/Enduring Understanding	Guiding Questions
The mole is a basic unit of chemistry.	How do we count the large quantity of particles involved in chemical reactions?

The resources included here provide teaching examples and/or meaningful learning experiences to address the District Curriculum. In order to address the TEKS to the proper depth and complexity, teachers are encouraged to use resources to the degree that they are congruent with the TEKS and research-based best practices. Teaching using only the suggested resources does not guarantee student mastery of all standards. Teachers must use professional judgment to select among these and/or other resources to teach the district curriculum.

Knowledge & Skills with Student Expectations	District Specificity/Examples	Suggested Resources (See note above)
<p>11 The student knows that balanced chemical equations are used to interpret and describe the interactions of matter.</p> <p>11C Explain and balance chemical and nuclear equations using number of atoms, masses, and charge.</p>	<p><i>Including</i></p> <ul style="list-style-type: none"> • Use and apply the Law of Conservation of Mass • Calculate <ul style="list-style-type: none"> ○ Molar Mass ○ Percent composition ○ Number of particles using Avogadro’s constant ○ Empirical formulas ○ Molecular formulas <p><i>define and use the concept of a mole</i></p> <p><i>use the mole concept to calculate the number of atoms, ions, or molecules in a sample of material</i></p> <p><i>calculate percent composition and empirical and molecular formulas</i></p> <p><i>use the law of conservation of mass to write and balance chemical equations</i></p> <p><i>perform stoichiometric calculations, including determination of mass relationships between reactants and products, calculation of limiting reagents, and percent yield</i></p>	<p>Fun and Games in Chemistry Claudia Wallace and Jane Smith http://cast2007.smithwallace.googlepages.com/MolarMassConversions.pdf http://cast2007.smithwallace.googlepages.com/Moles-Puzzled.pdf</p> <p>How Big is a Mole Lab? See chemistry resource folder</p> <p>Lab: Percent of water in popcorn See chemistry resource folder</p> <p>Lab: Mole Airlines See chemistry resource folder</p> <p>Lab: Mole Airlines Answer Sheet See chemistry resource folder</p> <p>Lab: Mole Airlines Teacher Answers See chemistry resource folder</p> <p>Lab: Composition of Hydrates (PAP) See chemistry resource folder</p>