

1014-Q1-623      **Bill Fox\*** ([bfox@fmarion.edu](mailto:bfox@fmarion.edu)), Department of Mathematics, Francis Marion University, Florence, SC 29501. *Mathematical Modeling of Chemical Stoichiometry.*

In beginning chemistry classes, students are taught a variety of techniques for balancing chemical equation. The most common method is inspection. This paper addresses using a system of linear mathematical equations to solve for the stoichiometric coefficients. Many linear algebra books carry the standard balancing of chemical equations as a system of linear equations. We continue by giving a mathematical modeling algorithm for balancing the more complicated redox equations using a system of linear equations. We discuss how to balance equations with the conservation of mass and charge. (Received September 21, 2005)