Virginia Standards of Learning Assessment
Chemistry Performance Level Descriptors

Fail/Does Not Meet	Pass/Proficient	Pass/Advanced
A student performing at this level should be able to: • Recognize safe investigations, identify the variables, and follow safe laboratory procedures. • Recognize that elements are unique and properties can be determined from the periodic table. • Identify compounds, formulas, and balanced equations, and that energy is involved. • Recognize that chemical quantities are based on molar relationships. • Recognize that the Kinetic Molecular Theory explains the behavior of matter and interactions between particles.	A student performing at this level should be able to: • Design and illustrate safe and controlled investigations, and interpret the results using appropriate calculations, procedural and error analysis. • Apply information provided by the periodic table to perform calculations, construct models, and make comparisons regarding the physical and chemical nature of matter. • Classify and describe compounds and bonding to provide appropriate names, formulas, structures, and properties. • Classify, describe and balance equations and interpret factors that affect equilibrium and kinetics. • Apply the Kinetic Molecular Theory to predict the behavior of matter and interactions between particles. Apply molar relationships to perform calculations involving molar conversions, concentrations and stoichiometry.	A student performing at this level should be able to: • Use procedural and error analysis to defend or refute the conclusions and/or results of a controlled investigation. • Evaluate information derived from historical models and the periodic table to make inferences, conclusions, and predictions about chemical and physical nature of matter • Use bonding principles to explain the interaction of substances during chemical changes, and evaluate their real life applications. • Predict relationships in calculations and laboratory investigations, which include percent yield and limiting/excess reactants. • Predict and infer the behavior of matter, based on the Kinetic Molecular Theory and interactions between particles.