Unit 8 –Reaction Rates and Chemical Equilibrium **Name:** _____

Unit 8 – Rates of Reactions and Chemical Equilibrium

HS-PS1-5 – Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.

HS-PS1-6 – Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.*

Std	Learning Target										
PS-1.5	8.1 – I can describe the rate of a reaction using the ideas of concentration of reactants, concentration of products, and time. I can explain why rate is dependent on concentration.										
PS-1.5	8.2 – I can calculate the average rate of reaction with respect to the concentration reactants and/or products.										
PS-1.5	8.3 – I can hypothesize about the impact that concentration, temperature, and pressure have on the rate of a chemical reaction.										
PS-1.5	8.4 – I can explain what the activation energy of a reaction is. I can identify it on a reaction coordinate and explain how it influences the rate of a reaction.										
PS-1.5	8.5 – I can define what a catalyst is and explain how it is related to the rate of chemical reaction. I can explain how a catalyst is related to a reactions activation energy.										
PS-1.6	8.6 – I can describe what equilibrium is and relate it to rates of the forward and reverse reactions.										
PS-1.6	8.7 – I can define Le Chatelier's principle and use this principle to predict how concentration, temperature, and pressure impact a given equilibrium.										