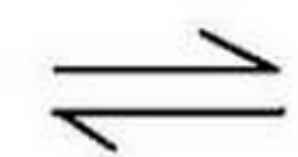
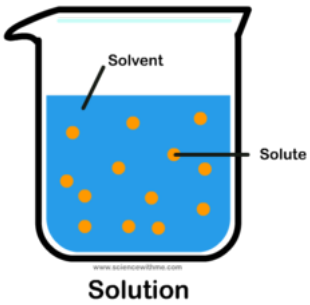
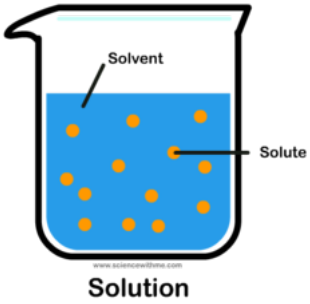
Equilibrium

Study online at https://quizlet.com/_4p44is

1.	**dynamic equilibrium**	continuous, random movement of particles, but no overall change in concentration of materials
2.	**LeChatelier's Principle**	When a stress is applied to a system at equilibrium, the equilibrium shifts to relieve the stress
3.	**Reversible Reaction**	a reaction where the conversion of reactants into products and the conversion of products into reactants can happen simultaneously 
4.	**Equilibrium Constant (K)**	Ratio of concentrations of the products to the concentrations of the reactants at the point of equilibrium, where each reactant and product in the expression is raised to the power of its stoichiometric coefficient. $$aA + bB \leftrightarrow cC + dD$$ $$K = \frac{[C]^c[D]^d}{[A]^a[B]^b}$$
5.	**Adding Products**	shift to left
6.	**Removing Products**	shift to right
7.	**An increase of pressure**	causes a shift to the side with less moles.
8.	**A decrease in pressure**	causes a shift to the side with more moles.
9.	**Catalyst**	decrease the time it takes to establish equilibrium by lowering the activation energy. Does not change equilibrium itself.
10.	**K>1**	Indicates that the products are favored
11.	**K < 1**	Indicates that the reactants are favored

12.	**Q>K**	the system needs to shift to the left to re-establish equilibrium to get Q = K
13.	**Q<K**	the system needs to shift to the right to reestablish equilibrium to get Q = K
14.	**Q**	The equilibrium expression written with initial concentrations in order to determine the direction of shift
15.	**gaseous and aqueous**	the only phases included in a Keq expression
16.	**+Ⱨ**	endothermic reaction, heat is a reactant
17.	**-Ⱨ**	exothermic reaction, heat is a product
18.	**Adding reactants**	shift to the right
19.	**Removing reactants**	shift to the left
20.	**Molarity**	moles of solute per liter of solution
21.	**solute**	substance being dissolved 
22.	**solution**	combination of solute and solvent 

23. **rate of reaction**	How fast is the concentration of each substance changing?
24. **equilibrium**	rate of forward reaction is equal to the rate of the reverse reaction
25. **Q=K**	comparison of Q and K at equilibrium
26. **Solvent**	In a solution, the substance in which the solute dissolves.