

Reaction Rates

Picture Vocabulary

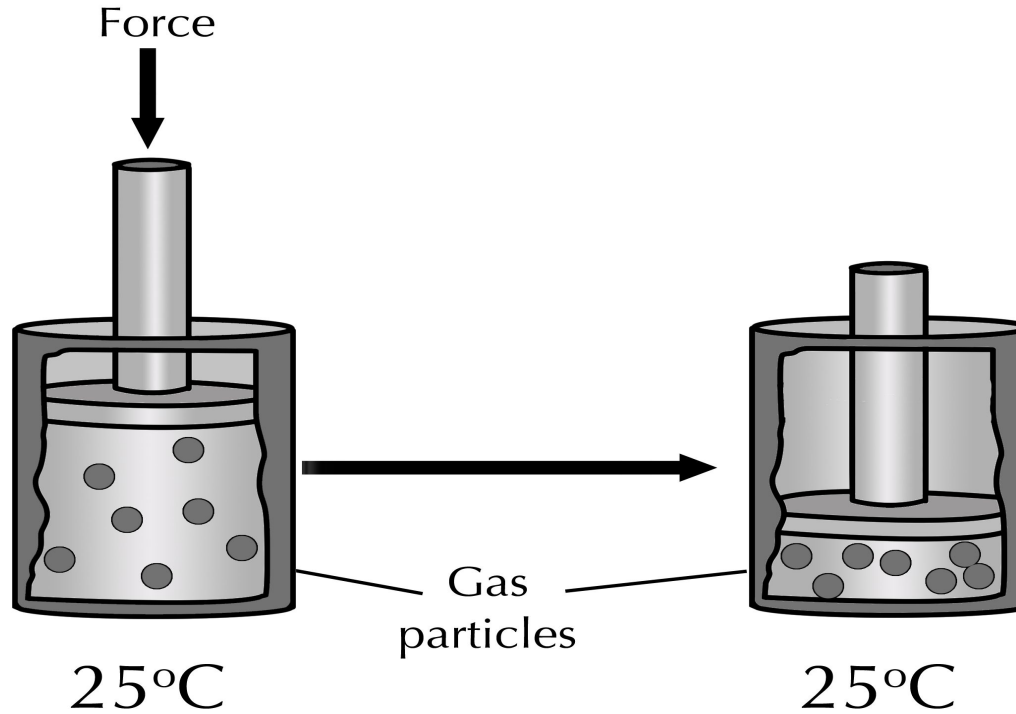
C4ABC Reaction Rates

Concentration



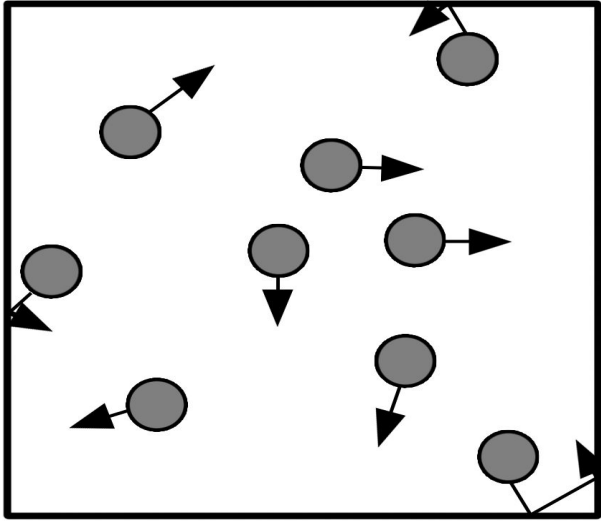
A measurement of the amount of solute that is dissolved in a given quantity of solvent

Pressure

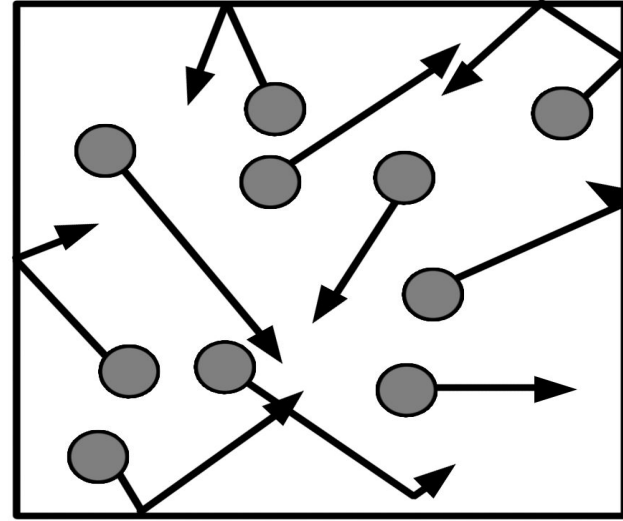


Force of objects pushing on other objects

Temperature



Cool gas, fewer and less energetic collisions



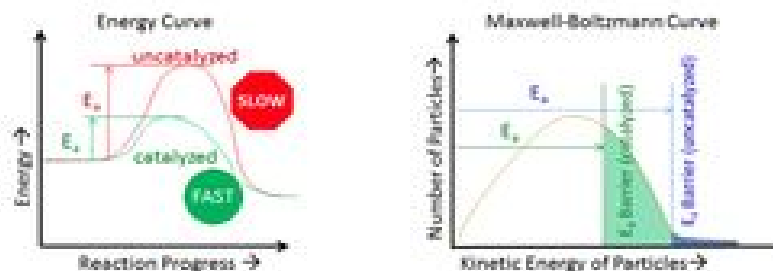
Hot gas, more and more energetic collisions

A measure of the average amount of kinetic energy of the molecules of a substance

Catalyst

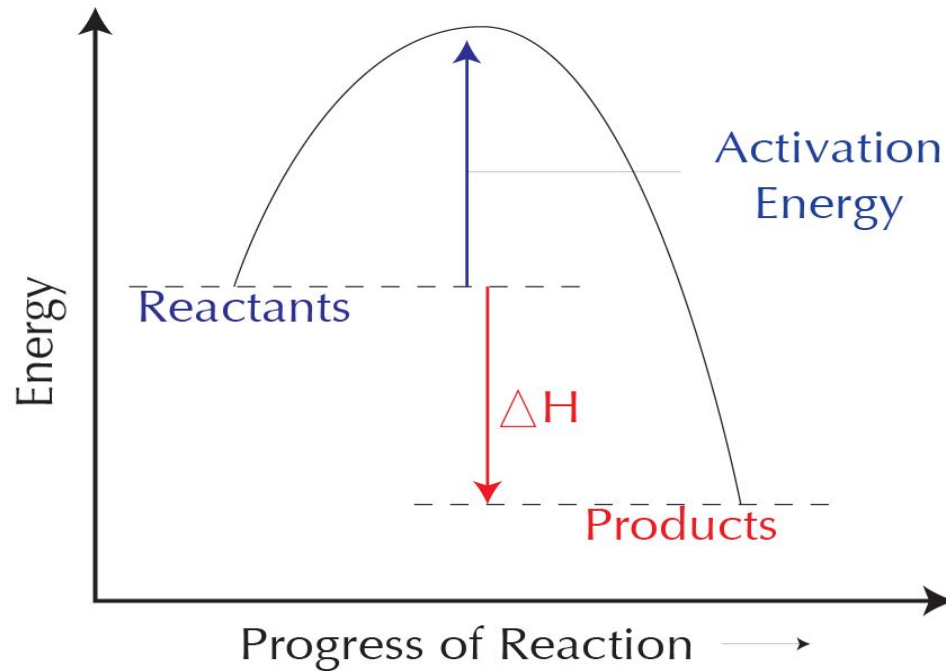
Catalysts Speed Up Reaction Rates

- All catalysts work by lowering the activation energy (E_a) of a reaction.
- By lowering the E_a barrier they cause more of the collisions to become effective (inelastic).



A substance that speeds up or promotes a chemical reaction without being chemically changed by the reaction

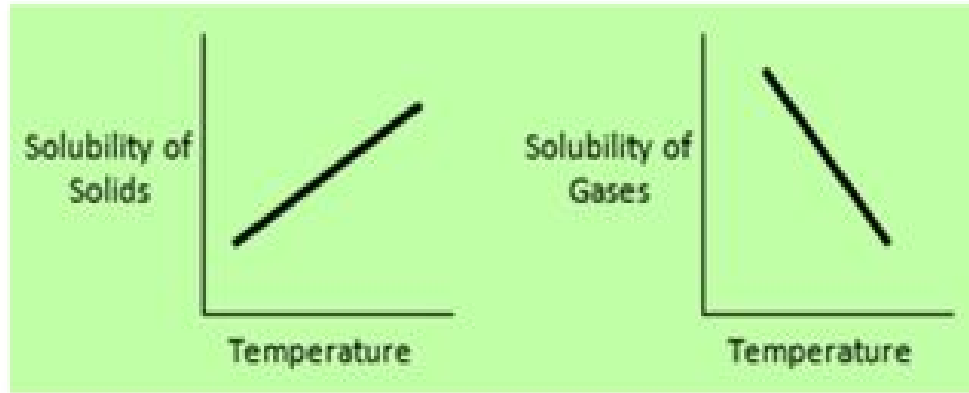
Activation energy



The amount of energy input needed to start a reaction

Solubility

Temperature is a Key Factor in Solubility



The solubility of solids will usually increase as temperature increases. The solubility of gases will decrease as temperature increases.

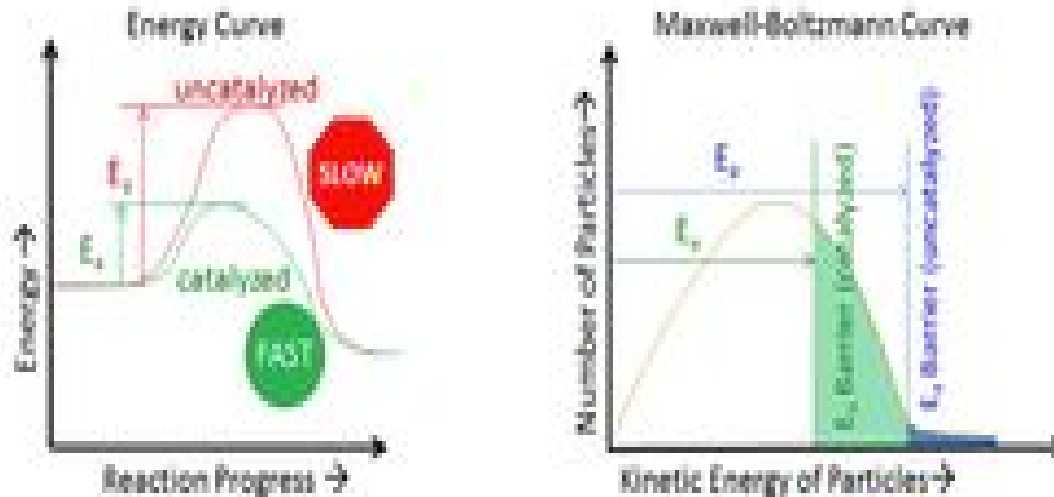
The ability of a substance to dissolve in another substance to form a homogenous mixture

Particle size



Dimension (normally average diameter) of a single grain

Speed of reaction



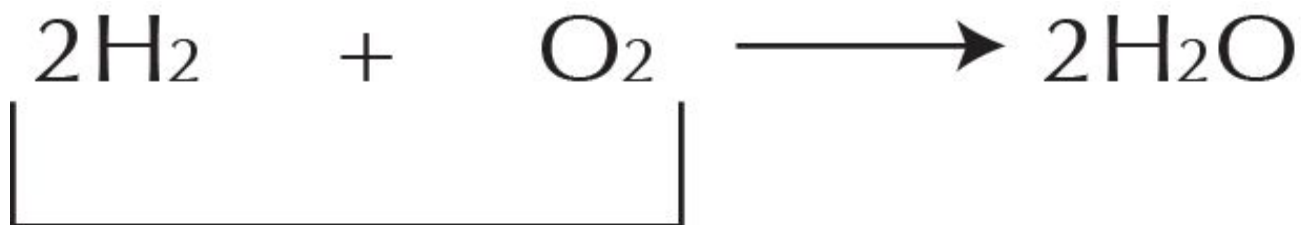
How fast or slow a reaction takes place

Chemical reaction



The process by which one or more substances change to produce one or more different substances

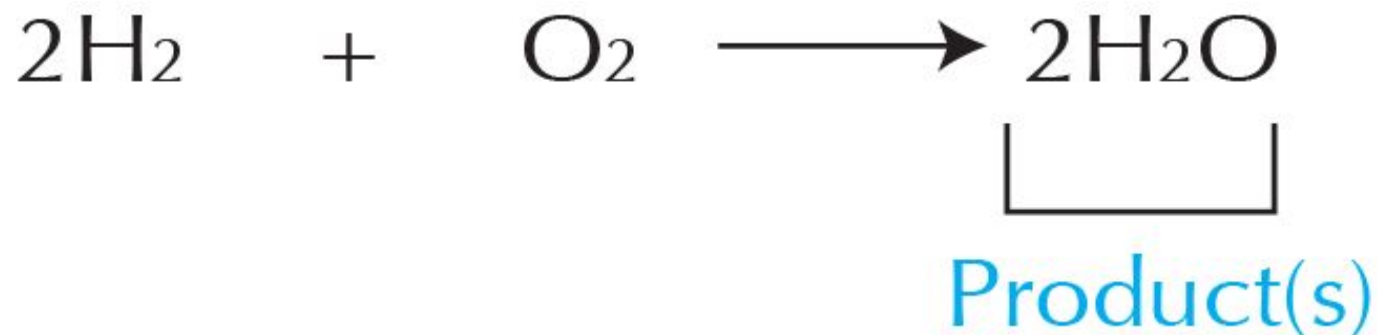
Reactant



Reactants

A substance that takes part in and undergoes change during a reaction

Product



The ending substance(s), written on the right side of the chemical reaction arrow, that is created during a chemical change