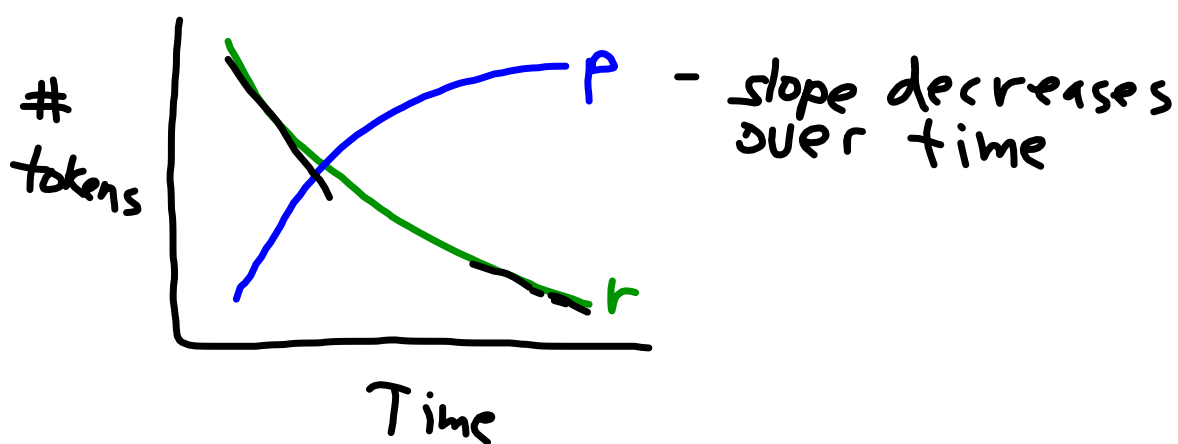


Reaction Rate Analogy

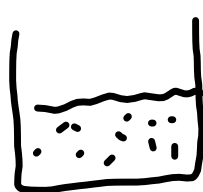


Particles must collide Successfully to react.
In "real" reactions - very low success

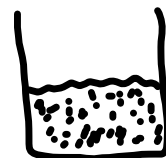
Kinetic Molecular Theory Explains Factors Affecting Rate of a Chemical Reaction

KM theory (or collision theory)
 — particles must collide to react.

1. Concentration

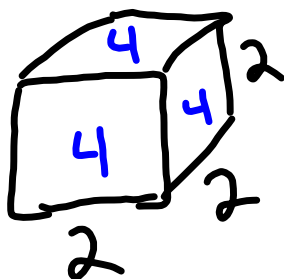


low

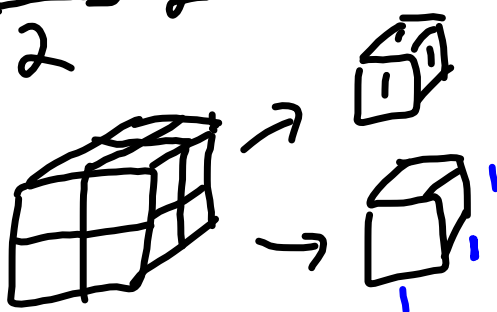


high

2. Surface area (higher S.A. = fast)
 heterogeneous rxn



$$S.A. = 6 \times 4 = 24$$



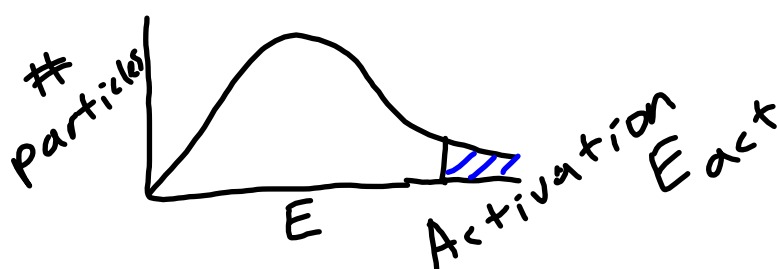
$$\begin{array}{r} 8 \text{ cubes} \\ \times 6 \\ \hline 48 \end{array}$$

— more S.A.
 — greater chance of collision.

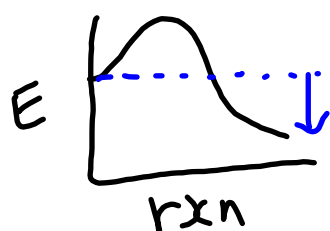
Kinetic Molecular Theory-Continued

3. Nature of reaction.

- reacting particles must have a minimum amount of energy to react successfully
- Potential energy diagrams.



Exothermic endothermic

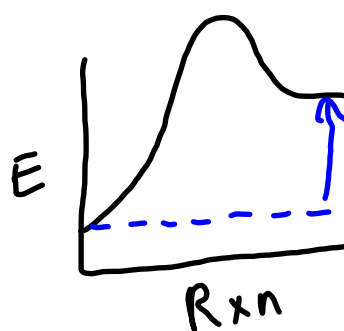


loss
of
E from
system

ΔH is negative
e.g. fire

Endothermic -

e.g. growth
of living
things



Read text
471-477