

5 Factors affecting Rate of Reaction

1.	Temperature (any reactions)	 ↑ temp. → ↑ kinetic energy of particles → ↑ frequency of effective collisions → ↑ rate of rxn
2.	Concentration (when one or more reactants are in solutions)	 ↑ concentration → ↑ number of particles per unit volume → ↑ frequency of effective collisions → ↑ rate of rxn
3.	Pressure (when one or more reactants are gases)	 ↑ pressure of a gas → gas particles are closely packed → ↑ frequency of effective collisions → ↑ rate of rxn
4.	Surface Area (when one or more reactants are solids)	 ↓ particle size of solid → ↑ surface area → ↑ frequency of effective collisions on the surface → ↑ rate of rxn
5.	Catalyst	 → Adding a suitable catalyst → Provides an alternative pathway involving a lower activation energy → More colliding particles possess energy equal to or greater than the activation energy → ↑ frequency of effective collisions → ↑ rate of rxn

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