

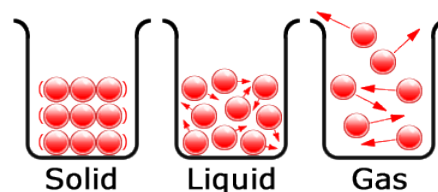
Triple Unit Overview – C6 The rate and extent of chemical change

You will learn about:

- Rate of reaction and the collision theory.
- Reversible reactions and energy changes.

You will be able to:

- Calculate rate of reactions.



Key Words

activation energy catalyst
collision frequency
concentration
endothermic reaction
equilibrium
exothermic reaction
gradient
Haber process
Le Châtelier's principle
product
random
rate of reaction
reactants
reversible
catalyst
concentration
temperature
surface area

Key learning points

Calculating rate of reaction	
Factors which affect rate of reaction	
RP Changes in concentration	
Collision theory	
Catalysts	
Reversible reactions and energy changes	
Le Chatelier's principle	
Equilibrium	
Changing concentration and pressure	

Links to other subjects:

SMSC: Consider the moral ambiguity of the work of some scientists, for example Fritz Haber.

Literacy:

Write instructions on how to calculate the mean rate of reaction, explain what is meant by the units g/s, cm³/s, mol/s, explain the effect of different factors on rate of reaction, describe collision theory, explain changes in the rate of reaction using collision theory, define the term activation energy and explain the effect of using a catalyst, identify advantages of using catalysts, explain what is meant by a reversible reaction, define exothermic and endothermic reactions, describe the effects of temperature on reversible reactions, explain the term equilibrium, describe Le Châtelier's principle, explain the effects on equilibrium of changing conditions, research the work of Le Chatelier, justify your predictions.

Numeracy: Use graphical data to explain parts of a graph of the rate of reaction, use graphs to explain what occurs as a reaction proceeds, use data to predict the effect of concentration, temperature and pressure on equilibrium