

Triple Unit Overview – The rate and extent of chemical change

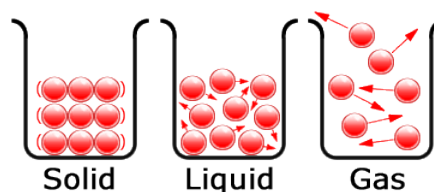
Target grade for test:.....

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



<table border="1"> <tr> <td>Key learning points</td> <td></td> </tr> <tr> <td>Calculating rate of reaction</td> <td></td> </tr> <tr> <td>Factors which affect rate of reaction</td> <td></td> </tr> <tr> <td>RP Changes in concentration</td> <td></td> </tr> <tr> <td>Collision theory</td> <td></td> </tr> <tr> <td>Catalysts</td> <td></td> </tr> <tr> <td>Reversible reactions and energy changes</td> <td></td> </tr> <tr> <td>Le Chatelier's principle</td> <td></td> </tr> <tr> <td>Equilibrium</td> <td></td> </tr> <tr> <td>Changing concentration and pressure</td> <td></td> </tr> </table> <p>Links to other subjects:</p> <p>SMSC: Consider the moral ambiguity of the work of some scientists, for example Fritz Haber.</p> <p>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 Chatelier's principle, explain the effects on equilibrium of changing conditions, research the work of Le Chatelier, justify your predictions.</p> <p>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</p>	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		<p style="text-align: center;">Key Words</p> <p>activation energy catalyst collision frequency concentration endothermic equilibrium exothermic reaction gradient Haber process Le Chatelier's principle product random rate of reaction reactants reversible catalyst concentration temperature surface area</p>
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