

CLASS-10  
PHYSICAL SCIENCE  
PERIOD PLANS

**CHAPTER: 02 – CHEMICAL REACTIONS AND EQUATIONS**

**PERIOD PLAN-07 :**    Effect of oxidation in daily life  
Corrosion – corrosion of food and metals like iron  
Corrosion – reasons – preventions

Content Analysis	Class Room Environment	Teaching Learning Material
<p><b><u>Effect of oxidation in daily life:</u></b></p> <ul style="list-style-type: none"> <li>* When we cut an apple it turns into brown colour after some time.</li> <li>* Iron substances turns into dark brown colour when reacts with oxygen in humid air.</li> <li>* Burning crackers is also oxidation reactions.</li> <li>* Bananas and potatoes turns into brown because the polyphenol oxidase or Tyrocinase enzyme reacts with oxygen.</li> <li>* Iron substances does not rust in oxygen free water or dry air.</li> </ul> <p>Silver and copper vessels are get rusted.</p>	<p><b><u>Conversation &amp; Explanation:</u></b> About the process of oxidation and the effects in daily life.</p>	Photos
<p><b><u>Some oxidation reactions:</u></b></p> <ul style="list-style-type: none"> <li>* Some metals reacts with humid air or with some acids and form metallic oxides. This is called corrosion.</li> <li>* Iron converts into brown colour when it rusted.</li> <li>* Silver converts into black colour when it rusted.</li> </ul> $4Ag + 2H_2S + O_2 \rightarrow 2Ag_2S + 2H_2O$ <ul style="list-style-type: none"> <li>* Copper converts into Green colour when it rusted.</li> </ul> $2Cu + O_2 \rightarrow 2CuO$	<p><b><u>Conversation &amp; Explanation:</u></b> About the process of oxidation and the effects in daily life.</p>	Photos
<p><b><u>Prevention of oxidation :</u></b></p> <ul style="list-style-type: none"> <li>* Corrosion can be prevented by shielding the metal surface from oxygen and moisture.</li> <li>* Painting is one method to prevent the corrosion.</li> <li>* Oiling, greasing, galvanizing are the methods to prevent corrosion.</li> <li>* Alloying is very good method.</li> <li>* Pure iron is soft and easy stretch.</li> <li>* If iron mixed with chromium, Nickel and Carbon then the qualities of iron improves.</li> <li>* Stainless steel is a mixture of these metals.</li> <li>* Chromium coating to iron is one method to prevent corrosion.</li> </ul>	<p><b><u>Conversation &amp; Explanation:</u></b> About the preventing process of oxidation. How to protect metals or metallic apparatus?</p>	Photos