

Meden School Curriculum Planning							
Subject	Chemistry	Year Group	12	Sequence No.		Topic	3.1.7 Redox

Retrieval	Core Knowledge	Student Thinking
What do teachers need to <b>retrieve</b> from students before they start teaching <b>new content</b> ?	What <b>specific ambitious knowledge</b> do teachers need to teach students in this sequence of learning?	What real life examples can be applied to this sequence of learning to <b>development of our students thinking, encouraging them to see the inequalities around them</b> and 'do something about them!'
GCSE AQA C4 Electrolysis section. Oxidation and reduction, OILRIG etc.  GCSE AQA C10 rusting and its solutions.	Oxidation is the process of electron loss and oxidising agents are electron acceptors. Reduction is the process of electron gain and reducing agents are electron donors. The rules for assigning oxidation states. Elements are zero, group 1 metals =+1, Group 2 metals are +2, Oxygen in compounds and ions is always -2 (except in hydrogen peroxide) Group 7 halide ions are always -1, Students should be able to: <ul style="list-style-type: none"> <li>work out the oxidation state of an element in a compound or ion from the formula</li> <li>write half-equations identifying the oxidation and reduction processes in redox reactions, including the addition of H<sup>+</sup> ions and water molecules when required.</li> <li>combine half-equations to give an overall redox equation, half equations must have the same number of electrons before they are combined.</li> </ul>	Everyday examples of redox reactions include combustion, respiration, rusting, photosynthesis.  Dealing with rusting is a massive consideration when building anything out of iron or steel. Industrial processes such as galvanising or the use of sacrificial anodes on boats could be researched.