- Because the oxidation state of hydrogen increased to +1, it is oxidized

Balancing, then combining half equations

- Write out the two half equations
- Make sure each has the same number of electrons
- Add them together
- The electrons will cancel. Check the charges balance
- Examples
 - ➔ In the reaction between chlorine gas and potassium iodide, the chlorine is reduced to Cl- ions and the iodide ions are oxidized. Write half equations and an overall redox equation
 - \rightarrow Cl₂ \rightarrow Cl⁻, then Cl₂+2e⁻ \rightarrow 2Cl⁻
 - \rightarrow I⁻ \rightarrow I², then 2I⁻ \rightarrow I₂+2e⁻
 - $\textbf{\textbf{\textbf{+}}} C|_2\textbf{\textbf{+}} 2\textbf{\textbf{-}} \textbf{\textbf{\textbf{+}}} 2\textbf{\textbf{C}}|\textbf{\textbf{-}}\textbf{\textbf{+}}|^2$

Disproportionation reaction

 Involves an element, only one element, in a single species being simultaneously oxidized and reduced

You need to understand...

*Oxidation number is a useful concept in terms of the classification of reactions as redox and as disproportionation *Metals, in general, form positive ions by loss of electron with an increase in oxidation number

* Non-metals, in general, form negative too by gain of electrons with an decrease in oxidation number

You need to be to ... DAGE

*You reed to be able to indicate the oxidation number of an element in a compound or ion, using a roman numeral

*You need to be able to write formulae given oxidation numbers

*Be able to write ionic half-equations and use them to construct full ionic equations