Note	Taking	Guide:	Episode	1401
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Name

electrochemistry - the study of electricity Joxidation L - Ireduction reactions

_-related applications of

oxidation numbers -

- numbers assigned to the elements in a chemical reaction that give the apparent ___ charge of the elements
- In ionic compounds oxidation # = true charge
- In molecular compounds oxidation # is based on _electron distribution
- Oxidation #'s are written with the sign first st and then the number

Rules For Assigning Oxidation Numbers:

oxidation# situation uncombined element sum in a compound charge on ion sum in a polyatomic ion

elements in a compound:

fluorine	-1	
oxygen	-2	
hydrogen	+1	
group 1	+1	
group 1	+2	
Aluminum	+3	

Example:

2 NaCl + MgO
$$\rightarrow$$
 Na₂O + MgCl₂
+1 -1 +2 -2 +1 -2 +2 -1
+1+ (Cl) =0

CuSO ₄	$Mg(NO_3)_2$
Cu+2(SO4)-2	Mg+2 (NO3)-1
4(-2) = -8	3(-2) = -6
S + (-8) = +6	N + -6 = -1

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An <u>oxidation - reduction</u> in which atoms or ions underg	go a <u>change</u> in <u>o</u>	xidation	number
Is this a redox reaction?	2 Na + Cl ₂	\rightarrow 2 Nac	Redox Reaction
When an <u>atom</u> or <u>ion</u> in	a reaction has an inc	crease	oxidation in
number, it has undergone the	e process of <u>oxidation</u>		by
losing 1 or more <u>e</u>	lectron		ovidized
The oxidation # of Na went	from <u>0</u> to <u>+1</u> ,	so Na was ₋	<u>oxidized</u>
When an <u>atom</u> or <u>ion</u> in	a reaction has a	rease	in oxidation
number, it has undergone the	e process of <u>reduction</u>	1	by
gaining 1 or more	electron		
The oxidation # of Cl went f	rom <u> </u>	o CI was <u>re</u>	educed
	150 050		
	LEO says GER		
ng electrons oxidized		gaining	electrons - reduced
Chemistry Assignment #3: (On Assignment #2, dr	aw circles o	around the reactants
that are oxidized and square	On Assignment #2, dr s around those that a	raw circles o	around the reactants
that are oxidized and square	On Assignment #2, dr s around those that a Types of Redox Rea	raw circles of re reduced ctions:	around the reactants
that are oxidized and square 3 #1 Electron exchange happe contact	On Assignment #2, dress around those that a Types of Redox Readors Mirectly reed, using electricity	raw circles of re reduced ctions:	around the reactants emicals come in
#1 Electron exchange happe contact #2 Electron exchange is for electrolysis	On Assignment #2, dress around those that a Types of Redox Readens directly reed, using electricity arated so	raw circles on the character character considerate character chara	around the reactants . emicals come in This is called on _ exchange
#1 Electron exchange happe contact #2 Electron exchange is for electrolysis #3 The chemicals are sepa occurs only when the electrolysis	On Assignment #2, dress around those that a Types of Redox Readens directly reed, using electricity arated so	raw circles on the character character considerate character chara	around the reactants . emicals come in This is called on _ exchange
#1 Electron exchange happe contact #2 Electron exchange is for electrolysis #3 The chemicals are sepa occurs only when the electricity Chemistry Quiz:	On Assignment #2, dress around those that a Types of Redox Readens directly reed, using electricity arated so	raw circles of re reduced ctions: _, as the chat electrons a wire	emicals come in This is called exchange producing

NaOH +HCl \rightarrow NaCl +H2O No redox H2 +Cl2 \rightarrow 2HCl Redox SO3 +H2O \rightarrow H2SO4 No Redox

2KNO3 \rightarrow 2KNO2 +O2 Redox H2+CuO \rightarrow Cu +H20 Redox