

Unit
11
Lesson
2

AIM
• Is this a redox reaction?

AGENDA

- Redox number line
- Identifying redox reaction CER practice
- U11L2 video

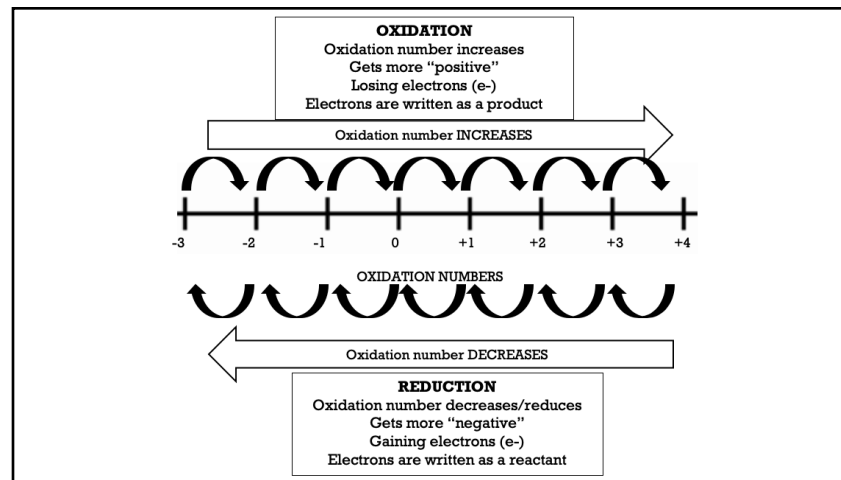
YOYO

- Pull up the U11L2 (unit 11 lesson 2) video on YouTube

HOMEWORK

- Ox #'s/Is this Redox Castle Learning due tonight by 11:59 pm
- Follow the calendar

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2

Practice Questions

- $0 \rightarrow +3$: _____ because _____
- $+2 \rightarrow +1$: _____ because _____
- $-2 \rightarrow -4$: _____ because _____
- $-1 \rightarrow 0$: _____ because _____
- $+2 \rightarrow 0$: _____ because _____
- $-1 \rightarrow +1$: _____ because _____

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Practice Questions

- $Fe^{3+} + 3e^- \rightarrow Fe^0$: _____ because _____
- $Fe^0 \rightarrow Fe^{3+} + 3e^-$: _____ because _____
- $Cu^0 \rightarrow Cu^{2+} + 2e^-$: _____ because _____
- $Cl_2^0 + 2e^- \rightarrow 2Cl^-$: _____ because _____

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Is This a Redox Reaction?

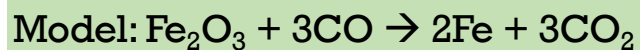
- **The Task:**
- Looking at the 10 reactions below, determine if they are redox reactions.
- Create a mini CER poster for at least 2 of the equations – use the model below to help you
- This is practice for your benefit and will not be collected

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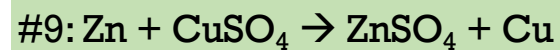
The Reactions

Model: $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$	REDOX	NOT REDOX
1. $\text{HCl} + \text{NaOH} \rightarrow \text{NaCl} + \text{H}_2\text{O}$	REDOX	NOT REDOX
2. $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$	REDOX	NOT REDOX
3. $\text{AgNO}_3 + \text{KCl} \rightarrow \text{AgCl} + \text{KNO}_3$	REDOX	NOT REDOX
4. $\text{NaCl} + \text{H}_2\text{SO}_4 \rightarrow \text{Na}_2\text{SO}_4 + \text{HCl}$	REDOX	NOT REDOX
5. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$	REDOX	NOT REDOX
6. $\text{BaCl}_2 + \text{K}_2\text{SO}_4 \rightarrow 2\text{KCl} + \text{BaSO}_4$	REDOX	NOT REDOX
7. $\text{Cu} + 2\text{AgNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + 2\text{Ag}$	REDOX	NOT REDOX
8. $\text{HCl} + \text{CaCO}_3 \rightarrow \text{CaCl}_2 + \text{H}_2\text{O} + \text{CO}_2$	REDOX	NOT REDOX
9. $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$	REDOX	NOT REDOX
10. $\text{Fe} + \text{CuSO}_4 \rightarrow \text{FeSO}_4 + \text{Cu}$	REDOX	NOT REDOX

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Is This a Redox Reaction?

Question: Is $\text{Fe}_2\text{O}_3 + 3\text{CO} \rightarrow 2\text{Fe} + 3\text{CO}_2$ an example of a redox reaction?

Claim: Yes, we believe the reaction is an example of a redox reaction

Evidence:

CO		
C	O	
Sub	1	1
Ox#	+2	-2
Total	+2	-2

Fe ₂ O ₃		
Fe	O	
Sub	2	3
Ox#	+3	-2
Total	+6	-6

CO ₂		
C	O	
Sub	1	2
Ox#	+4	-2
Total	+4	-4

Fe has an oxidation # of 0 because it is all by itself.

Reasoning: Yes we believe the reaction is an example of a redox reaction BECAUSE Fe is gaining electrons (+3 → 0) so it is being reduced, and C is losing electrons (+2 → +4) so it is being oxidized.

SCANLON