

Module 5 - Engaging Activities

I. Determine the oxidation number of the elements in each of the following compounds;

- H_2CO_3
- N_2
- $Zn(OH)_4^{2-}$

II. Identify the species being oxidized and reduced in each of the following reactions:

- $Cr^{+} + Sn^{4+} \rightarrow Cr^{3+} + Sn^{2+}$
- $3Hg^{2+} + 2Fe_{(s)} \rightarrow 3Hg_2 + 2Fe^{3+}$

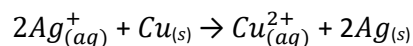
Performance Tasks

III. Balance the following redox reactions.

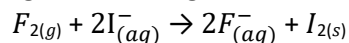
- $VO_4^{3-} + Fe^{2+} \rightarrow VO^{2+} + Fe^{3+}$ in acidic solution
- $Fe(OH)_3 + OCl^{-} \rightarrow FeO_4^{2-} + Cl^{-}$ in acidic solution

IV. Evaluate the following.

- Calculate the standard cell potential, E_{cell}° for a silver-copper galvanic cell given the following reaction:



- Regarding the following reaction:



- List the species being oxidized: _____ List the species being reduced: _____
- Calculate E_{cell}° for this cell.