

Summary Sheet of Experiments NCW 2019

Experiment 1: Redox Rnxs with Co and Cu salts (*Demonstration*)

- Puzzle word: *color*

Experiment 2: Ferromagnetism of Iron (*Individual/Group*)

1. Which Metals are Magnetic→*only Fe* (Individual Experiment)
2. Does unmagnetized Fe work as a compass→*No* (Group)
3. Magnetize the Fe nail to work as a compass pointer using strong magnet (Group)

- Puzzle word: *compass*

Experiment 3: Which materials are the best conductors? →*Cu, Zn* (*Group*)

- Puzzle word: *cold*

Experiment 4: Using reactivity to predict where metals are found in Nature (*Demo/Individual/Group*)

1. Precipitation of Cu from aq. CuSO₄ onto Al foil—*Cu less reactive* (Group).
2. Reactivity of 6 metals: Ca in H₂O (demo); Mg, Zr, Al, Cu, Zn in HCl (Individual)

- Puzzle words: 4-1: *ore*
4-2: *gas*

Experiment 5: Enhancing Metals with Metals (*Demo/Individual/Group*)

1. Silver Deposition from AgNO₃ onto Cu foil (Demonstration)
2. Cu plating on steel nail; Cu from pennies and CuSO₄ (Individual)
3. Zn protects steel from corrosion (Group)

- Puzzle word: *plating*

Experiment 6: Memory Metal (nitinol wire) (*Individual*)

- Can be a take home if necessary—Instructions for this experiment are on the back of the Word Puzzle sheet

- Puzzle word: *memory*