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| Lithium (Li)atomic weight = 7Oxygen Combination:**2:1***Property:**Electron Affinity: 59* | Beryllium (Be)atomic weight = 9Oxygen Combination:**1:1***Property:**Electron Affinity: -241* | Boron (B)atomic weight = 11Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 15* | Carbon (C)atomic weight = 12Oxygen Combination:**1:2***Property:**Electron Affinity: 122* |
| Nitrogen (N)atomic weight = 14Oxygen Combination:**2:5***Property:**Melting Point: -209* | Oxygen (O)atomic weight = 16Oxygen Combination:**1:3***Property:**Electron Affinity: 141* | Fluorine (F)atomic weight = 19Oxygen Combination:**2:7***Property:**Electron Affinity: 330* | Sodium (Na)atomic weight = 23Oxygen Combination:**2:1***Property:**Electron Affinity: 52* |
| Magnesium (Mg)atomic weight = 24Oxygen Combination:**1:1***Property:**Electron Affinity: -232* | Aluminum (Al)atomic weight = 27Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 120* | Silicon (Si)atomic weight = 28Oxygen Combination:**1:2***Property:**Electron Affinity: 133* | Phosphorus (P)atomic weight = 31Oxygen Combination:**2:5***Property:**Melting Point: 44* |
| Sulfur (S)atomic weight = 32Oxygen Combination:**1:3***Property:**Electron Affinity: 200* | Chlorine (Cl)atomic weight = 36Oxygen Combination:**2:7***Property:**Electron Affinity: 350* | Potassium (K)atomic weight = 39Oxygen Combination:**2:1***Property:**Electron Affinity: 48* | Calcium (Ca)atomic weight = 40Oxygen Combination:**1:1***Property:**Electron Affinity: -156* |
| Gold (Au)atomic weight = 197Oxygen Combination:**2:1***Property:**Electron Affinity: 222* | Titanium (Ti)atomic weight = 48Oxygen Combination:**1:2***Property:**Electron Affinity: 19* | Vanadium (V)atomic weight = 51Oxygen Combination:**2:5***Property:**Melting Point: 1890* | Chromium (Cr)atomic weight = 52Oxygen Combination:**1:3***Property:**Electron Affinity: 64* |

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| Manganese (Mn)atomic weight = 55Oxygen Combination:**2:7***Property:**Electron Affinity: 0* | Copper (Cu)atomic weight = 63Oxygen Combination:**2:1***Property:**Electron Affinity: 118* | Zinc (Zn)atomic weight = 65Oxygen Combination:**1:1***Property:**Electron Affinity: 0* | Mercury (Hg)atomic weight = 200Oxygen Combination:**1:1***Property:**Electron Affinity: 0* |
| Thallium (Tl)atomic weight = 204Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 430* | Arsenic (As)atomic weight = 75Oxygen Combination:**2:5***Property:**Melting Point: 817* | Selenium (Se)atomic weight = 78Oxygen Combination:**1:3***Property:**Electron Affinity: 194* | Bromine (Br)atomic weight = 80Oxygen Combination:**2:7***Property:**Electron Affinity: 324* |
| Rubidium (Rb)atomic weight = 85Oxygen Combination:**2:1***Property:**Electron Affinity: 46* | Strontium (Sr)atomic weight = 87Oxygen Combination:**1:1***Property:**Electron Affinity: -167* | Ytrrium (Y)atomic weight = 88Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 1500* | Zirconium (Zr)atomic weight = 90Oxygen Combination:**1:2***Property:**Electron Affinity: 48* |
| Niobium (Nb)atomic weight = 94Oxygen Combination:**2:5***Property:**Melting Point: 2500* | Molybdenum (Mo)atomic weight = 96Oxygen Combination:**1:3***Property:**Electron Affinity: 97* | Lead (Pb)atomic weight = 207Oxygen Combination:**1:2***Property:**Electron Affinity: 106* | Silver (Ag)atomic weight = 108Oxygen Combination:**2:1***Property:**Electron Affinity: 125* |
| Cadmium (Cd)atomic weight = 112Oxygen Combination:**1:1***Property:**Electron Affinity: 0* | Indium (In)atomic weight = 114Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 500* | Tin (Sn)atomic weight = 118Oxygen Combination:**1:2***Property:**Electron Affinity: 121* | Antimony (Sb)atomic weight = 122Oxygen Combination:**2:5***Property:**Melting Point: 630* |

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| Tellurium (Te)atomic weight = 128Oxygen Combination:**1:3***Property:**Electron Affinity: 190* | Iodine (I)atomic weight = 127Oxygen Combination:**2:7***Property:**Electron Affinity: 300* | Cesium (Cs)atomic weight = 133Oxygen Combination:**2:1***Property:**Electron Affinity: 45* | Barium (Ba)atomic weight = 137Oxygen Combination:**1:1***Property:**Electron Affinity: -52* |
| Lanthanum (La)atomic weight = 138Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 1800* | Cerium (Ce)atomic weight = 140Oxygen Combination:**1:2***Property:**Electron Affinity: 0* | Tantalum (Ta)atomic weight = 182Oxygen Combination:**2:5***Property:**Melting Point: 3000* | Tungsten (W)atomic weight = 184Oxygen Combination:**1:3***Property:**Electron Affinity: 58* |
| Bismuth (Bi)atomic weight = 208Oxygen Combination:**2:5***Property:**Melting Point: 271* |  |  |  |
| \*Scandium (Sc)atomic weight = 44Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 1000* | \*Gallium (Ga)atomic weight = 68Oxygen Combination:**2:3***Property:**Boiling Pt of Salt: 200* | \*Germanium (Ge)atomic weight = 72Oxygen Combination:**1:2***Property:**Electron Affinity: 116* | \*Technetium (Tc)atomic weight = 100Oxygen Combination:**2:7***Property:**Electron Affinity: 68* |

Note to organizer:

If you want to reuse this activity, photocopy on colored cardstock. The final cards (with asterisk, \*) should be a different color than the rest of the cards for ease of finding and retrieving before giving an envelope of cards to the students. For example: make copies on blue, pink, green, purple cardstock. The team who gets the pink set would get the green \* cards, the team with the purple set would get the blue \* cards, etc. Keep the \* cards in a separate envelope and give to students after they have made their predictions in part 1.