## Formulas Poker

Purpose:
This activity will help students understand the concepts of balancing charge and naming chemical compounds.

## Materials:

Several decks of "formula" cards. I made these out of index cards. You should have enough for each group to have its own deck.

## Safety:

Not an issue.

## Procedure:

Divide the class into groups of three or four. Give each student a deck of cards and ask each group to establish a scorekeeper.

Each Deck should contain at least one of the following cards:

| $\mathrm{Ba}+2$ | $\mathrm{Be}+2$ | $\mathrm{Cu}+2$ | $\mathrm{Sr}+2$ |
| :--- | :--- | :--- | :--- |
| $\mathrm{Na}+1$ | $\mathrm{Mg}+2$ | $\mathrm{Cu}+3$ | $\mathrm{Sc}+3$ |
| $\mathrm{Ca}+2$ | $\mathrm{Ag}+1$ | $\mathrm{Fe}+2$ | $\mathrm{Al}+3$ |
| $\mathrm{Li}+1$ | $\mathrm{~K}+1$ | $\mathrm{H}+1$ | $\mathrm{Hg}+2$ |
| $\mathrm{~Pb}+2$ | $\mathrm{~V}+3$ | $\mathrm{Fe}+3$ | $\mathrm{Sn}+1$ |
| $\mathrm{Zn}+2$ | $\mathrm{Ni}+3$ |  | $\mathrm{Rb}+1$ |
| $\mathrm{NO} 3-1$ | $\mathrm{HCO}-1$ | $\mathrm{CrO} 4-1$ | $\mathrm{~S}-2$ |
| $\mathrm{NO}-1$ | $\mathrm{PO} 4-3$ | $\mathrm{Cl}-1$ | $\mathrm{O}-2$ |
| $\mathrm{SO}-2$ | $\mathrm{HPO}-2$ | $\mathrm{AsO} 4-2$ | $\mathrm{~F}-1$ |
| $\mathrm{SO}-2$ | $\mathrm{NH} 4+1$ | $\mathrm{C} 2 \mathrm{H} 3 \mathrm{O} 2-1$ | $\mathrm{~N}-3$ |
| $\mathrm{HSO} 4-2$ | $\mathrm{OH}-1$ | $\mathrm{H} 2 \mathrm{PO} 4-1$ | $\mathrm{Br}-1$ |
| $\mathrm{CO} 3-2$ | $\mathrm{ClO} 4-1$ | $\mathrm{I}-1$ | $\mathrm{P}-3$ |

One Blank or Free Card
15 of each subscript: 1, 2, 3
This game is played as a 5-card draw.

## Procedure

This game is played as a 5 card draw. The dealer will pass out 5 cards to each player from the shuffled deck.
Each player may turn in as many as 3 cards but only ONCE. The players will try to make a chemical formula that uses as many of their cards as possible. If they cannot play, they must simply PASS. It is possible to make 2 chemical formulas in one play..

The score is totaled by the number of cards that the player is able to use to make the chemical formula.

