

A HUGE thank you to Mike Palazzolo & Sue Bober for hosting!

Schaumburg 11.29.18 ~~~~~ Presentations are listed in chronological order.

Mike Offutt

Asking for song ideas- things that kids have trouble with or points you really want to drive home.

Performed the Mole Song, Mendeleev Song, the Goggle Song

Sue Bober & Mike Palazzolo (Schaumburg)

- H₂ and O₂ reaction to figure out the best ratio of reacting hydrogen and oxygen to find for the loudest pop.
 - Hydrogen generator- zinc and 2M HCl
 - Oxygen generator- yeast and hydrogen peroxide - fill about halfway
 - Use mini pipettes with 5 marks on it to make 6 sections. Then they fill it with the different ratios of oxygen and hydrogen. (6:0, 5:1, 4:2, etc). To ignite, hold pipette about one inch from the flame and squeeze to ignite.
 - Use water displacement to fill up the pipette. Keep it upside down to move from hydrogen to oxygen generator. Then they graph the ratio to the loudness.
 - The next day- post lab and play football. Use the ratio to make a field goal through goal post. Start with the goal posts close and progressively move back. At first, use the small pipettes from the lab, then try with a bigger pipette.
 - Use for balancing reactions
- Iodine clock reaction to 1812 overture
 - Pour back and forth in cups 3 times
 - Use for reactions, rates of reactions

Laura Dubnicka (Elk Grove)

Models of the atom demos

- Thomson- Cathode ray tube
- Rutherford gold foil- hula hoop with a tennis ball with a positive charge on it. Students throw a crumbled ball with a positive charge on it at the tennis ball. Count the number of deflections.
- Bohr- flame tests- use wet wooden splints dipped in salts

Eleanor Park (Elk Grove)

Mg and 1 M HCl Reaction in different ratios to compare the size of the balloons. Keep adding more and more Mg which leads a discussion on limiting reactants. Then can graph the diameter of the balloon vs the mass of Mg used. Used for teaching limiting reactants in a less mathematical way.

Jake Hadden (Johnsburg)

1. Have students make ornaments for different elements. They pick an element card and go home to make the ornament to represent something about the element- a use, visual, etc.
2. Icebreaker for when students start working with a new group- Lost at sea ranking chart. First do alone, then do as a team, then compare to the Coast Guard's rating

Sarah Boesdoifer (Illinois State University)

- There is a Chemistry Education Master's program at ISU. There are courses offered every semester. There are both content courses and courses with an education focus.
- Identifying Unknown Solutions lab- give solutions in pipette bulb. They figure out what are in each of the droppers.

Gigi Matthews (Prospect)

Ionic Bonding Activity- each student needs an ion card to wear as a necklace and they need to find someone to bond with. They write the chemical formula and name the compound. They must bond with someone in another class. They must explain it to a staff member and screenshot a picture of them with their ion cards with a certain hashtag. They wear the necklaces in all the classes for 2 days.

Lindsay Consdorf (Warren)

<https://ionic-formula-practice.netlify.com>

This website lets kids practice ionic naming. It gives kids a cation and anion. You can click and find formulas if they can't figure them out and then they can click to find the solutions.

Tina Lulla (Evanston)

Lab- measuring the calories in food using $q = mc\Delta t$. Great connections for that food calories are a measure of energy. To hang the can, put a stir rod through the pop tab and hang the can through a ring on a ring stand by hanging from the stir rod.

Peanuts, marshmallows don't work well. Puffy cheetos and Pirate's Booty work well.

Generally get a high percent error, but is a good lab for error analysis.

Therese Youel (Cary-Grove)

$\text{CoCl}_4 \cdot 6(\text{H}_2\text{O})$ dissolves readily in ethanol. It is very blue, then you can add water until it turns the purple color you want. When one tube is in hot water and one is in cold water, the blue and pink colors are favored/distinguished. Lots of different stressors you can add- add heat, remove heat, add chloride, add water, add silver nitrate, etc.

Use this as a station in a stations lab with many other equilibrium systems.

Danica Esquivel (Cary-Grove)

Purple Precipitate Challenge Lab- 2 different versions. The equation for CoCO_3 is easier to balance than the equation for Co_3PO_4 - can use this to differentiate. Worksheet for stoichiometry practice where the answers match to a word bank to spell a silly sentence.

Binh Nguyen (Northside College Prep)

- Atom's Family: For Halloween, students pick element cards and dress up as the elements to show characteristics of the elements. Then, students find their family members (i.e. Alkali metals), take a picture, and write a description.

- For Christmas- Students take pictures with the Chemistree and reword a Christmas carol to be about what they learned in chemistry. This helps to see what sticks with students, what is done well.
- Batman and Robin comic for Stoichiometry. Now, has his students make their own comics that feature a stoichiometry problem. Then, can use the problems students write the next year.
- Pick a chemistry concept and explain it using the 10,000 most common words in the English language.

Stefan Panzilous (Maine West)

Whiteboard- with wooden feet on the back and a neodymium magnet on the back. Then, have a ramp leading to the board. You need marbles of various sizes and compositions. Start with glass marbles and show a straight-line path. Then roll steel marbles and mark where they end leave the whiteboard. Then transfer the tick marks from where the marbles leave the board and that turns into a mass spec graph.

Pilot frixon pens- erase by the heat from frixon causes a chemical reaction that makes the ink go invisible. Can also erase by holding a flame under the paper. If you put the paper in liquid nitrogen, pull it out, then blow on it and the words reappear.

Person (school)

This part will be updated later!