Chemistry in the Kitchen: Quick-Rise Bread

Quick-rise breads use baking soda or powder to rise. You know the classic volcano science project that combines vinegar & baking soda for “explosive” results? The same type of chemistry happens when you make scones, pancakes, cookies, banana bread, etc! NaHCO₃ (baking soda) is a base & reacts immediately with acids (such as buttermilk or cream of tartar) to make carbon dioxide gas, which is trapped by the dough, making it fluffy! But, since quick-breads are not kneaded, they do not have long gluten chains (see last week); so they deflate if not cooked immediately. Try your acid/base chemistry skills with a recipe:

1) Everyday Pancakes
2) Snickerdoodle Cookies

Note: baking powder is made of baking soda (base), cream of tartar (acid), & starch (neutral).

When moistened, the acid and base react.

Check this Out!

Virtually explore five different breathtaking National Parks with the help of Google: ArtsAndCulture.WithGoogle.com

Senior citizens, who are higher risk for COVID-19, have been directed to stay indoors. Separated from loved ones & concerned for their health, senior communities are asking for letters! Learn more and send a letter here: www.lettersforseniors.com

A virtual scavenger hunt of the Computer History Museum? Check it out here: computerhistory.org

Logical Fallacy of the Week

Argument from Consequences

If I stop eating cake, I will not have my favorite food & that will make me sad; therefore cake is not unhealthy.

“Just because a proposition leads to some unfavorable result does not mean that it is false. Similarly, just because a proposition has good consequences does not all of a sudden make it true.”

An Illustrated Book of Bad Arguments, Ali Almossawi, p10
BookOfBadArguments.com

Craft Corner

Beautiful and easy doodles! “The Zentangle Method is an easy-to-learn, relaxing, & fun way to create beautiful images by drawing structured patterns [using] dots, lines, simple curves, S-curves and orbs.” Zentangle, Zentangle.com

Make Silly Putty at Home! Take 1.5 tablespoons of dish soap and mix it with 2 tablespoons of cornstarch. Now you have something to fidget with when you get stressed!

Bonus Question: What’s chemically happening to make the silly putty?

Taking care...

Kaiser Permanente has created a website dedicated to wellness resources, and it is available to everyone. Check out topics like Managing Stress, Sleeping Better, or Self-Compassion, which includes a lovely article “for the skeptics” among us. Learn more at kp.org

Culture during COVID-19

Sir Patrick Stewart (from Star Trek & X-Men) reads one Shakespeare Sonnet a day on his Instagram: @sirpatstew

Chemistry in the Kitchen: Quick-Rise Bread

Did you know... When popcorn pops, a superheated liquid foam of starch and steam flows out of the burst kernel. Learn more in this KQED video.

And watch popcorn pop in ultra slow-motion here: youtu.be/FSZd33awQk

Happy Pic Of the Week

Photo by: Edward Kopeschny, 2015

More pics here!