

Weekly Digest

During the coronavirus shutdown

June 1, 2020

Did you know...

Have you ever made oobleck, the non-Newtonian fluid? Sometimes it acts like a liquid, sometimes a solid. What's happening here? Turns out, it's behavior depends on the type of pressure it's experiences. What else behaves this way? Silly Putty & quicksand! Learn more at [Scientific American.com](http://ScientificAmerican.com)

Chemistry in the Kitchen: Chilli Peppers

What makes chilli peppers so spicy? While there are a wide variety of chillies, all with different chemical makeups & flavor profiles, the molecule called capsaicin is responsible for the hot, burning sensation that peppers cause. These molecules bind to a receptor in the mouth that our brains associate with heat and physical abrasion. As a result, when capsaicinoids bind to this receptor, our brain interprets it as heat & burning. Interestingly, in this case, this sensation doesn't correspond to any physical damage. So, if you've eaten a pepper that's too hot, how can you get it to unbind from the receptors in mouth? Capsaicin has a long hydrogen-carbon chain that makes it not water soluble; however casein molecules are attracted to this chain & can wash them away. And what edible thing contains casein?

Milk! (see the [April 20th Weekly Digest](#)) Has all this made your mouth water? [Check out this fun how-to guide for making your own hot sauce!](#)

Brunning, Andy. "Why Chilli Peppers are Spicy: The Chemistry of a Chilli" *Compound Interest*. 15 Jan, 2014. CompoundChem.com

Check this Out!

Around the world, people are noticing and befriending the wildlife all around them! Hummingbirds, squirrels, hawks, swans, egrets, even baboons! Read more about in The Guardian's ["Wildlife through the Windows."](#)

Itching to get out of town? Take a detailed [virtual tour of Krakow in Poland](#), with a history that reaches back to the Stone Ages.

NASA's upcoming space telescope is named after NASA's first Chief Astronomer, Nancy Grace Roman, a pioneer for women & space. Read more at www.CNN.com

Logical Fallacy of the Week

Genetic Fallacy

"My brownie recipe is amazing, because I attended culinary school," she said.
"It's impossible to dislike my truffles, since the recipe is my grandma's," he replied.

"An argument's origins or the origins of the person making it have no effect whatsoever on the argument's validity. A genetic fallacy is committed when an argument is either devalued or defended solely because of its history."

An Illustrated Book of Bad Arguments, Ali Almosawi, p30, bookofbadarguments.com

Craft Corner

This week, when you need a break from the computer screen, **make your own lava lamp** & enjoy watching bubbles float by! You'll need:

- Clear glass, jar, or bottle
- Tap water
- Vegetable or mineral oil
- Food coloring
- Alka-Seltzer tablets or salt
- Flashlight (optional)

Follow the instructions at [Scientific American.com](http://ScientificAmerican.com) to create your lava lamp. What have learned in passed Chemistry in the Kitchens that relate to or can help explain what is chemically happening in your lava lamp?

Taking care...

Each day, as you eat breakfast, lunch, and then dinner, **pick a word to describe how you're doing** & write it down. It can be any type of word (adjective, verb, exclamation, noun, etc). If you forgot one day, that's okay. Just be sure to do it the next. Notice if picking & writing this word effects you, your mood thoughts, emotions, etc.

Some change is instant, some takes days, weeks, & months, & that's okay.

Culture during COVID-19

Even if you aren't a classical music fan, chances are you've heard the music of **film composer John Williams** (Star Wars, Jurassic Park, Harry Potter, Indiana Jones, etc). This Tuesday at 6pm PST, tune in to the Bay Area's classical radio station KDFC to hear him speak with LA Philharmonic's Gustavo Dudamel & share an hour of music selections. Learn more at KDFC.com

Happy Pic Of the Week



It's duckling season! If you're observant, you might see them in local ponds & parks!

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