Weekly Digest

Back 2 School!

Septemeber 8th, 2020

Did you know...

On "May 21, 2019, Earth trembled from the vibrations sent off by [a distant black hole collision], cluing in astronomers to the biggest cosmic bang they'd ever detected" Read more from National Geographic!

Chemistry in the Kitchen: Caffeine

Many of us love the effects of caffeine. But how does it put that pep in our step? First, we must look at adenosine, a molecule that binds to specific adenosine receptors in the brain. When bound, adenosine slows down nerve reactivity which results in drowsiness and helps us fall asleep. Because the caffeine molecule resembles adenosine's structure in strategic spots, it is also able to bind to the adenosine receptors in the brain. But, rather than slowing down nerve activity, caffeine speeds it up. In this way, caffeine "wakes us up" *and* also hinders us from falling asleep.

Source: Marshall Brain, Charles W. Bryant & Matt Cunningham "How Caffeine Works" 1 April 2000, HowStuffWorks.com. https://science.howstuffworks.com/caffeine.htm, 4 September 2020

Check this Out!

In a recent article in the New York Times, Myriam Sarachik talks about the relentless drive and tenacity it took to become a physicist as a woman. She just received this year's Medal for Exceptional Achievement in Research, a high honor from American Physical Society.

In this frozen research station at the very north of Greenland, researchers study the arctic & build a community that is surprisingly full of life. Read more from National Geographic

Logical Fallacy of the Week

Circular Reasoning

Everyone knows the best brownies are moist. These can't be the best brownies because they are not very moist.

"In circular reasoning, a conclusion is either blatantly used as a premiss, or more often, it is reworded to appear as though it is a different proposition when in fact it is not."

An Illustrated Book of Bad Arguments, Ali Almossawi, p44, bookofbadarguments.com

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