

OXE Newsletter

April 13th, 2017

Announcements

Board and Brew Fundraiser: the evening of April 23rd

CHBE Senior Farewell Banquet: May 1st

OXE Initiation: May 8th

We will be handing sweatshirts out for those who ordered them this Friday (April 14th) and Monday (April 17th) in the AIChE lounge. Look out for an email with specific times!

Do you have suggestions for improving OXE? Submit them anonymously at <http://oxeumd.com/>

Professor Quotes

"So when my wife and I got to the hotel in Denver, our conditioner bottle opened and I stared as the pressure difference actually caused the viscoelastic fluid to siphon everything out onto the floor. My wife was yelling at me to stop it but I had to have my moment." - Dr. Calabrese, paraphrased

"This is your door prize for coming to class today, not that it's free shots or anything." Dr. Dixon handing out a glycolysis worksheet

"B holes and A holes" – Professor Lloyd

"I brought my Yardstick, because it somehow amuses me to do problems on the board with it" – Dr. Karlsson (before drawing lines on the board)

"Oh that's the number for the shift base. I'm going to go play the lottery with this even though I have no clue how to play" – Dr. Dixon

Proving that ChemEs are Sorcerers: Part One

Photos and Story by Annika Vaerst

The other week I was hanging out with my one non-ChemE friend, let's call her Biottrice. Biottrice is majoring in psychology and is always bragging about the new cool mind tricks she can play on people. It occurred to me that, while Biottrice may one day be able to market her skills as a mind reader, ChemEs can harness the power of science to play games on our unknowing friends.

In this first edition of "ChemEs are Sorcerers," we'll be taking a look at a trick that exploits water's surface tension. This trick was first introduced to me by Dr. Goldberg in CHBE422. There are many videos online of this trick, so it is difficult to know who started it. I'll put links to some of these videos underneath the article.

The premise of the trick is simple: because the density of a paperclip is more than that of water, a paper clip should sink when placed in a bowl of water. However, when laid carefully across the surface of the water, surface tension keeps the paper clip floating.

After seeing this trick in Dr. Goldberg's class, I immediately went to show everyone I knew. However, each time I tried it, I could not make the paper clip float. Although I felt like the world had betrayed me, I picked myself up and thought, "What would Bird do?" Which led me to today: time to experiment!

If you'd like to follow along, here are the supplies you'll need:

1. One bowl of room temperature water
2. Several paperclips
3. One paper towel
4. Tissue or toilet paper
5. Any flat, metal objects that you want to try to float



Let's try the original experiment as shown in Dr. Goldberg's class. The first step was to lay a paperclip on top of a tissue, as such:



Then, you carefully put this on the surface of the water. The goal is to try to get the paperclip to lie as parallel to the surface as possible. Once the tissue with the paperclip is lying on the surface of the water, you must take away the tissue so that the paper clip remains on top of the surface, suspended by surface tension. However, I was not rewarded with this magic. Instead, I was given a paperclip lying on the bottom of a bowl. So scratch that method.

After trying a few more methods with varying levels of success, I found one that worked consistently, given a pair of steady hands. One paperclip was bent at a 90° angle and another one was balanced on one end, as so:



The second paperclip could be gently lowered into the water and could stay on the surface once the bent paperclip was taken away. Inspired by this success, I was led to bigger and better things, such as hair clips and safety pins.



If you can successfully master this trick as I did, your confidence will soar and you might be able to make it through another week of ChemE classes.

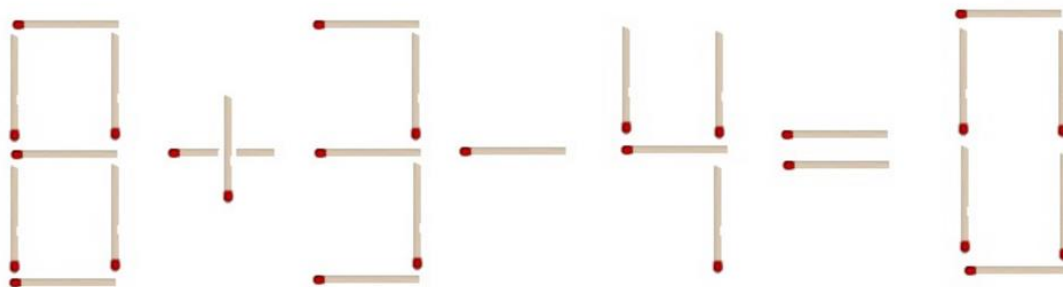
If you'd like to see more variations of this trick, tutorials can be found here:

<https://www.youtube.com/watch?v=3Cf68jizW0Q>

<https://www.youtube.com/watch?v=CvyklVBF2Us>

<https://www.youtube.com/watch?v=LQ9t9Dsdqps>

Can you move just ONE matchstick
to make this equation correct*?



**Psst! There's more
than one solution...*

CHBE PROFESSOR WORD SEARCH

Presented by Trey Mason

R A P W D E T L K W T T K H F O W S C H
V D A D G C B X T D K F Y V X J O D R U
J I D I X N C A L A B R E S E G K A V V
K M P F T O O U L I U C O U R P T S C Y
E I C T I P I V B Q W H P Q U A B A Q T
G T Y N F M M K O C C O U U C N J A Y L
N R J V N R R Y P V K I M H P V N W E E
S A L R A G H A V A N D J N B C A U H V
W K R Q G V Y J K E Q T E B E B D K R D
A O O W R H F Q A Q H C K W N H A U M E
N P U I E N W Z R Q S C F O A V P V A C
G O A K B D I A L K I K B E Q A D O N H
Z U U Q D Q N C S J T L W E E D O M I H
H L X R L L J H S N I A W K J L K I R G
C O C B O G A A O D A U B T Z Z N S F I
R S S M G Q W R N M M D G W B Q D I I B
I Z W C H T T I O E O A I L N Q E N C B
U B A Y R T G A I N D C I J E P W A P O
K A N P P P Z H B I A V N L H U Z Z O N
Y K G I J Z L H W G L M A R I R S S K S

WORD BANK:

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