ACS Chemistry for Life®

CINTACS

Cincinnati Section of the American Chemical Society

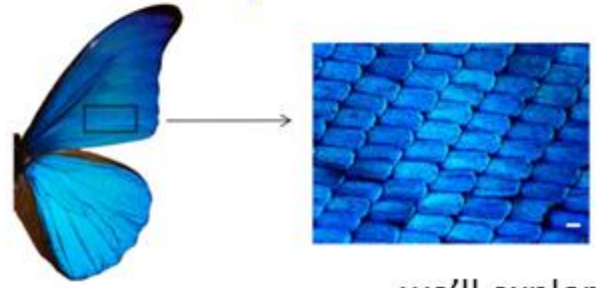
Celebrating Over 125 Years of Chemistry in Cincinnati!

Our chemists will celebrate Chemists Celebrate Earth Week with demonstrations about:

Be a Bee

A scent-matching game

The Beauty of Butterflies



we'll explore the colors of butterfly wings – digital microscope and copies of electron microscope images

Lightening Bug Flashlights

bioluminescent beetles

Multicolored luminescence and luminol demos

Termites – Snacking on Wood?

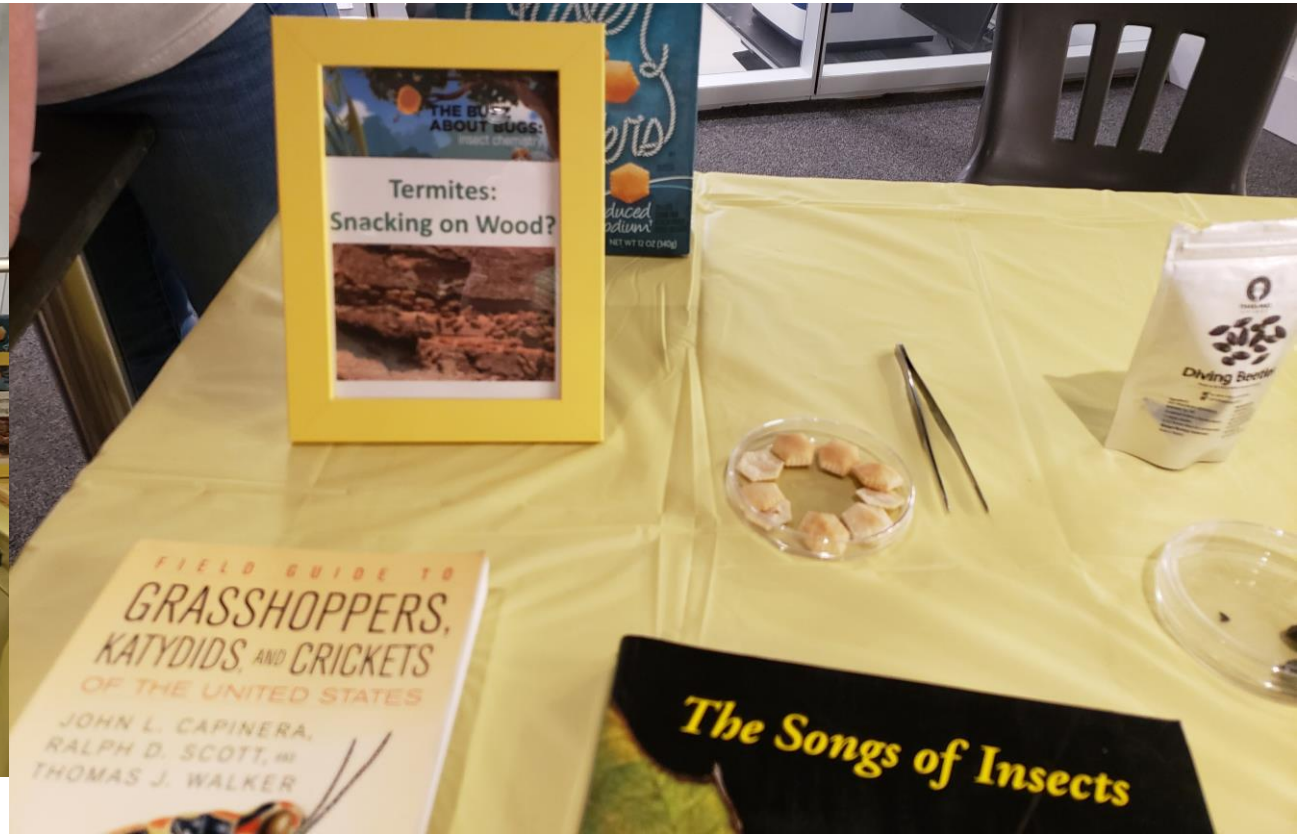
Betadine – starch vs sugar

Striders - Walking on Water

Water tank and surface tension floaters/sinkers

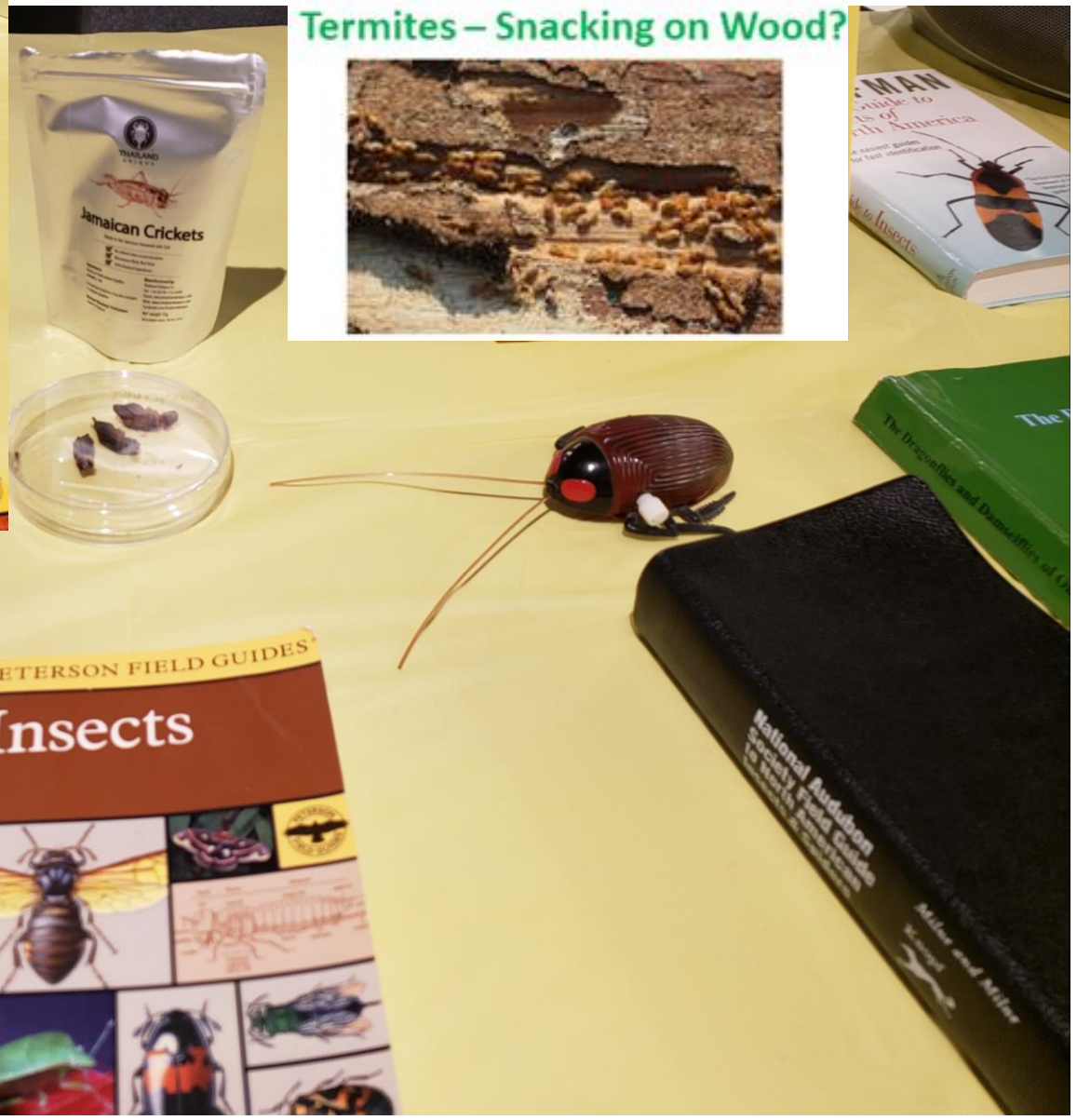
Taking the Sting out of Bites

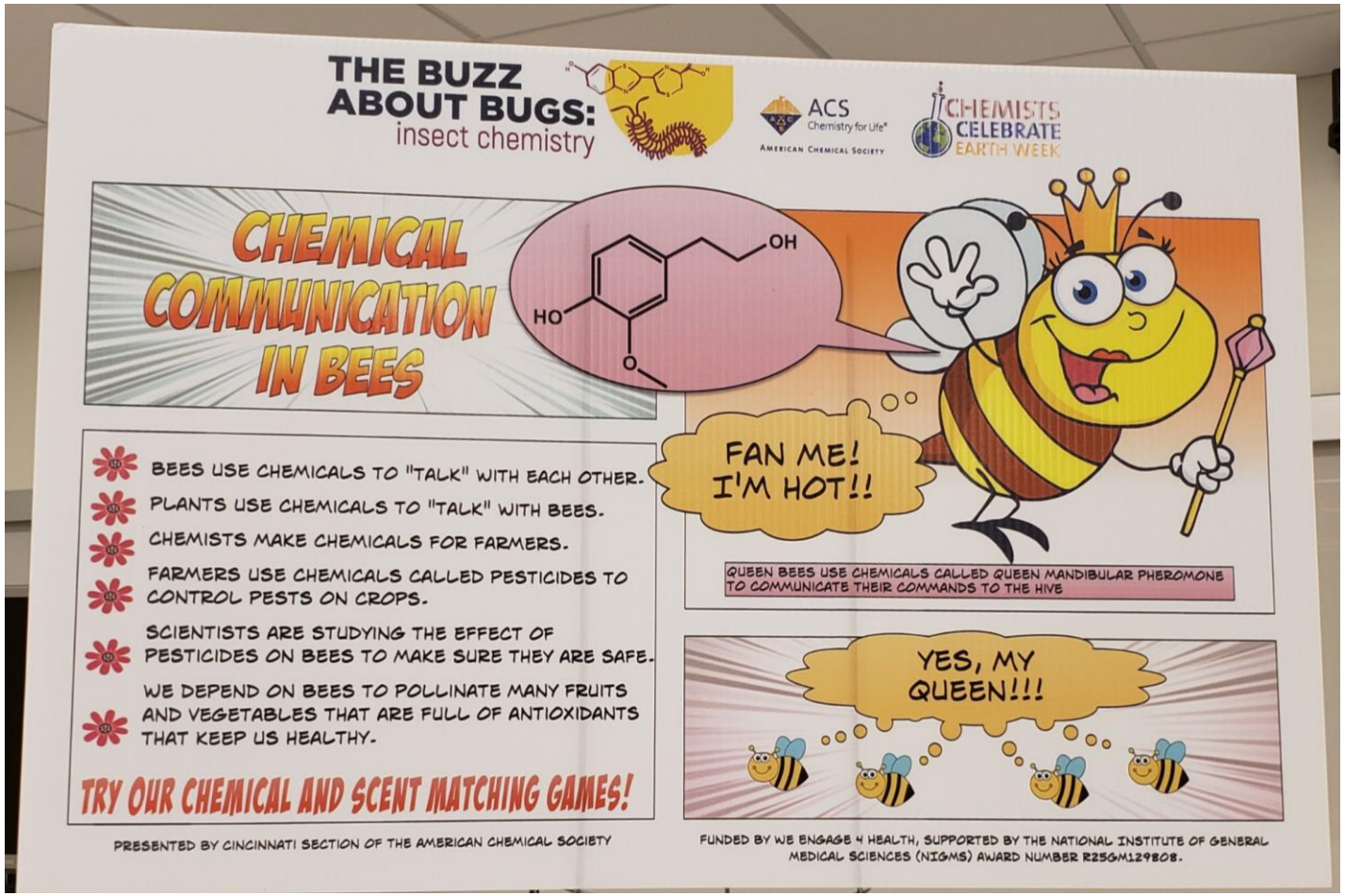
Red cabbage juice – again ☺



Sue Buescher provided a demo on comparing our digestion of starch with enzymes (crackers and betadine) with termites' digestion of wood with the help of friendly protozoa.

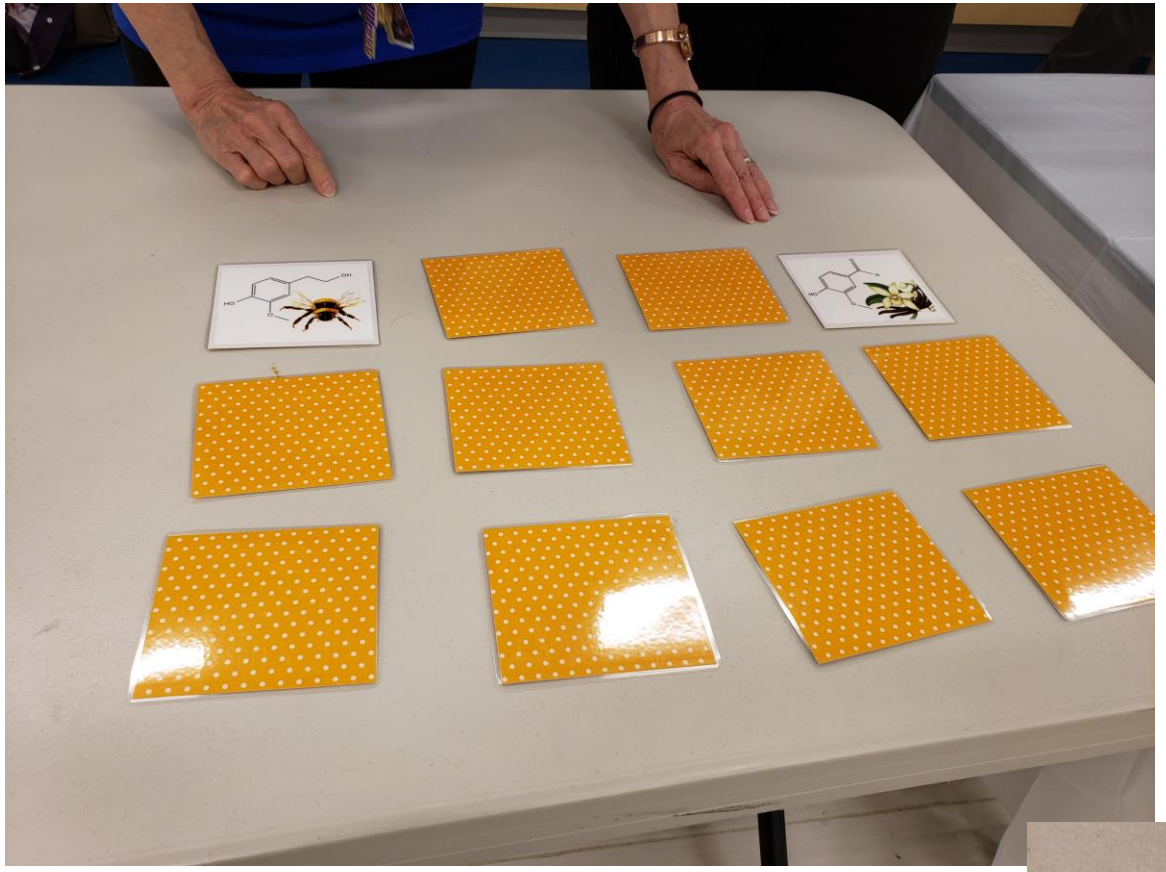
Insect edibles for the brave to try





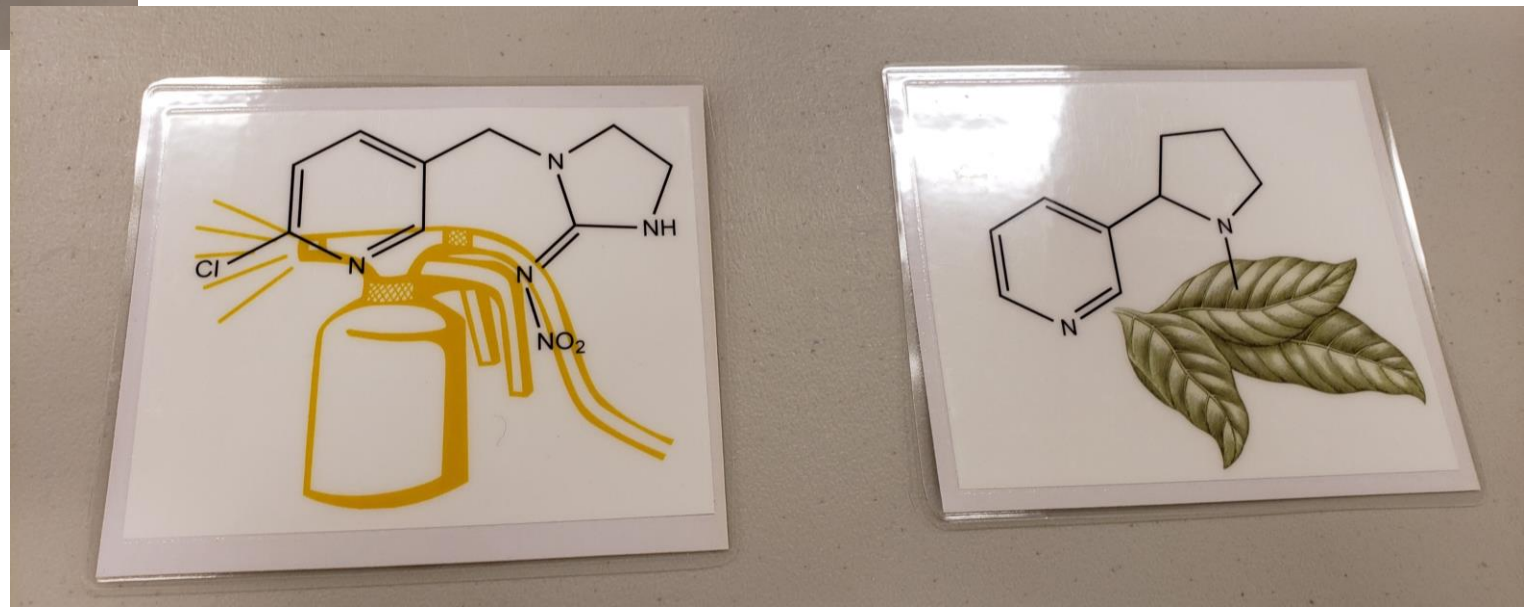
A scent-matching game

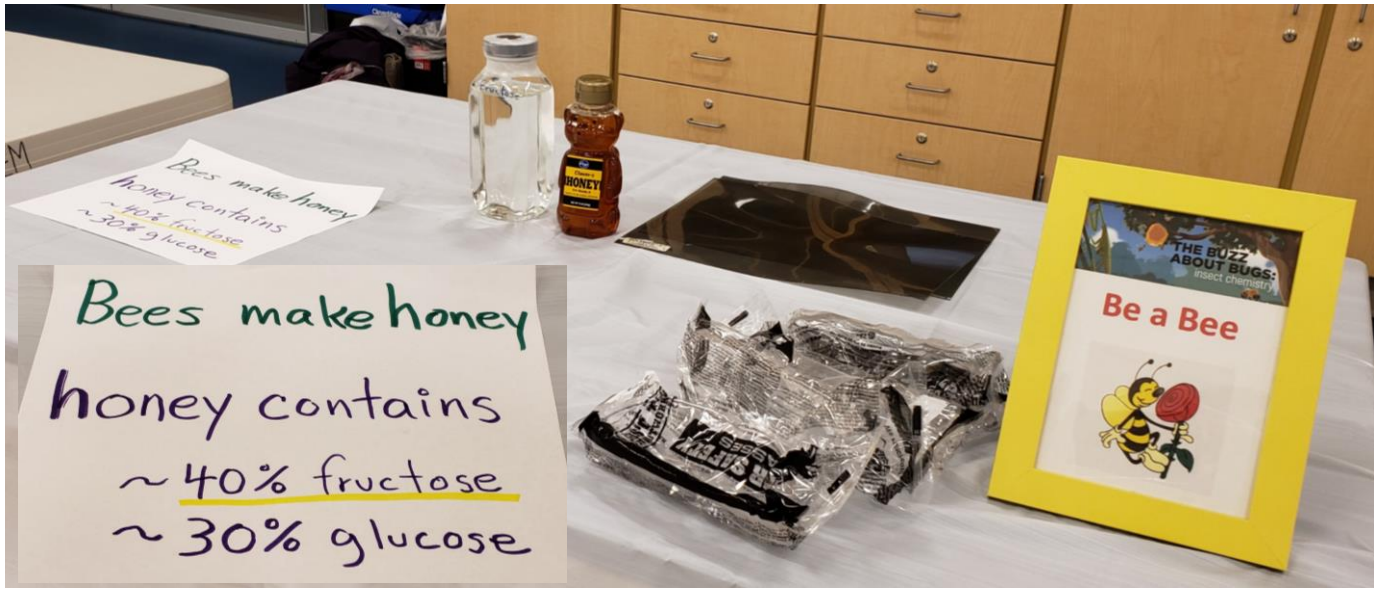
Susan Hershberger developed a fabulous demonstration about the chemical communication in bees.



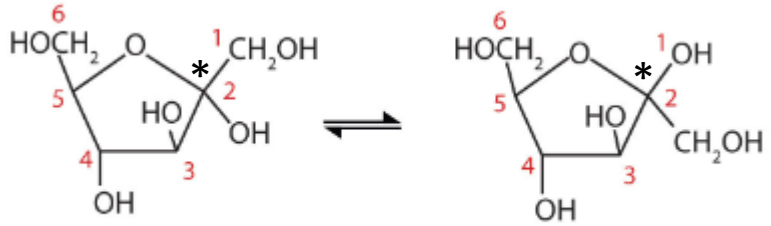
A scent-matching game

It consisted of 2 matching games – one with cards that contained typical scent molecules/pictures and one with scent samples to sniff and match.





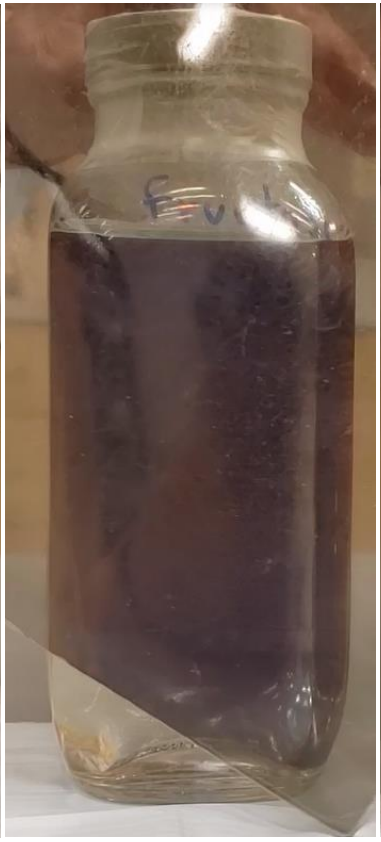
Ed von Bargen provided a demo using honey solution and polarizers revealing the rotation of light with chiral molecules (fructose). Keep one polarizer stationary on one side of the solution and rotate the other on the other side of the solution.

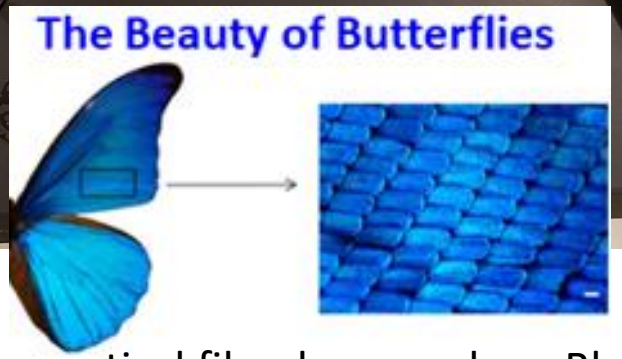


α–D–(+)–fructose

β–D–(–)–fructose

* - chiral center



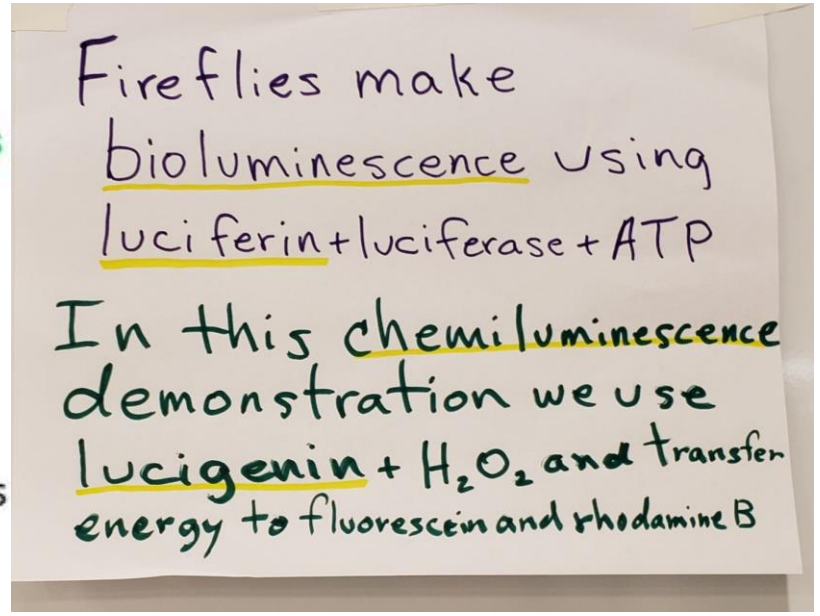


Brian Pollock from the CMC provided an optical film demo on how Blue Morpho butterflies get their blue color (not a pigment, but iridescence created by the microscopic scales in the wings). He used a simple dish of water, clear nail polish, and strips of black construction paper to create thin films with similar optical properties to butterfly wings. Different thicknesses of the nail polish film created different colors that changed with the observed angle.

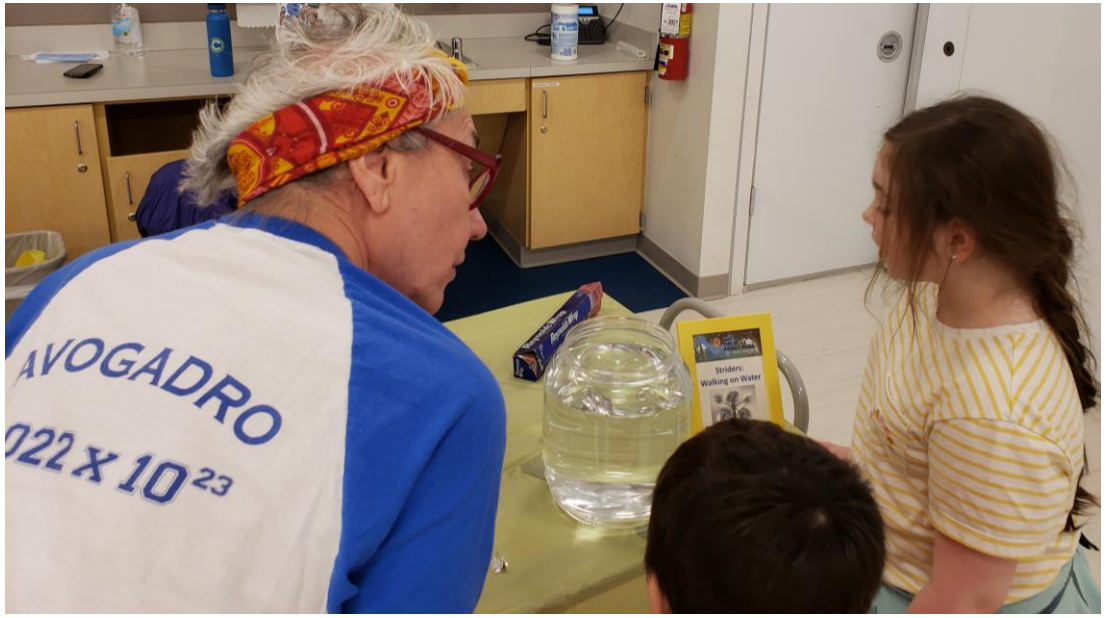
Lightening Bug Flashlights

bioluminescent beetles

Multicolored luminescence and luminol demos

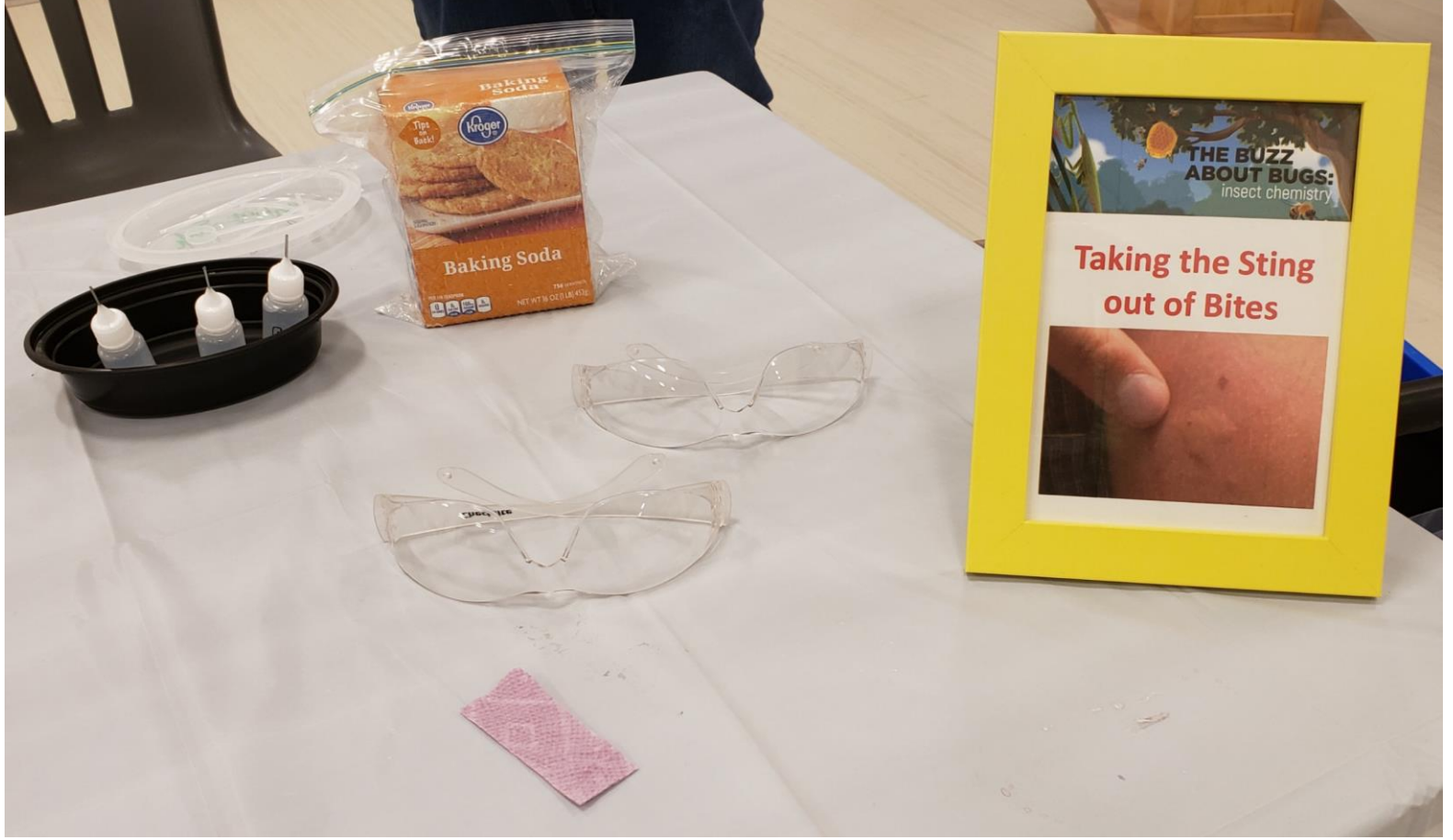


Ed von Bargen compared the bioluminescence of fireflies to chemiluminescence.
Light producing reactions are always a hit!



Striders - Walking on Water

Lynn Hogue and Donna Wiedemann demonstrated how striders can walk on water – surface area and surface tension. They used aluminum foil boats on water vs. heavier objects and water containers with screens over them that magically hold the water inside, until you shake or tip them.



Gloria Story and Michele Mangels compared how the reaction of histamines due to insect bites can be reduced with antihistamines (Benadryl was invented right here at UC!) using a pH demo with red cabbage juice-soaked Bounty® towels (fake skin), baking soda dropper (“sting”), and vinegar dropper (“antihistamine”).