

Rider Root Beer

Ehren Whigham & Henry Gunderson

STEM Initiative Experience

- u Summer 2014 - Kemin Industries, Specialty Crop Improvement Division
- u Field work w/Courtney, Greenhouse work w/Alexa, and Lab work w/Nick
- u Final meeting John asked “What will you take back to your classroom?”
 - u Communication
 - u Collaboration
 - u Content?? But I can't distil oils w/o a distillation unit . . .
- u Emphasis that summer was Project Based Learning (PBL)
 - u Project should have impact outside the classroom
 - u Students need an audience of experts and stakeholders

Rewind

- u Kemin followed my first year at Roosevelt after earning my M.S.
- u I asked students if their parents did Biology or Chemistry and if so, would they come speak to the class.
- u PD and the Brewery!!
- u Curriculum director said no, but that motivated me to find a connection.
- u What do these microbreweries have in common:
 - u Old Main in Ames
 - u PeaceTree in Knoxville
 - u Mill Stream in the Amana Colonies

Root Beer!

- u What if AP Biology and AP Chemistry collaborated with Confluence Brewing Company on a root beer recipe?!
- u Kate Galligan - "I'll hang out at the brewery."
- u Kevin Biggs - hesitated at first but saw potential and ultimately became a huge proponent.
- u John Martin - "This is exactly what Confluence is all about - Where good things come together!"
- u Dr. Weld - "This is exactly what we want to see!"

A little more background . . .

- u Spring of 2007, I needed a summer job before student teaching
- u Adah Leshem-Ackerman recruited science ed students to the ISU Research Experience for Teachers (RET) program.
 - u Goal was to introduce teachers to academic research and replicate the experience in their classroom
- u I returned twice as an in-service teacher and did my graduate work in that lab
- u Summary of RET experience:
 - u Dr. Wise told me I should teach students how to do PCR.
 - u I'd love to, but I need \$20,000 for equipment and supplies
 - u Write me a budget
 - u iTAG curriculum in use at ISU, Oregon State, Cornell, Tuskegee, Indiana, DMACC and soon IWCC

Ehren's Keys to Success

- u Start teachers early - recruit Pre-service!
- u Encourage and facilitate collaboration after the experience
- u Teach teachers how to ask the right questions
 - u Teachers connect project to curriculum
 - u Ask business leaders for specific expertise and resources
- u Put teachers in contact with those who can make decisions

What I Learned

- u Entrepreneurship
- u Cross Curricular Communication
- u Working with Confluence and 818
- u Legacy