

Making Career Pathways More Visible

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<u>E</u>xploring

<u>Career</u> Opportunities

in

- <u>Wa</u>ter
- <u>T</u>hemed <u>E</u>ngineering <u>R</u>esearch



Year 1 Snapshot

- 10 teachers: 3 in math, 3 in chemistry, 1 in physics, 2 in biology, 1 in engineering
- 2 are from the same school

- Some have research experience; few have engineering experience
- Years teaching range from 1 to 20+



WORKSHOP FOR RET & REU "Careers in the Chemical Industry"

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- 1. Learn about our new case study for a workshop on careers in the chemical industry
- 2. Discuss other elements of the career workshop
- 3. Discuss results
 - --What worked well?
 - --What didn't work so well?
 - --How might we improve?

Case study: Meatless Meat Market

How does a chemical innovation, like vegan meat, become a commercially viable product?





1st Activity



- 6 groups, each with a different career
- Read about assigned career, then discuss



Case Study Timeline	Time (min.)	
Activity #1: Introduce case to ~6 groups	3	
Read Part I individually	3	– 15 min.
Discuss questions, reveal answers in envelopes	3	
Read Part II	3	
Discuss Part II questions, reveal answers in envelopes	3	
Activity #2: Form 4 mixed groups (1 from each group in Activity #1; pre-determined)	5	
Introduce yourself and your career	10	– 60 min.
Discuss your company	10	
Create elevator pitch	15	
Each group gives a 3-min elevator pitch to class	15	
Wrap up	5	



Workshop Elements...

1. Keynote speaker from industry (0.5 hr)) *Shared career insights, pathway, personal story*

2. Case study / role play (1.25 hr) *"Meatless Meat Market"*

- 3. Two breakouts (1 hr)
 - **1. Undergrads** worked with career counselors to enhance their resumes
 - 2. Teachers met with career counselors to learn strategies for helping students learn about career options

As a result of this workshop...

I have a better understanding of the **different types of careers** involved in commercializing chemical innovations.



The workshop was useful at informing me about **how** chemical innovations are commercialized.



I enjoyed the scenario in the first activity.



I enjoyed the tasks in the 2nd activity.



The breakout session was useful.



The amount of time for this workshop was appropriate.



The session led me to reconsider my career options.



What did you find most useful?

Teachers:

- I appreciated time to interact with the REU students and learn about their experiences
- The online resources were great
- The thoughts about career advice/counseling to share with our high school students
- I enjoyed activity #2 where someone from each group came together to present the pitch.

Undergrads:

- I think the collaboration with the teachers and other students who represented different careers was useful.
- Interacting with the RET participants was a great way of sharing ideas with more experienced people in the professional and work field
- The [keynote speaker from industry] getting a personal story about career path
- I found it very interesting how non-linear career paths were presented. The activities were well-tailored for that understanding
- Resume building

What would you change?

Teachers:

- Provide samples of vegan burger for inspiration ^(C)
- Add more about the concept of how to [help students] be motivated but not overly-driven
- Nothing!

Undergrads:

- More career exploration. Various pathways our specific majors help us with
- I wish we had heard from more people in different STEM industries
- I think including government careers, Engineers without Borders, and starting a business would be cool. Include things like engineering consulting
- More engineering focus
- Condense company activity

Your thoughts?

Summary

New case study shows promise

- helps both teachers and undergrads explore careers in the chemical industry
- both teachers and undergrads like interacting with each other
- <u>But</u> it could still be improved, especially for undergrads

Some ways to enhance workshop:

- Include personal story from industry professional
- Resume-building breakout for undergrads
- Advice from career counselors for teachers

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cebc.ku.edu/ret

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IDEA Incubator for Porous Materials: Integrating Discovery Engineering and Art

Thank you!

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