

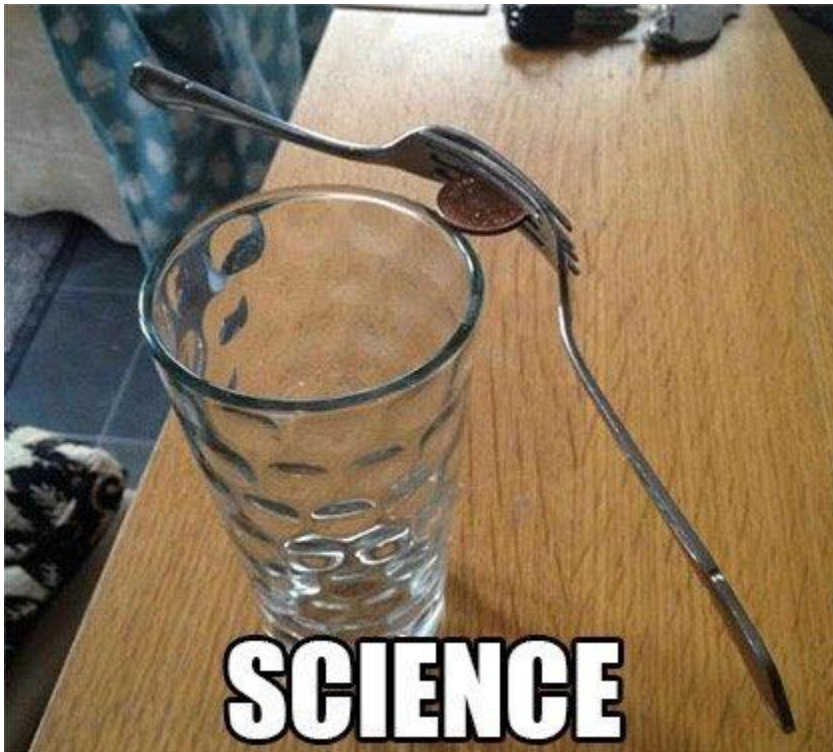


BETHEL
UNIVERSITY

Career skills 1

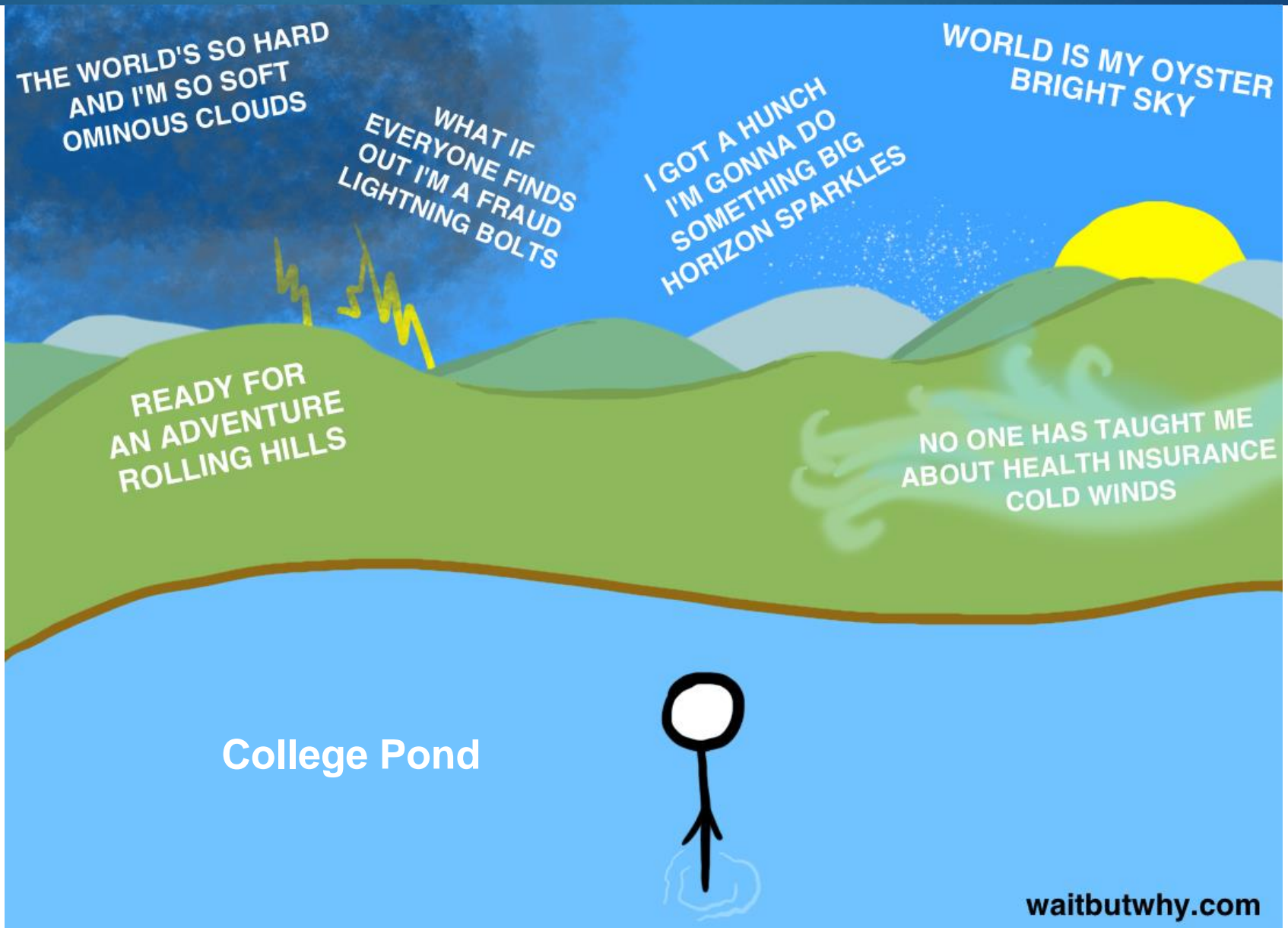
JULIE HOGAN

6/24/24



Today: Resume prep and informational interviews
Next time: everything about graduate school!

You are here





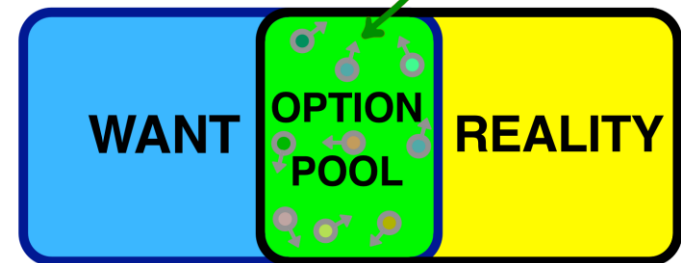
Careers I Want



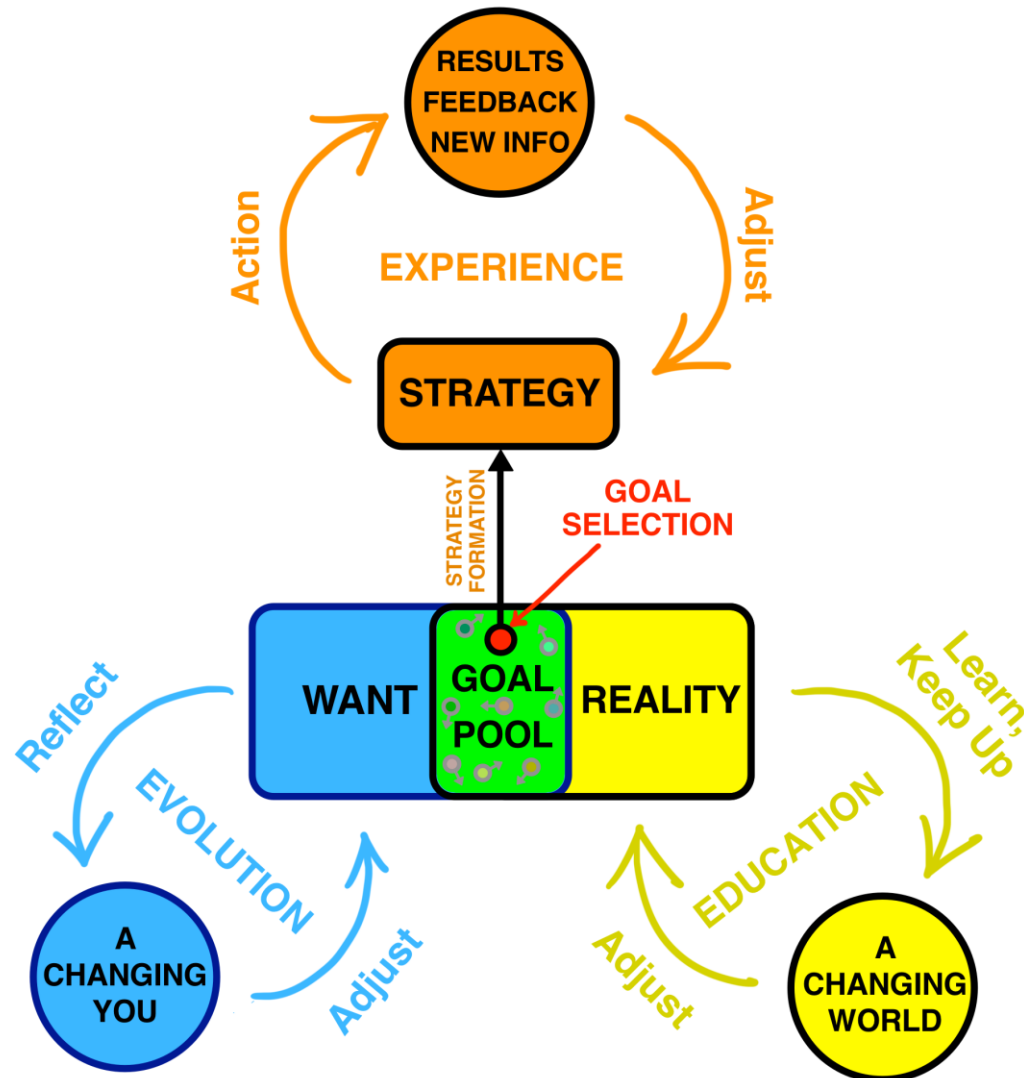
Careers That Are Possible

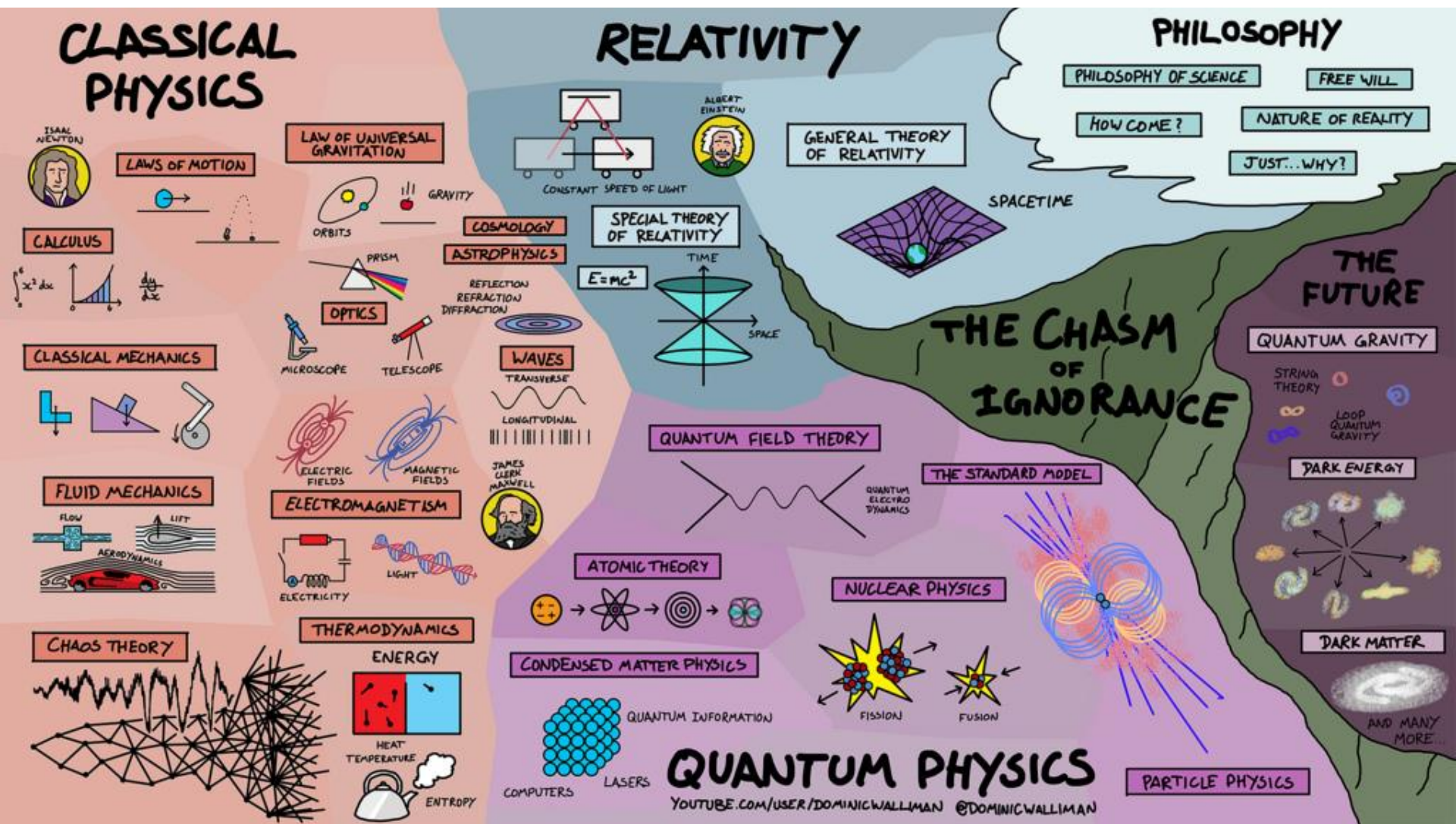


MAP ARROW
OPTIONS



waitbutwhy.com





- ▶ Concentrations:
 - ▶ **Nuclear/Particle physics**
 - ▶ Astronomy/astrophysics
 - ▶ Solid state/materials physics
 - ▶ Atomic & molecular optics
 - ▶ Condensed matter physics
 - ▶ Biological/medical physics
 - ▶ Etc!

- ▶ Experimental vs Theoretical
- ▶ Academia, Government, Industry

► Academia:



Undergrad

The diagram shows a horizontal sequence of four chevron-shaped boxes pointing to the right. The boxes are colored in a gradient from light blue to green. The first box is light blue and contains the text 'Undergrad'. The second box is a slightly darker blue and contains 'Grad student'. The third box is a medium green and contains 'Post-doctoral researcher'. The fourth box is a dark green and contains 'Faculty member'.

Grad student

Post-doctoral researcher

Faculty member

- Many options for transitions out after any level on this track

► Government (ex: Fermilab):



Post-doctoral researcher

The diagram shows a horizontal sequence of five chevron-shaped boxes pointing to the right. All boxes are a uniform brown color. The first box contains 'Post-doctoral researcher'. The second box contains 'Associate Scientist'. The third box contains 'Scientist 1'. The fourth box contains 'Scientist 2'. The fifth box contains 'Scientist 3'.

Associate Scientist

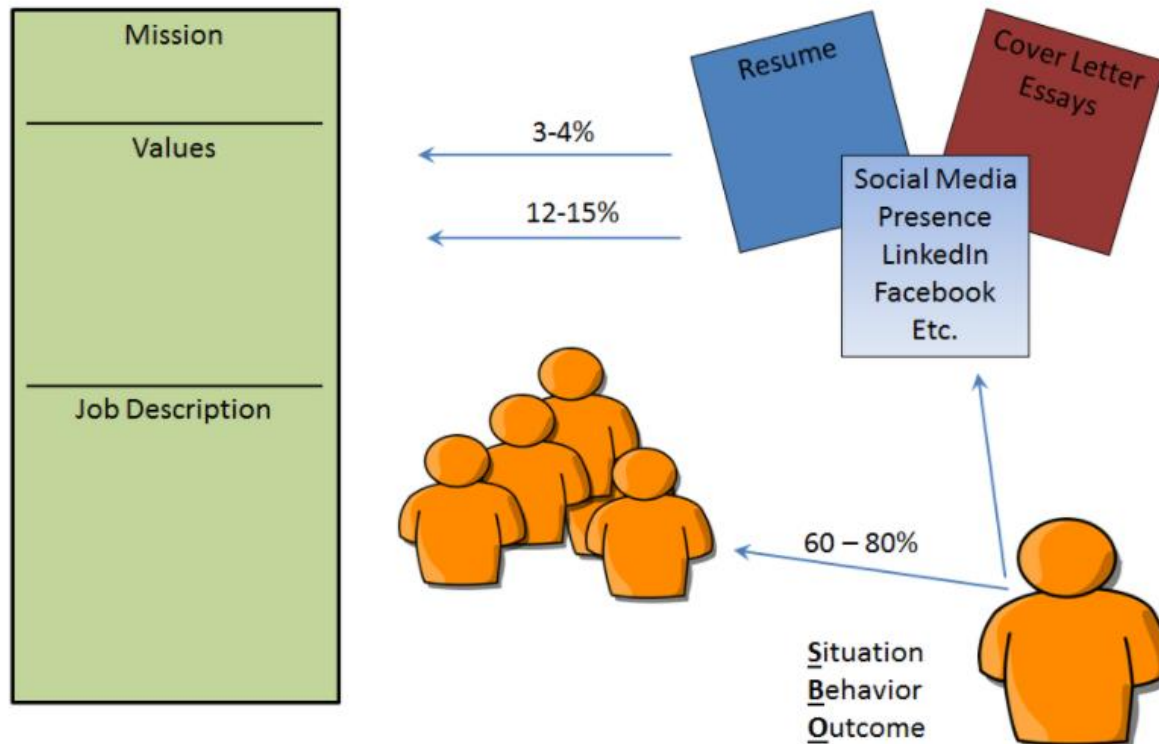
Scientist 1

Scientist 2

Scientist 3

- Job description will include the type/category of science

- ▶ **History is the best predictor of future success**
- ▶ Employers create job descriptions from their mission & values
- ▶ They want to know how your experiences align with their needs



- ▶ **Your resume communicates your “brand” to the world**
- ▶ Contact information
- ▶ Skills
- ▶ Education
- ▶ Job experience
- ▶ Other experience

- ▶ Goal is FAST information transfer
 - ▶ Pass the computerized keyword search!
 - ▶ Make sure a 30-second glance shows someone the highlights

30 second look!

Science Student

St. Paul, MN • 651-638-1000 • student@bethel.edu • [LinkedIn URL](#)

PERSONAL PROFILE

Pursuing a career in the pharmaceutical industry, and interested in starting my career in pharmaceutical sales which will utilize my Biochemistry degree and my customer service experience and skills.

EDUCATION

Bachelor of Science in Biochemistry

Anticipated Graduation: May 2018

Bethel University, St. Paul, MN

GPA: 3.9, Summa Cum Laude

Honors:

Dean's list past 4 semesters

Tri Beta (Honor Society for Biology and related majors)

Sigma Zeta (Science Honors)

Phi Theta Kappa (Honor Society for college juniors)

RESEARCH PROJECTS

Senior Project

Fall 2017 – Spring 2018

Investigated the effects of specific compounds on hair growth. Study done in conjunction with Biochem Inc. and Bethel University.

Independent Study

Spring 2017

Microbial study investigating sanitizing agents and their effectiveness. In cooperation with Biochem Inc. Production Department.

RELATED EXPERIENCE

Lab Technician

Spring 2016 – Fall 2016

Biochem, Inc., St. Paul, MN

- Conduct a variety of experiments and tests to determine product safety
- Generate lab samples for evaluation
- Assist on project to reduce impurities in experimental sanitizing agents

Organic Chemistry Lab Tutor/Assistant

Fall 2015 – Spring 2016

Bethel University, St. Paul, MN

- Led scheduled Organic Chemistry lab classes during professor's absence
- Corrected quizzes and assignments
- Assisted students by answering questions
- Demonstrated correct lab procedures and techniques

WORK EXPERIENCE

Logistics Assistant

Summer 2015

Biochem Inc., St. Paul, MN

- Performed accurate audit of company freight bills, resulting in a cost reduction
- Organized all transportation records
- Demonstrated professional communication skills in person and on the telephone

Office Assistant

Summer 2014

Chem Products, Blaine, MN

- Assisted manager in writing business documents, answering phones, and greeting clients
- Dealt with a diverse customer base and processed orders to ensure proper shipping

CAMPUS & COMMUNITY INVOLVEMENT

Chairperson & Member, Student Leadership Team

Fall 2015 – 2016

Participant, Habitat for Humanity Service Project

Spring 2015

- Profile:**
- Career Goal: graduate study leading to research position in particle physics
 - Research skills: ROOT program, data logistics, material property simulations
 - Computer skills: Unix, C/C++, Perl, grid computing (PBS)
- Education:**
- Vanderbilt University, Nashville TN
College of Arts & Sciences
B.A. in Physics, 2009
Honors in Physics, *summa cum laude*
Minor: General Music
- Awards**
- Phi Beta Kappa, Vanderbilt University 2009
 - Underwood Memorial Scholarship, Dept. of Physics 2009
 - McMinn Scholarship, Dept. of Physics 2007 – 2009
 - Earnest A. Jones Scholarship, Dept. of Physics 2007
 - College Scholar, Vanderbilt University 2005 – 2009
 - National Merit Finalist and Award Winner 2005
- Leadership**
- Victory A Cappella choir, Musical Director 2007 – 2009
- Experience:**
- National Honor Society Member 2004 – 2005
- Research**
- Vanderbilt University – *High Energy Physics group* 2007 – 2009
- Experience:**
- Optimized the REDDnet data logistics network for the CMS Tier-3 data center at Vanderbilt.
 - Learned about the challenges of “big data”, using grid computing systems, and the ROOT software program.
 - Three weeks at CERN as part of the McMinn Scholarship.
 - Lawrence Livermore National Laboratory – *Beam Research group* 2007
 - Modeled surface flashover of annular dielectrics in high gradient electric fields for development of the Dielectric Wall Accelerator, a compact accelerator designed for proton radiation therapy.
 - Presented a research poster at LLNL undergraduate poster session.
- Publications:**
- J. R. Harris, D. Blackfield, G. J. Caporaso, Y. J. Chen, S. Hawkins, M. Kendig, B. Poole, D. M. Sanders, M. Krogh, and J. E. Managan, “Vacuum Insulator Development for the Dielectric Wall Accelerator”, *J. Appl. Physics* **104** 023301 (2008).
 - J.E. Managan and J.R. Harris, “Simulation of Electron Trajectories Inside an Annular Dielectric”. *U.S. Dept. of Energy Journal of Undergraduate Research* **8** (2008), 252.

My old resume



Science Student resume



▶ Your resume communicates your “brand” to the world

▶ Contact information

- ▶ NAME! Biggest thing they see
- ▶ EMAIL!
- ▶ LinkedIn, etc
- ▶ Phone
- ▶ Location (not full address)

First Name Last Name

St. Paul, MN • 651-638-0000 • student@bethel.edu • LinkedIn URL

First & Last Name

St. Paul, MN • 651-000-0000 • student@bethel.edu • LinkedIn URL

Science Student

St. Paul, MN • 651-638-1000 • student@bethel.edu • LinkedIn URL

Julie E. Managan

~~1588 Harlan Drive~~, Danville CA, ~~94526~~ • (925) 708-2108 • julie.e.managan@vanderbilt.edu

- ▶ **Your resume communicates your “brand” to the world**
- ▶ Contact information
- ▶ Skills

- ▶ **From courses?**
- ▶ **From hobbies?**
- ▶ From jobs?

RELATED COURSES:

Media Communication

Advanced Public Speaking

Group Communication

Organizational Communication

Ethics: Theory & Practice

Social & Political Philosophy

CAREFUL!!

Profile:

- Career Goal: graduate study leading to research position in particle physics
- Research skills: ROOT program, data logistics, material property simulations
- Computer skills: Unix, C/C++, Perl, grid computing (PBS)

Skills

- | | |
|------------------|---|
| Programming | ▶ C++, Python, Bash, L ^A T _E X |
| Web & Workflow | ▶ Markdown, HTML, CI/CD, Google Cloud Engine, Argo, Kubernetes |
| Analysis | ▶ ROOT, MATLAB, minimization fits, Monte Carlo generation |
| Machine learning | ▶ decision trees, dense and convolutional networks, neural autoregressive flows |

Beware of jargon!

Hi (Bethel Prof) –

Just wanted to give you some feedback – we did get several applications from Bethel students, so wherever you announced/posted had some impact. Thanks for that!

It might be good to also let them know they have resources at Bethel to help them with resumes ... I can certainly relate what it's like to be someone who has to read over a stack of resumes in a short amount of time and pick only one or two to recommend... But certainly **let them know that a list of courses at Bethel isn't really sufficient** – they have to **point out what skills or knowledge** they have that **applies to the posting**.

(3M manager)

▶ Your resume communicates your “brand” to the world

▶ Contact information

▶ Skills

▶ Education

- ▶ University & location
- ▶ Anticipated graduation
- ▶ GPA (unless it's poor...), perhaps honors

Education:

- Vanderbilt University, Nashville TN
College of Arts & Sciences
B.A. in Physics, 2009
Honors in Physics, *summa cum laude*
Minor: General Music

EDUCATION

Bachelor of Science in Biochemistry

Bethel University, St. Paul, MN

GPA: 3.9, Summa Cum Laude

Honors:

Dean's list past 4 semesters
Sigma Zeta (Science Honors)

Tri Beta (Honor Society for Biology and related majors)
Phi Theta Kappa (Honor Society for college juniors)

Anticipated Graduation: May 2018

▶ Your resume communicates your “brand” to the world

▶ Contact information

▶ Skills

▶ Education

▶ Job experience

▶ Where, when

▶ Bullets for responsibilities

▶ ACTION WORDS

▶ BE SPECIFIC

Teaching Assistant, Philosophy Dept, Bethel
2019

- Created an organizational system to ef
- Graded, cataloged, and sorted student
- Planned class discussion questions and

Resident Assistant, Bethel University | St. Paul, MN

September 2019 - May 2020

- Provided counseling, mediation, and friendship for 30 freshman and 10 sophomore women
- Coordinated group of 250 people and small group of 30 in educational activities and social events
- Developed time management, prioritization, and team-building skills
- Assessed spiritual, social, educational and physical needs of residents; encouraged, confronted, redirected

▶ Your resume communicates your “brand” to the world

▶ Contact information

▶ Skills

▶ Education

▶ Job experience

▶ Other experience

▶ **ENGINEERING!!**

▶ **PHYSICS!!**

▶ Volunteering, etc

Research Experience:

- Vanderbilt University – *High Energy Physics group* 2007 – 2009
 - Optimized the REDDnet data logistics network for the CMS Tier-3 data center at Vanderbilt.
 - Learned about the challenges of “big data”, using grid computing systems, and the ROOT software program.
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- J.E. Managan and J.R. Harris, “Simulation of Electron Trajectories Inside an Annular Dielectric”. *U.S. Dept. of Energy Journal of Undergraduate Research* **8** (2008), 252.

RELATED EXPERIENCE

Lab Technician

Biochem, Inc., St. Paul, MN

- Conduct a variety of experiments and tests to determine product safety
- Generate lab samples for evaluation
- Assist on project to reduce impurities in experimental sanitizing agents

▶ Your resume communicates your “brand” to the world

▶ Contact information

▶ Skills

▶ Education

Leadership • Victory A Cappella choir, Musical Director
Experience: • National Honor Society Member

▶ Job experience

▶ Other experience

▶ ENGINEERING!!

▶ PHYSICS!!

▶ Volunteering, etc

Campus & Community Involvement

President - Bethel Business and Economics Association

Captain - Bethel University Soccer Team

Volunteer - Habitat for Humanity, Minneapolis, MN

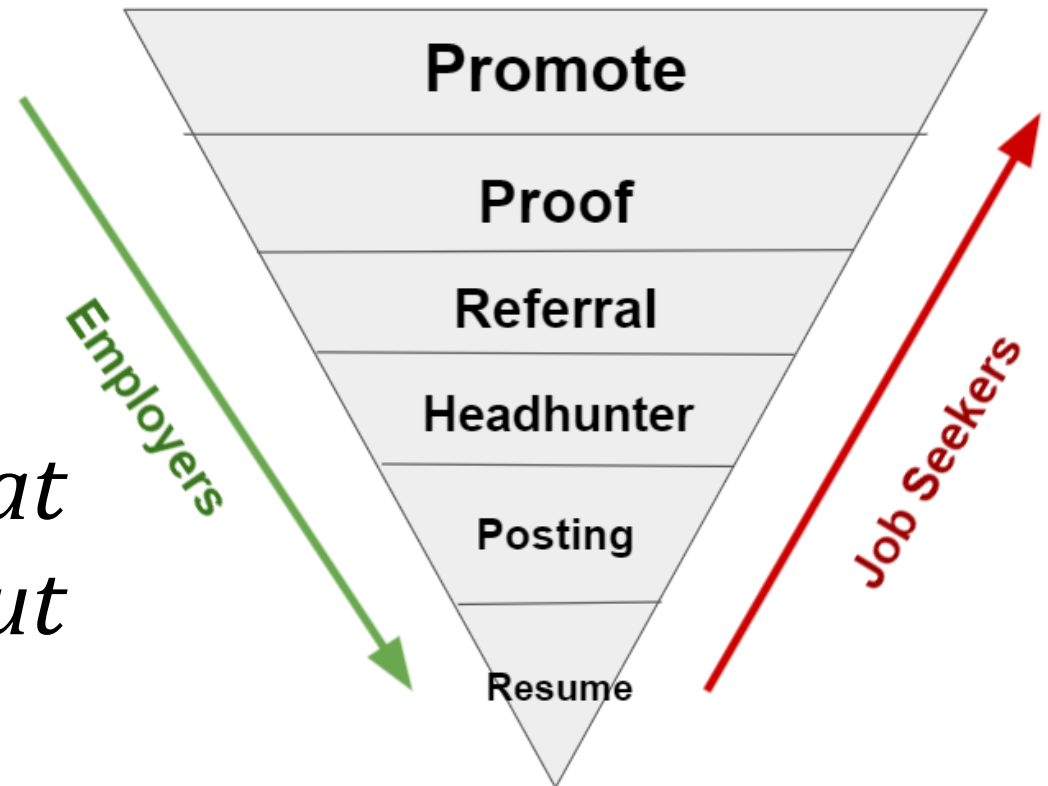
CROSS CULTURAL EXPERIENCE

Youth Advisor, Teen Ministries | Cape Coast, Ghana

- Led and directed two small groups of 10 teenage students

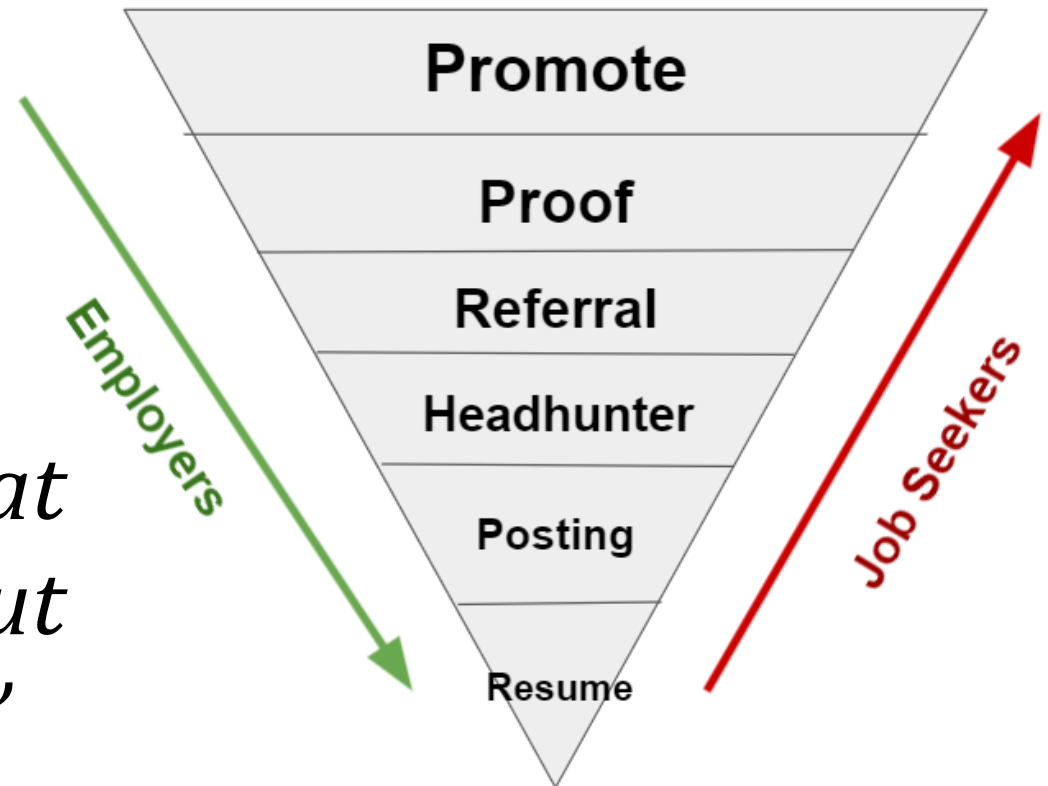
- ▶ How will you add this summer's experience to your resume?
- ▶ Skills you're building?
- ▶ Techniques you're learning?
- ▶ Bullet point descriptors?

- ▶ Companies don't want to post jobs!!
 - ▶ Costs \$\$!
 - ▶ Costs time!
- ▶ Referral bonuses



“It’s not about what you know, it’s about who you know”

- ▶ Companies don't want to post jobs!!
 - ▶ Costs \$\$!
 - ▶ Costs time!
- ▶ Referral bonuses



*“It’s not about what you know, it’s about who **knows you**”*

- Talk to people about your job hopes!
- School, hobbies, volunteering, **parents**

Internal

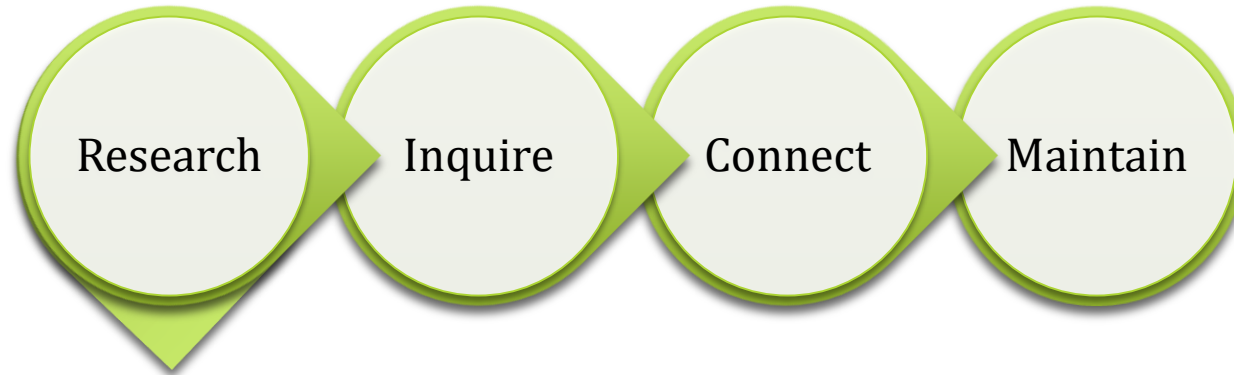
- LinkedIn
- Social media
- Contact info on job postings or company webpages

Online

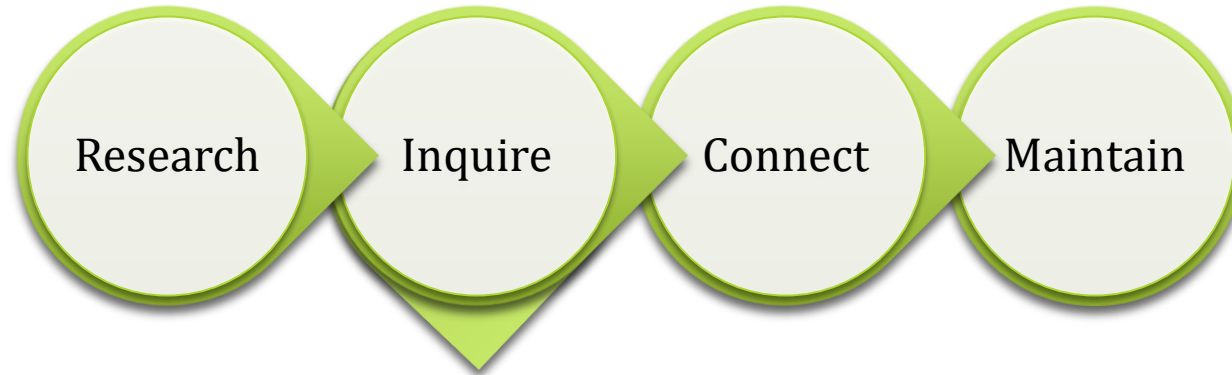
- Job fairs
- Campus events
- Community events
- Conferences

Events

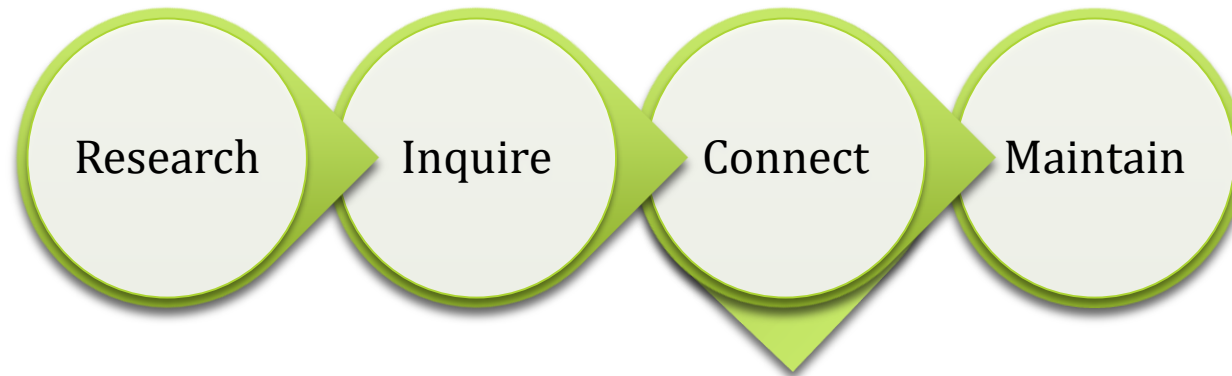
***How many people do you know?
Who has the biggest “internal”
network?***



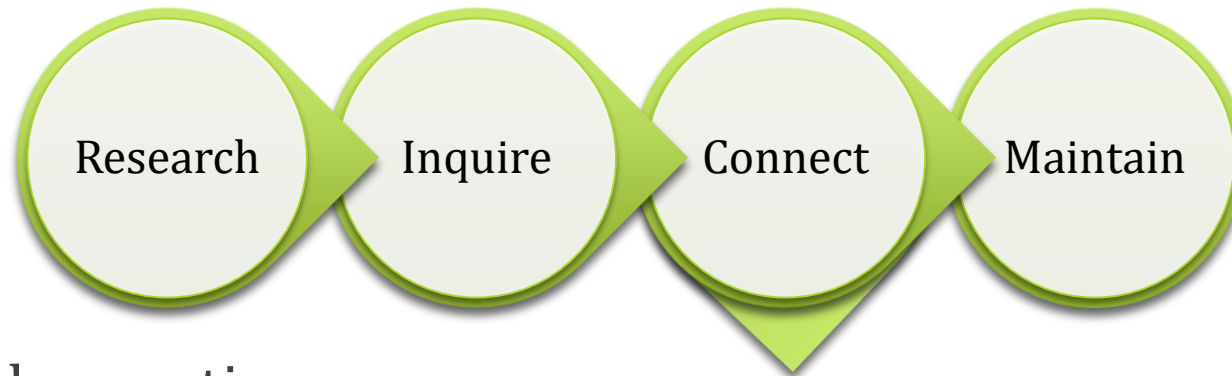
- ▶ <https://www.onetonline.org/>
 - ▶ Compendium of info and statistics on many many job titles
- ▶ Society of Physics Students careers toolbox
 - ▶ <https://www.spsnational.org/sites/all/careerstoobox/>
- ▶ <https://www.linkedin.com>
 - ▶ Search alumni of your school!
 - ▶ Can search for people connected to Fermilab, CERN, etc.



- ▶ Assessor versus Ally strategy
- ▶ “Can you get me a job at your company?”
 - ▶ Casts this connection as an **assessor**
 - ▶ They are more defensive, given role of judging you
- ▶ “Can you tell me a little about your job/company?”
 - ▶ Casts this connection as an **ally** – no immediate “ask”
 - ▶ Gets them talking about themselves

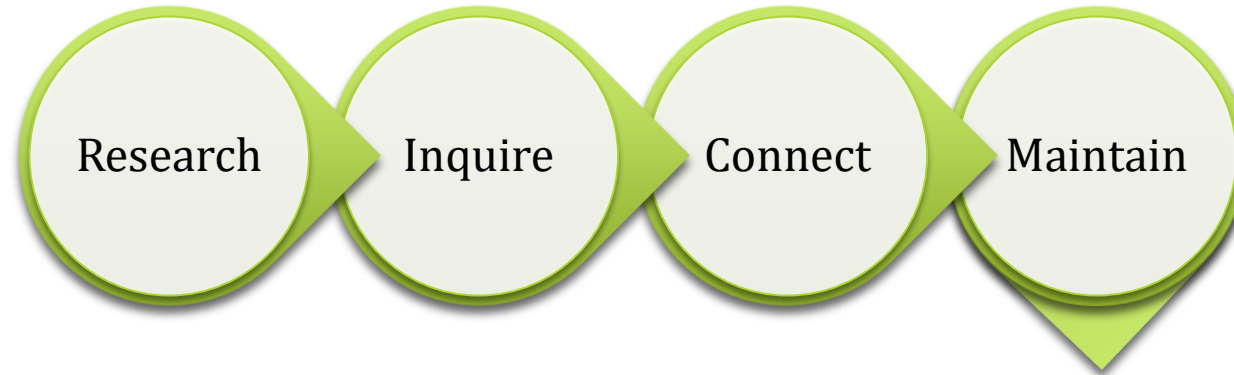


- ▶ Informational interviews
 - ▶ Have a conversation with someone in a job/field that interests you!
- ▶ Know your objective: have tailored questions for this person
- ▶ Keep it professional: not coffee with a friend, networking!
- ▶ Keep on target: respect their time with questions that fit in ~30 minutes (unless they volunteer more time)



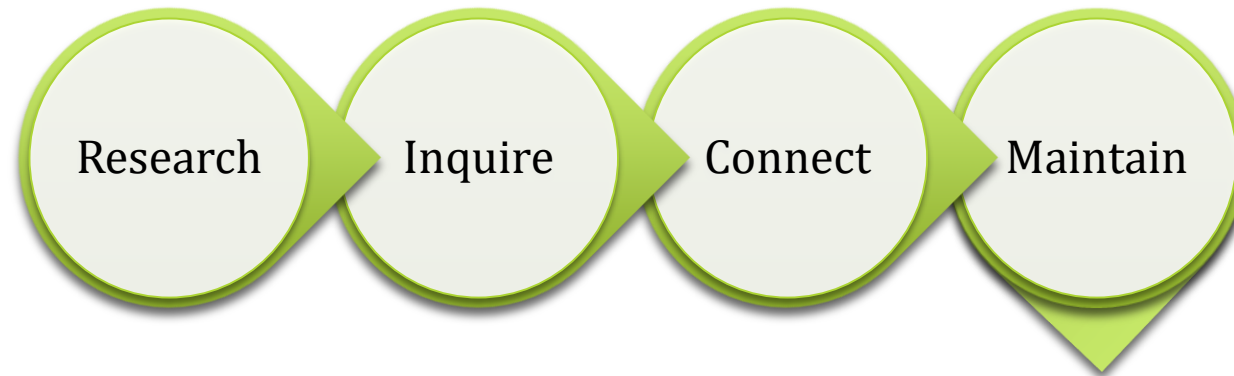
▶ Example questions:

- ▶ Would you tell me your story? How did you get here professionally?
- ▶ How does your job relate to your training in school?
- ▶ What do you do on a typical day?
- ▶ Can you describe some of your projects and the tools/techniques?
- ▶ What do you like best/least about your job/company/field?
- ▶ What has been the hardest thing to learn in your position?
- ▶ What advice would give someone in my position? Any pitfalls to watch out for?



- ▶ May I stay in touch with you periodically?
- ▶ Would you recommend anyone else I could meet to hear their story?

- ▶ After your connection: **THANK THEM!**
 - ▶ Email is fine
 - ▶ Follow through on following up



- ▶ **SUMMER CHALLENGE!**
- ▶ Ask one of the graduate students, postdocs, or professors at your research site to share their story with you over a lunch or coffee break!
- ▶ Triple bonus for doing this with multiple people!