

Time-Line for 2020 Cohort

List of discussions/interactions and the activities for 2019/2020 Program

Each discussion/interaction will be completed by each mentee with his/her mentor. In addition, the mentees will each meet monthly virtually to discuss what they learned from their mentor and to compare information. Throughout this document, “IM” refers to industry mentor. Note that Program staff realized that all opportunities may not be available to all teams of participants/mentors. Talk to Project staff if questions arise about the suggested discussion/interaction. We are a flexible bunch of people and want to hear what you believe is doable in your situation! Please do not hesitate to contact your university mentor or XXXX if you need ideas or suggestions for completing the activities. At the end of each monthly segment after you’ve worked with your mentors you will share the recording of your brief science presentation with XXXX and XXXX.

Due date: 8/15/2019 (materials sent in early July 2019)

1.1 Interview IM about the skills important to workplace success:

- a. The mentee will interview the IM to determine what social skills, e.g., getting along with others, getting to work on time, completing work within stated deadlines, helping coworkers, are most important to succeeding on the job.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

1.2 A Tale of Two Craters

- a. Models: Meteor Crater and the Perfect crater
- b. Objectives: developing tactile senses, gaining experience with simple science communication

Due date: 9/15/2019 (materials sent in early August 2019)

2.1 Interview of the IM:

- a. The mentee will interview the student IM to learn about the his/her visual impairment including when it began, what the mentor can see, accommodations the mentor uses in the workplace, technology the mentor uses in the workplace, transportation options the mentor uses to travel to/from the workplace or for job-related duties, and literacy medium preferred for different tasks. If the mentor was VI when he/she received an education (K12 and college) the mentee will ask about accommodations and experiences related to education and the VI.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

2.2 Something in the Center

- a. Model: Tycho crater on the moon
- b. Objectives: developing and using tactile senses, understanding of a sense of distance scale, experimenting with more complex communication

\$\$\$\$ First financial stipend at completion of segments 1 & 2

Due date: 10/15/2019 (materials sent in September 2019)

3.1 Virtual job shadow:

- a. As approved by the IM's boss, the mentee will do two job shadowing (1 to 2-hour experiences) using web conferencing technology such as Zoom or FaceTime. If necessary, the IM can record his/her job activities. During the observation, the mentee will write down the tasks that he/she observes the IM doing and the tools the IM is using to do them. For this assignment, the mentee will "rent a set of eyes" meaning he/she will solicit sighted assistance (e.g., TVI, parent) so as not to interrupt the IM as he/she works. IMs will be asked to select observation times that have them doing a variety of tasks and not just computer work for example. At a subsequent meeting, the IM and mentee will review the notes from the job shadowing discussing topics such as interactions the IM had with co-workers and customers, mobility requirements on the job, and the IM's strategies for efficiently accomplishing tasks.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

3.2 Mapping the Moon

- a. Model: Spacecraft currently being used to study the moon (assembly required)
- b. Objectives: appreciating basic engineering of orbiting spacecraft, understanding data collection, developing further complexities in communication

Due date: 11/15/2019 (materials sent in October 2019)

4.1 Assistive technology log:

- a. Both the IM and the mentee will keep a list for a week of the types of technology and literacy medium they each use to complete tasks throughout their day. Names of specific apps and programs will be recorded by both. At the end of the week, they will share their lists with the IM giving suggestions to the mentee of other potential ways to have done the task and vice versa.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

4.2 Counting Craters

- a. Models: Lunar Maria and Lunar Highlands
- b. Objectives: comparing and contrasting different regions on the same object, understanding and applying a sense of distance scale, understanding effects of different time scales, developing communication skills

Due date: 12/15/2019 (materials sent in November 2019)

5.1 Interview of a co-worker of the IM without visual impairments:

- a. The IM will identify a co-worker who does similar tasks to him/her and asks that individual to be interviewed by the mentee. The mentee will ask both individuals questions about the tasks that they do as part of their employment and how they each do them differently because one individual has a typical vision and the other has a VI.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

5.2 Two-Face Moon

- a. Models: Two different hemispheres of the moon
- b. Objectives: understanding how the moon rotates and orbits Earth, keeping one side always facing our planet, appreciating the striking differences between these two hemispheres, developing communication skills

\$\$\$\$ Second financial stipend at completion of segments 3-5

Due date: 02/15/2020 (materials sent in January 2020)

6.1 Training and certification journal:

- a. The mentee will research the career that the IM is currently employed to do. Specifically, the mentee will capture information from the Department of Labor website, <https://www.bls.gov/careeroutlook>, to determine the type of training required for the mentor's job. The mentee will get a sense of what the job entails and realize that general research about a job is helpful before pursuing the job. The IM and the mentee discuss the types of training and certifications required to attain the current job for the mentor and identify ways that the mentee could be prepared to attain his/her potential career goal.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

6.2 Moving to Mars

- a. Models: East and West hemispheres of Mars
- b. Objectives: comparing and contrasting the Moon and Mars, as well as different regions on Mars same object, communicating these science observations

Due date: 03/15/2020 (materials sent in February 2020)

7.1 Resource and network list:

- a. The IIM and the mentee identify key resources and network for studying in the STEM fields. They will come up with three mailing lists, two professional networks, and two websites that contain career and training information for STEM.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

7.2 Mars in High Definition

- a. Model: Mars orbiting spacecraft with HiRISE camera (assembly required)
- b. Objectives: basic engineering principles of orbiting spacecraft, understanding differences between spacecraft operating at the Moon versus at Mars (radio communication and solar power differences).

Due date: 04/15/2020 (materials sent in March 2020)

8.1 Transportation journal:

- a. For at least one week, the mentee will talk with the IM daily to learn about the places the mentor went each day, the methods of transportation used to travel, and any problems related to transportation management.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

8.2 Martian Craters Tell Tall Tales

- a. Models: Two craters on Mars imaged with HiRISE and displaying evidence of water
- b. Objectives: Using evidence to support theory, understanding distance scales, communicating how evidence supports theory

\$\$\$\$ Third financial stipend at completion of segments 6-8

Due date: 05/15/2020 (materials sent in April 2020)

9.1 Mock interview:

- a. If appropriate for the situation, the IM will talk to the mentee about questions that might be posed at an interview for a STEM job. After developing a list of at least 5 questions, the IM can role play the part of a potential employer, asking the mentee questions to answer. IM gives feedback to mentee about the types of answers that are more apt to get positive reactions/responses from employer and work with mentee to develop strategies for answering different types of questions.
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

9.2 Grand Canyon Crater

- a. Models: River canyon into Gusev crater on Mars
- b. Objectives: Establishing expectations/hypotheses based on understood processes and theory, communicating expectations/hypotheses verses results

Due date: 06/15/2020 (materials sent in May 2020)

10.1 Reflection:

- a. Mentee and IM will discuss biggest “takes” from mentoring experience, e.g., what was the most surprising thing that the mentee learned from the IM and that the IM learned from the mentee? What are 3 ways the mentee will use what the IM shared with the mentee?
- b. Make a brief typed or voice recording reflection of your thoughts after your Industry Mentor interview. Share this file with XXXX.

10.2 Wheels on the Ground

- c. Model: Mars Exploration Rover “Spirit” (assembly required)
- c. Objectives: Comparing and contrasting different types of spacecraft (previous orbiter, current rover), understanding evolution of spacecraft design (sizes, energy sources, delivery mechanisms, data gathering and analysis capabilities, etc)

~~Date: June 2020 (Cancelled due to Covid-19)~~

~~11 Return to UA Campus in June 21-26, 2020 for Enrichment Camp~~

Date: July 6 2020

11.1 All Hands zoom meeting to wrap up year and kick off gap-year activities

11.2 Curious About Gale: Unboxing and assembly of Mars Curiosity Rover

\$\$\$\$ Final financial stipend at completion of segments 9-10 & July 6 Zoom meeting