



Exploring Science: Instructions for interviewing your mentor

Please read this document fully before you begin your interview journey!

This interview is intended to build a personal and professional connection between you and your mentor. Your goal as a mentee is to allow your mentor to provide you with information that would help you to more accurately visualize their career story.

The information captured through the interview session with your mentor will also be used to build the centralized “*Exploring Science*” database that allows users to visualize and sort through the career trajectories of members of the STEM community. The goal of the *Exploring Science* database is to capture both the professional and personal experiences that shaped a person’s journey. It will showcase information beyond what you can find in a CV or resume and it will include serendipitous moments that influenced them. The goal of this project is to merge the professional side of your mentor with their non-professional experiences to build a whole view of their career story.

Think about your mentor as a character in a movie or book – your goal is to understand their intentions and mindset behind the steps they took. You are helping build this career trajectory to provide mentorship for other individuals in the STEM community. Your goal is to highlight the importance of an all-inclusive and accurate look at the career stories of mentors in the STEM field.

Before the interview

1- Ask your mentor to send you their resume or CV with the following info:

- Date range [MMYY-MMYY] and where they completed each degree, starting from elementary school onwards.
- Any positions held throughout their training and career thereafter: date range [MMYY-MMYY], where they completed each position, job title, and one sentence summary of what their position entailed. Ask your mentor to include all paid roles they had during their training, in between degrees, after graduation, and in their current work position. They can also include unpaid roles that they felt were important (ex. Unpaid internships, voluntary leadership roles, etc).

2- Book the interview. You will likely need 45 min to do it so make sure you go into the session prepared (review this document in advance). Be prepared to take a lot of notes during the interview! You likely will not be able to fill out the tables directly so you can do this after the interview.

3- Ask your mentor whether they would be comfortable with the conversation being audio recorded (if so, you can use your phone’s audio recording ability). Note that this recording will be used to accurately transcribe the information shared with you and will not be shared publicly or with anyone outside of AtaS. Once you have completed your interview, input your answers collected onto the questionnaire form.

Conducting the interview

Now, you should already have the basic information about your mentor’s professional trajectory (when and where they did their training and any positions they took). The goal of this interview is to fill in the missing information that one can’t get from reading a resume. Think of it as colouring in between the lines of the picture their resume information has made.



We have a set of questions that are intended to prompt your mentor to reflect on their time in elementary school, high school, and so on. The point of these questions is to guide your mentor on a self-reflective journey to identify the experiences that shaped their professional identity.

When your mentor identifies an experience they had in that stage of their life, you will then ask them to reflect on their experience and rate how impactful, prominent, and intentional this experience was for them.

For example, if your mentor responded that they spent the majority of their high school hiking as a hobby, you will want to ask them **when** this experience happened (the year range is fine) and ask them these questions:

- 1) **How impactful was this hobby toward your professional career?**
 1 = It did not contribute to my current profession
 5 = I pursued my professional career because of my love for hiking
- 2) **How prominent was this experience in your life?**
 1 = I do not pursue this hobby anymore
 5 = I have met most of my professional colleagues through this hobby
- 3) **How serendipitous was this?**
 1 = I have always enjoyed hiking
 5 = I never expected to enjoy hiking
- 4) **Degree to which this pivoted your professional career**
 0 degrees = this did not pivot my career at all
 180 degrees = because of hiking I met a professional in another field and completely changed the direction of my studies to pursue this career

After the interview

Now it's time to distill what you learned from the conversation and fill it into the tables provided. There are 2 tables, each occupying a sheet in a template Excel file provided to you.

Table 1: Career stages in your mentor's life.

Stage no.	Stage title	Start date [MM/YYYY]	End date [MM/YYYY]	Geographical Location	Institution (if applicable)	One sentence summary of the experience	Dream job at the start	Dream job at the end	Certainty about career decision	Message to past self	Additional Notes

This table captures the resume-type information – the “traditional” information about your mentor’s education, training, and work experience. Each of these experiences is a “stage” in their professional career and is numbered in this table chronologically. You should have these stages already identified based on your mentor’s resume or CV before the interview happens, but make sure to fill in any blanks that were missing during the interview! Here’s the info you will need:

- Date: [MM/YYYY - MM/YYYY]
- Geographical location
- Institution (if applicable)
- Title of degree or work position



- One sentence summary of their experience in this stage
- Their dream job at the start and end of that stage
- How certain they were of this dream job choice
- What message they would give to their past self at this stage

Table 2: Experiences that influenced your mentor’s trajectory.

Stage no. (if experience was during a career stage)	Category	Start date [YYYY]	End date [YYYY]	One sentence description	Impact	Prominence	Serendipidy	Degree of Pivot

This table is where you will capture the experiences that have shaped your mentor’s trajectory. As you guide your mentor during their interview, you are trying to prompt them to reflect on what experiences shaped the route they took. We ask that you summarize these experiences by providing the following info for each:

- Stage number: map the experience back to the career stages you listed in table 1 – did this happen in one of those stages? Some experiences may happen between stages as well and for those you can denote “between stage 1 and 2”, as an example.
- The category of the experience (see dropdown list)
- Start and end date (only year is fine)
- One sentence description of the experience
- Their rating of 4 key metrics:
 - Impact of experience on their professional career (scale of 1 to 5)
 - Prominence of the experience in their life (scale of 1 to 5)
 - How serendipitous the experience was (scale of 1 to 5)
 - Degree to which this experience pivoted their career choice (0-180 degrees)

For example, here are the completed tables for Nika Shakiba:

Table 1:

Stage no.	Stage title	Start date [MM/YYYY]	End date [MM/YYYY]	Geographical Location	Institution (if applicable)	One sentence summary of the experience	Dream job at the start	Dream job at the end	Certainty about career decision (%)	Message to past self	Additional Notes
2	high school	09/2002	06/2006	Richmond Hill, Canada	Bayview Secondary School	High school student	didn't want to be an engineer	biomedical engineer	50	Not to stress too much, enjoy learning for the sake of learning	
3	undergraduate degree	09/2006	05/2010	Toronto, Canada	University of Toronto	Undergraduate in Engineering Science, Biomedical Engineering	Liked research and would pursue graduate training	biotechnology professional	50		
5	undergraduate research position	05/2009	09/2009	Toronto, Canada	University of Toronto	Summer student in Dr. Warren Chan's lab	biotechnology professional	biotechnology research and development	50		
6	undergraduate research position	05/2009	09/2009	Toronto, Canada	University of Toronto	Summer student in Dr. Yu Sun's lab	biotechnology professional	biotechnology research and development	50		
7	graduate degree	09/2010	07/2017	Toronto, Canada	University of Toronto	Doctoral studies in stem cell bioengineering, supervised by Dr. Peter Zandstra, thesis focused on reprogramming to an induced pluripotent stem cell state	toggled between biotech, medical school, and becoming an academic	academia	90		
8	post-doc	02/2018	03/2020	Boston, USA	Massachusetts Institute of Technology	Postdoc in mammalian synthetic biology, supervised by Dr. Ron Weiss and Dr. Domitilla Del Vecchio, focused on designed genetic controllers to reprogram human fibroblasts to an induced pluripotent stem cell state	academia	academia	100		



Table 2:

Stage no. (if experience was during a career stage)	Category	Start date [YYYY]	End date [YYYY]	One sentence description	Impact	Prominence	Serendipity	Degree of Pivot
1	Hobby	1998	2002	I watched Crocodile Hunter on Discovery channel alot	5	4	3	0
1	Other	1994	2017	I went to Ontario Science Centre and loved IMAX movies	3	1	2	0
1	Other	2000		At the school assembly, a wildlife conservation group talked about the importance of regulating animal poaching	4	3	5	0
1	Hobby	1994	2002	I collected a lot of bugs and raised caterpillars, and worms	4	3	1	0
2	Other	2002	2006	The IB program allowed me to become a well rounded person and developed my soft skills such as writing and speaking	3	2	1	0
2	Relationships			My parents background in electrical engineering built my confidence in my proficiency in STEM	5	5	3	90
3	Other	2008	2010	I did summer projects in 3 labs (devices, regenerative medicine, nanotechnology) and interacted with supervisors that influenced my career trajectory	5	3	1	90
4	Mentor	2010	2017	My PhD supervisor (Peter Zandstra) actively guided me as I made the next decisions for my career	5	3	4	180
4	Professional event	2013		I attended the ISSCR conference when Thomas Zwaka presented his paper on cell competition which piqued my interest for the field	5	5	5	90
4	Professional event	2017		I attended the Mammalian Synthetic Biology Workshop meeting at which I met my future postdoc supervisors, this set down the trajectory entering the synthetic biology field currently pursued in my lab	5	5	2	90
4	Clubs/Organizations	2010	2017	I was involved with science outreach initiatives (StemCellTalks, Let's Talk Science, DEEP, etc) which solidified my love for teaching and mentorship	5	4	1	45



Interview questions

Review the list of education/ work positions your mentor sent you in advance of the interview and ask your mentor if any additional positions are missing / they would like to add.

Make sure you have the necessary information you need for each:

- Date: [MM/YYYY - MM/YYYY]
- Geographical location
- Institution (if applicable)
- Title of degree or work position
- One sentence summary of their experience in this stage

Use the information your mentor provided you in terms of their formal education and work experience – each of these is a stage in their trajectory. Ask them to think about each of these stages of their career (ex. high school, undergrad, graduate school, post-grad, work positions, etc). Move chronologically between the stages and for each stage, ask them the following questions:

1. What was your dream job at the start of this stage and end of this stage?
2. How certain were you about your career choice at this stage of your life? (0-100% sure)
3. How did this experience (ex. a work position, earning a degree, etc) influence your trajectory? Ask them 4 key questions.
 - a. How impactful was this experience toward your professional career?**
1 = It did not contribute to my current profession
5 = I pursued my professional career because of of this
 - b. How prominent was this experience in your life?**
1 = I rarely think about this event or engage in this hobby, etc.
5 = I always think about this event or regularly engage in this hobby, etc.
 - c. How serendipitous was this event?**
1 = I have always enjoyed this type of event / hobby / movie, or I sought out this teacher / friend, etc.
5 = I never planned to attend this event / engage in this hobby / like this movie / meet this teacher or friend, etc.
 - d. Degree to which this pivoted your professional career**
0 degrees = This did not pivot my career at all
180 degrees = This experience completely shifted my career to a new direction (ex. a new field, a new type of position, etc)
4. What are other experiences at this stage of your life that you think most influenced your trajectory? Note: for each experience they identify, ask them the 4 key questions.

Use these questions below to help trigger their memories. Feel free to come up with more of your own questions.



- a. Were there any classes that were particularly memorable (for good or bad reasons)?
 - b. Were you a part of any clubs or groups?
 - c. Did you have any hobbies?
 - d. What is one book you remember reading at this stage?
 - e. Do you remember any key mentors at this stage? Ex. teachers, parents, friends, etc.
 - f. What music did you listen to every day?
 - g. What was your artistic outlet? Did you play any musical instruments?
 - h. What was the most memorable trip you took?
 - i. Did you volunteer anywhere? What was the most impactful volunteering you participated in?
 - j. Were there any difficult events or challenges you faced in this stage (if you are comfortable sharing them).
 - k. Do you remember any relationships (friends, colleagues, etc) that were important at this stage or beyond?
5. What is one message you would tell your past self at this stage?

Additional questions to help in case the interview gets stuck!

- If you could look back through the entire trajectory we reviewed, where can you identify a surprising turn? What happened at what point that you did not expect?
- Name the jobs you wanted to have since you can remember.
- What's the name of your favorite book? It does not have to be related to your current profession.
- What was your favorite textbook and what was a textbook you were afraid of?