

Reflection Exercises Based On Type of Writing

Research Papers

- Sketch out your results and methods. Can you diagram your methods in a way that someone who doesn't work on your immediate research question could follow?
- Can you narrow down your research into these key elements: what questions did you answer in your study, what takeaways did you learn, what are the applications and implications of your findings.
- Can you identify the part of the paper that you are dreading to write? Are there any parts that feel more natural to you?
- Note how you write research proposals vs publications. What are key differences you notice in language and tone.
- Think about papers you've read along the way that have impacted how you think about your work. Note those and cite them.

Generalizing Research

- When you read papers for a journal club, where do you often take key points of information away from each paper? What type of workflow do you use to read scientific papers?
- Can you translate a science abstract only using the [1000 most common words](#) in the English language?
- Beyond your research, what's something you wish others knew about your interests in science? Why is it important to you personally?
- Practice creating a biosketch. Where do you see your research goals at the end of the academic year? What about a year from now?
- What are areas of science that interest you outside of your field? What helped you focus your interests on what you particularly study?
- Say you have a summer project for a visiting mentee or undergraduate student. How do you explain goals and expectations to someone who has minimal experience in what you study?

Experiences in Science

- What is something you wish you found out about when you first started X research position, or beginning graduate school?
- If you've identified mentors who uplift you and your work, what strategies are those and how do they serve you? Do you have mentors and resources outside of your program that support you?
- What are your perspectives on navigating self-advocacy?
- When you take time off from research, what does rest look like for you?
- Did you relocate at all to start grad school or a new research position? What were your circumstances when you moved? If you didn't relocate, how did you navigate starting a program in a place that was familiar to you?

Mentorship and Cultivating Community

- How do you go about finding industry internship opportunities in grad school?
- What are questions you should ask about your advisor's mentorship style before joining a thesis lab?
- How do you identify thesis labs that best align with your needs and personality?
- What should you prioritize when picking grad school programs?
- What does coursework look like in grad school?
- Working through failure. How do you navigate days where research, papers, fellowships, and/or institutional responses don't support you?
- What does taking time for yourself to focus on other life priorities look like?
- What does belonging in STEM look like for you?
- How do you navigate white/cis academic spaces with X marginalized identities?
- How often do your career goals change? Do you respond by finding community with others who have shared interests?
- How do you navigate healthcare, medical expenses, and moving costs as a trainee?

Organizational Tools

- Mendeley
- Evernote
- OneNote
- Notion
- Endnote
- Zotero
- Paperpile
- Strikingly
- Squarespace
- Wix
- Weebly
- Wordpress

Writing Tips

- Think about how you tell stories in writing. Do you like to draw things out first? Do you make an outline? How much detail do you provide? Take time to write out particular feelings and details that are important to you when you journal.
- If you had to give folks a takeaway in three sentences, what should someone see?
- Read perspective pieces and chat with community mentors when you have a particular perspective you wish to share. You might find connections with others that can help you grow.
- When discussing inequity and belonging in STEM, be sure to read and understand the historical context of racial justice work and cite the work of experts in these areas.
- Journaling can help you learn how to speak from an "I" perspective.
- Identify how you like to reflect. Do you like to write, go on a walk, talk to family, etc.