Passion Development:

How literature
reviews can help you
dive into your
research projects

Objectives

- Demystify your research project through inquiry
- Have a better understanding of information literacy using scientific search engines
- Be able to perform complex literature reviews on your research project

Mindset Building

Curiosity

- Demonstrate constant curiosity about our changing world

Connections

- Integrate information from many sources to gain insight

Creating Value

- Identify opportunities to create value

What are your research interests?

What is a Publication?

"Publications make scientific information publicly available and allow the rest of the academic audience to evaluate the quality of the research."

A publication should:

- Introduce or generate new information meant to advance science
- Go through a peer review process to ensure accuracy of the information
- Follow ethical research practices

Publications must not:

• Knowingly misinform the public or peers

Types of Publications

Primary Publications



- Journal articles
- Methods papers



Secondary Publications

- Review articles
- **Textbooks**

Tertiary Publications

- Encyclopedias
- Handbooks

Primary Publication

Very structured; meant to share the research as it has been performed with the intent to generate original information.

Structure of a primary publication:

- Abstract
- Introduction
- Methods/Materials
- Results
- Discussion
- Conclusion

Secondary Publication

Relies on primary publications to summarize and generalize information, draw broader conclusions, and generate new information

Less structured than primary publication

- Abstract
- Introduction
- Discussion of topics
- Conclusions/takeaways

Potential Scientific Search Engines To Use

Google or GoogleScholar (any field)

https://scholar.google.com/

Science Direct (any field)

https://www.sciencedirect.com/

Researchers are Typically Looking for Publications! Why?

It is the primary mode of disseminating what we do in the lab & the currency of our research.

PubMed (life sciences, biochemistry, and biomedical engineering)

https://pubmed.ncbi.nlm.nih.gov/

IEEE Xplore (electronics, electrical engineering, and computer science)

https://ieeexplore.ieee.org/Xplore/home.jsp

Activity Introduction

Spend the next 30 minutes moving through the worksheet which will guide you through a process you can use to <u>identify</u> and <u>assess</u> literature aligned with your project and your interests.

Adapted from Discovering Passion for Bioengineering: Engineering Unleashed Card #1521

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Google or GoogleScholar (any field)

https://scholar.google.com/

Science Direct (any field)

https://www.sciencedirect.com/

Start Time:

11:44 PM

PubMed (life sciences, biochemistry, and biomedical engineering)

https://pubmed.ncbi.nlm.nih.gov/

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Activity Debrief

How did you start investigating your research project?

What was your mindset - curious, overwhelmed, etc.?

What's your mindset now?

What would you do differently next time?

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