



CONNECTING SCIENCE AND COMMUNITY

Engaging the ACRL Framework in a
Physics Seminar Course

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- 1. Helpful Context**
- 2. The Physics IL Activity**
- 3. Final Projects**
- 4. Assessment**
- 5. Tips and Tools for You!**
- 6. Questions**

Agenda 



01

HELPFUL CONTEXT

First REAL effort to design EFFECTIVE objectives highlighting the importance of Information Literacy, Oral Communication, and Written Communication

PPC: Program Prioritization Committee (directed to evaluate and assess existing academic programs offered at Juniata College)

2019-2020: Gen Ed Redesign

Summer 2020: Workshops for Gen Ed instructors and Department Chairs

Framework	Skills
Authority is Constructed and Contextual	<ul style="list-style-type: none"> Begin to understand that acknowledged authorities scholars and publications "standard"
Information Creation as a Process *NEW	<ul style="list-style-type: none"> Explore the fit between a process and a particular information Articulate the traditional and information creation and discipline
Information has Value	<ul style="list-style-type: none"> Introduce the concept that and social construct that v Introduce/Explore copyrig domain
Research as Inquiry	<ul style="list-style-type: none"> Continue formulating basi based on information gap information Continue to determine ap Deal with complex resear complex questions into si investigations Organize and consciously for meaningful connector Begin synthesizing ideas Maintain an open and crit

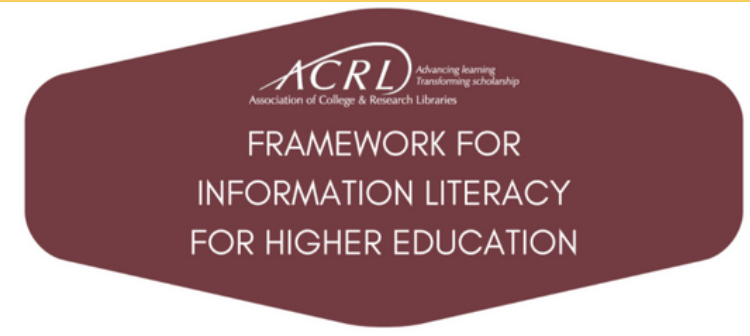
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Circle one of your learning objectives above to tie into your course/project information literacy goals.

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Select the Information Literacy Frames that apply (what skills do you want your students to exercise or explore?)
Find detailed Learning Outcomes for each frame at: <http://www.ala.org/acrl/standards/ilframework>

Authority is Constructed & Contextual	Information Creation as a Process	Information Has Value
<ul style="list-style-type: none"> Reflect on the credibility and expertise of authors Information need changes based on context Define different types of authority (scholarship, public office, title, discipline, etc) Assess content while self-aware of own biases and worldview 	<ul style="list-style-type: none"> Recognize that info may be perceived differently based on the presented format Understand that source choices impact the purposes for which the final product is conveyed (newspaper/academic/popular sources) Understand 	<ul style="list-style-type: none"> Give credit to the original ideas of others through proper citation See themselves as contributors to the info marketplace Make informed choices regarding their online actions (privacy, personal info.) Examine own information privilege
Research as Inquiry	Scholarship as Conversation	Searching as Strategic Exploration



The Framework is a guiding document used by librarians to promote an "overarching set of abilities in which students are consumers and creators of information who can participate successfully in collaborative spaces [metaliteracy]."

- There are 6 overlapping concepts:
- AUTHORITY IS CONSTRUCTED AND CONTEXTUAL
 - INFORMATION AS A PROCESS

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ACRL Framework for
Literacy for High
<http://www.ala.org/ilframework>
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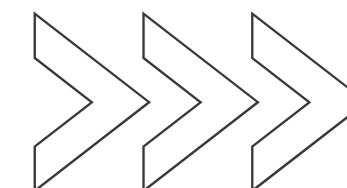
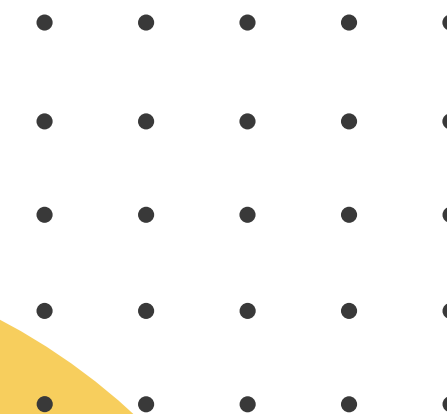
Defining & Teaching Information Literacy

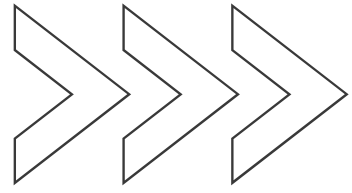
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EXPANDING OUR PARTNERSHIP

Physics and Engineering
Physics Department Chair

Physics Seminar

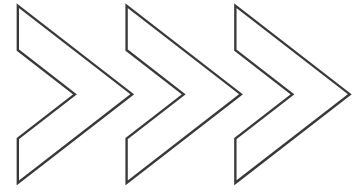




Objectives

- Students will be aware of different types of media authority
- Students will examine the impact of certain information based on delivery method
- Students will learn that there is more than one way to find information on a topic
- Students will learn that they are in an ongoing scholarly conversation on their research topic





Components

- Work in groups of four students
- Find sources (academic and non-academic)
- Evaluate information (individually and as a group)
- Synthesize collective information
- Enhance science communication ability by using creative techniques to convey complex scientific concepts at a layman's level



L. A. Beeghly Library

Juniata College / LibGuides / Physics Seminar (Borgardt) / 1. Start Here

Physics Seminar (Borgardt): 1. Start Here

Information Literacy activity guide for the Fall 2019 Physics Seminar with Prof. Borgardt

2. Academic Articles

3. News Articles

4. Hist-Current

5. Social Media

6. Introductory

7. Synthesize & Present

Information Literacy Librarian



Research in Physics: Opening the Community

This semester, you and a small team of your peers will be researching a specific Physics topic.

Information on a topic is framed and perceived differently based on the source type (news paper article vs academic article vs tweet). As a team, you will be exploring all the different ways both scholars and the general public talk about your assigned topic.

This is an opportunity for you to exercise your skills as an individual contributor, team member, facilitator, and researcher. Each person in your team will have an opportunity to conduct individual research, facilitate a group discussion, evaluate relevant sources, and generate a final product that appeals to Physics-POE members and the greater Juniata College community.

<https://libguides.juniata.edu/physseminar>

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FINAL PROJECTS

Many students took advantage of the opportunity to explore a new medium!

- Four recorded podcasts
- Two videos
- One stop-motion video
- One digital children's book
- Three scientific posters



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ASSESSMENT

- Faculty feedback
- Student feedback
- Librarian reflection

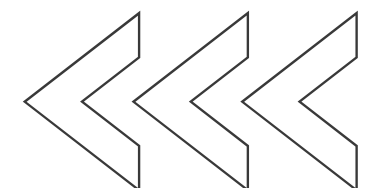
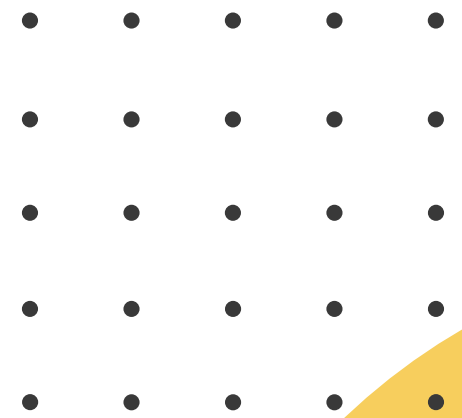


FACULTY FEEDBACK

Based on pre and post-activity discussion, faculty feedback was positive!

- Research topics in new and impactful ways
- Experience with multimedia was matured
- Starting a repository of marketing items that could be used to recruit prospective physics students

- Need clearly scheduled check-in times and deadlines built into the course calendar
- Shortening the six-week timeline to promote continued productivity



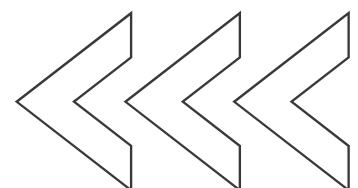
STUDENT FEEDBACK

The addition of a brand new activity . . .

“Overall, I believe that this project was annoying for many people because it drastically changed the format of seminar compared to previous years. However, I do believe that in the long run it will be beneficial.”

“Though we enjoyed the actual making of the project, the whole group was in agreement that this was not our favorite project.”

“Overall, I think that having this project gave Seminar a dynamic that we were unfamiliar with, compared to classes before.”



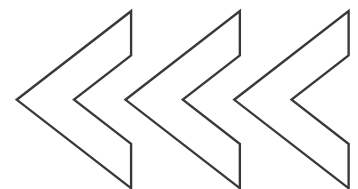
STUDENT FEEDBACK

Time management issues . . .

“Overall, the project was a success. The group could have benefitted from meeting a few more times during the semester, but with busy schedules, it was difficult to find times that worked.”

“The worst part was trying to find times when the four of us could meet because it was virtually impossible.”

“The main takeaway, the group as a whole felt there ought to be bi-weekly deadlines for this assignment. By activating such deadlines, students are more encouraged to work ahead on the project along with collaborating with their group mates regularly . . . This implementation would eliminate much of the procrastination and lack of communication that induces unnecessary stress.”



STUDENT FEEDBACK

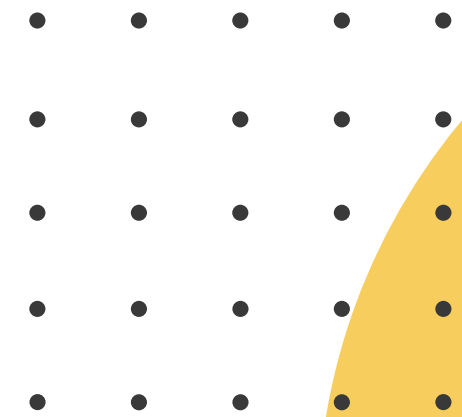
But still beneficial!

“This project required us to analyze a portion of physics from several different perspectives, and I believe that this was interesting because most of the time we are only learning from the perspective of the professor or a textbook.”

“Overall, our group enjoyed the project because we got to realize our academic progress. By working together, rather than talking in the lunch, our freshmen member got to see how older students parse through a technical paper and apply their existing idea to new ideas.”

“It is through projects like these that we as students can learn a lot about certain topics, and about research in general. Deeply diving into a certain subject provides us with new insights, thoughts, and knowledge we didn't have beforehand.”

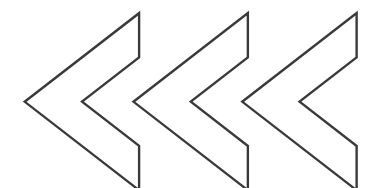
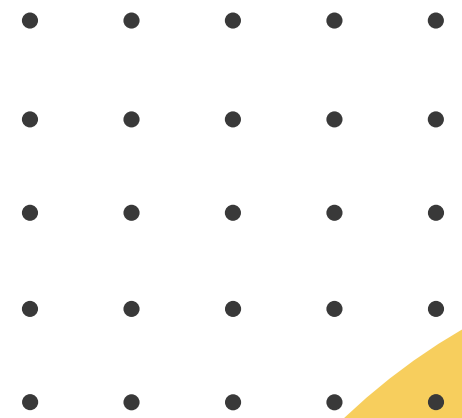
“This was a neat and refreshing way of doing physics without the burden of lengthy equations and fancy terminology. The freedom we had in selecting our topic as well as the length of time we had to complete the assignment were very much appreciated. With this freedom we turned an assignment into something our group truly enjoyed.”



LIBRARIAN REFLECTION

An amazing collaboration!

- Plan on being more involved in the actual execution of the activity to provide another layer of instructor and student support
 - Hybrid-model (face-to-face and embedded into Moodle course)
- Fantastic prototype-assignment that can be shared with other STEM and non-STEM departments
- Vocal faculty support
- Increased library awareness on campus





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TIPS AND TOOLS

Communicating with Faculty

- Workshop slides
- Info Lit worksheet for instructors
- ACRL Framework brochure
- Example of embedded IL Program

Detailed outline of Physics Seminar activity

Copy of this presentation

Google Drive Folder Link:

<https://bit.ly/3eXWge4>

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Thank you!

