5-4-2023

# Getting STEM Students Into the Archives & Special Collections

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## Abstract

Gonzaga's University Archives & Special Collections (UASC) worked with a faculty member from the Math department to view two early editions of Newton's *Principia Mathematica*, rare books, and tour the vault.

This was an intentional effort between STEM faculty and UASC to show non-traditional users how historical records and rare books can intersect with their discipline.

Approximately 100 students from three classes wrote short reflections about their visit, which UASC faculty graded. This poster highlights how UASC and STEM faculty developed this partnership and the impact it had on student learning.

## Making First Contact

**The Role of Serendipity...**
A math professor stumbles into the Rare Books Reading Room to view a student exhibit.

**The Librarian...**
...Happens to spot this wandering fellow and they begin discussing their mutual interest of rare books. This then leads to the Librarian inviting the faculty member back for a visit to view more items.

**The Vault...**
Having captured the attention of the faculty member, the Librarian highlights some of the early editions of Newton's *Principia Mathematica* in UASC's collections. The Librarian then asked if he would be interested in bringing his students to view these items as well. He happily agreed!

**The First Visit...**
The faculty member adapted his lecture to include a historical component that would introduce the students to the evolution of calculus. This segued into a visit to the Rare Books Reading Room and the Archives to view early editions of Newton's work.

## STEM Students in UASC

Following the success of the first visit, the faculty member then collaborated with UASC to bring more of his classes to the Library. This visit was more structured and included the following:

**Figure 1:** Second edition of Newton's *Principia Mathematica, 1714.*

- Historical background to the history of calculus.
- Introduction to the University Archives & Special Collections.
- A discussion of how math intersects with architecture, fine arts, and the process of early printing.
- A presentation of rare books, archival materials, and a tour of the vault.

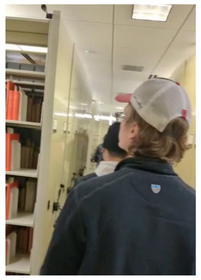

**Figure 2:** Students touring the UASC vault.

## Student Reflections

"I want to thank [our math professor] for going out of his way to help students better understand calculus and what it means on a larger scale by exposing us to amazing resources. I highly doubt other math professors care as much [...] Yesterday was an interesting but much needed twist to class that increased my interest in resources at Foley and [helped] better my relationship with the deeper meaning of calculus." - Jaxon

"I was skeptical today about going and looking at the books in the library because I did not understand how it would help my understanding of calculus. However, after leaving the library, I was thrilled [...] I have a hard time reading, meaning I have a different appreciation for books than most people. However, when I went and examined these books in the library, it [...] give me a better understanding of why they are so important and that they hold an untampered history of what was thought at that time to be factually correct." -Dillon

As an international student, I may not fully understand the English in the book, but I think mathematics [...] is [a] cross-language discipline, [...] even if our mother tongue is different [...]. but when [I] see calculus, [there is a] resonance. I think this is the charm of calculus [...] - Haolin

"[The vault] reminded me of my grandma's church, just off [...] the smell alone. It was a smell of old wood and other things, and it reminds me of a homely feeling." -Jack

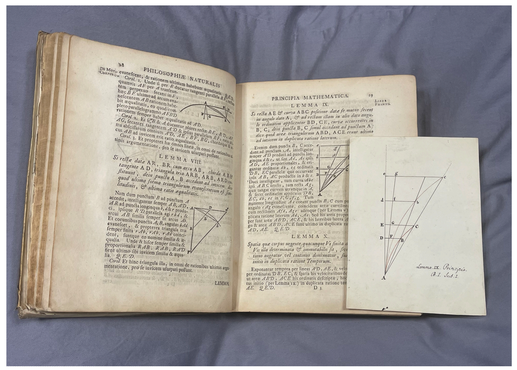

**Figure 3:** Second edition of Newton's *Principia Mathematic,* 1714

**Figure 4:** *Saint John's Bible,* Heritage Edition, Vol. 6, 2012

## Outcomes

Increased outreach with faculty and students.

Early attempts at embedding the UASC faculty into STEM teaching.

Learning more about the unique attributes of UASC's special collections as they relate to STEM.

Developing teaching materials for primary source literacy and associated learning outcomes.

Bringing awareness of library resources to students who would not normally consider the library or special collections as a place for information related to them.

## Future Directions

Encourage faculty to think more broadly about the content they teach and encourage their departmental peers to utilize the library resources and expertise.

Help faculty see the value of interdisciplinary instruction in their classroom experience.

Identify opportunities to embed real life applications of the course content, such as blueprints and architectural plans.

Think of primary source literacy in the same way librarians think about information literacy.

Collaborate with other library peers to learn about STEM research methodologies.

Learn more about the collection themselves to identify outreach opportunities that can relate to non-traditional disciplines.

## Contact Information

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## Acknowledgements

UASC would like to thank Dr. Tomas Guardia and the students from MATH 167 and MATH 261 Spring 2023.

## Presented At

Northwest Archivists Annual Meeting
May 2023