What experiences have you had with virtual reality (VR)?

What questions do you have about VR?

https://go.wm.edu/YJCz0n
Reality of VR: Library Involvement in Virtual Reality for Instruction
Camille Andrews - May 2024 - ASERL
Projects Timeline

- **2018**
  - Formal opening of makerspace (including VR) at Cornell University

- **2018-2021**
  - VR demos and consults; Intro VR workshops at Cornell

- **2018-2020**
  - 360 video class sessions and course-related instruction at Cornell

- **2020**
  - VR paper prototyping at Cornell

- **2022-2023**
  - University teaching & learning project on VR at William & Mary

- **2023**
  - VR chemistry lab project at William & Mary
VR Projects

- **VR demos & consults, Intro to VR workshop**
  Workshops and scheduled sessions to introduce VR concepts and experience VR apps with Jimmy McKee

- **360 video campus tours & other course-related instruction**
  Multi-session workshops to create immersive campus tours for COMM classes & other course-related instruction with Jimmy McKee and others

- **VR paper prototyping**
  Paper-based VR design assignments for COMM class

- **Advanced 360 videos**
  360 videos with interactivity (VR chemistry lab for organic chemistry class - modeled on NCSU example) w/ Prof. Dana Lashley and students

- **Advanced VR creation**
  More complex VR scenes and interactions
VR Projects

STEAM VR

Google Earth VR

YouTube VR

First Steps
VR Projects

https://guides.libraries.wm.edu/xr

A whole new world, from the comfort of your home

Take control of your online communities with a fully open source virtual world platform that you can make your own.
VR Projects

What do you see in front of you?
Casually looking around, what do you see in your primary view?

What is to your side?
If you look left, what do you see?

What is to your side?
If you look right, what do you see?

What is behind you?
If you twist your torso and look over your left shoulder, what would you see?

What is behind you?
If you twist your torso and look over your right shoulder, what would you see?

Concept Name:
VR Projects

View your 360s in Virtual Reality
VR Projects

COMM 1300
VR Projects

University Teaching & Learning Project

The University Teaching & Learning Project brings together a cross-disciplinary group of faculty members to explore innovative methods, problems of practice, and new approaches to teaching at William & Mary. For 2022–2023 we are exploring teaching and research applications for augmented and virtual reality (AR/VR).

Interested? Contact Pablo Yanez to learn more.
VR Projects

[Images of laboratory equipment and a person conducting experiments]
VR Projects

The Future of Molecular Design
Global real-time collaboration using Virtual Reality for general chemistry to pharmaceutical drug discovery.

Gravity Sketch
Express ideas the same way you imagine them: In 3D
Design in 3D from the start. Gravity Sketch provides a virtual studio for designers to create, communicate, and share in 3D at every step of the design workflow.

Unity
UNREAL ENGINE
blender
VR Projects

Image from built-in Unity simulator by Jungmin Shin and Kyle Lewis-Johnson
Other Ways to Support VR Projects

The virtual reality exhibition “War Up Close” premiered at Old Dominion University in December. (Image courtesy of the exhibition) and was also exhibited at W&M.
VR Tools and Projects

- Just getting started? Try
  - YouTube VR and other sources of VR content (like Mindscape) and help faculty identify VR experiences that are useful in their instruction
  - Mozilla Hubs (and Spoke for creation)
  - VR paper prototyping grid and Memento360 to display prototypes
  - VR instruction in your spaces and outreach to faculty with partners

- Have you played with VR but want to dive a little deeper? Try
  - Making a library orientation or tour using 360 video cameras (e.g. Ricoh Theta, DJI action 2 GoPro) or apps like Gravity Sketch, ThingLink, WondaVR or FrameVR

- Want to get into the nitty gritty? Try
  - Offering open source or commercial software like Unity (tutorials), Unreal Engine (tutorials), or Blender (tutorials)
  - Circulating equipment

- Learn more using tutorials like the ones above or at conferences like ACTAL
Lessons Learned and Future Directions

Start Small
Begin with simple projects to get experience before expanding in scope and complexity.

Have Fun
Make the experience engaging & enjoyable for participants (and you).

Connect to Learning
Align projects to educational goals and outcomes.

Set Expectations
Be clear about what is possible given constraints of time, skills, & resources.

Changing Technology
Be flexible and adaptable as tools rapidly evolve.

Tools
Develop sustainable models for lending and/or sharing VR headsets or partner with other depts who are doing this.
Acknowledgements

I would like to acknowledge the generous support and guidance of collaborators Jimmy McKee, Prof. Andrea Stevenson Won, Sara E. Wright and everyone involved with the mannUfactory makerspace, Prof. Dana Lashley, Kyle Lewis-Johnson, & Jungmin Shin and direct or indirect funding from the Maker Literacies team at UT Arlington Libraries (IMLS grant LG-17-19-0126-19), Center for Teaching Innovation at Cornell, and the Studio for Teaching and Learning Innovation’s AR/VR University Teaching and Learning Project at William & Mary.
Questions and Contact Me
Camille Andrews
Instruction and Research Librarian
William & Mary
ceandrews01@wm.edu