

# Experience VR

How To Get Started and  
See Virtual Reality For Yourself

## Today We'll Find Out

- What ARE VR, AR, and R? ;-P
- Why have VR in the library?
- How to build a viewer
- How to find good VR apps
- How to install an app
- View and share feedback

### WARNING

Most VR headsets - including those we build and use today - include magnets that may affect pacemakers

#### Tips

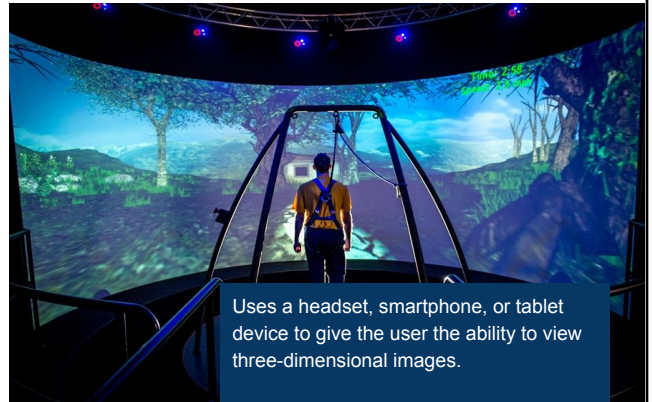
- Take frequent breaks
- Cardboard is not for use by children without adult supervision
- Do not use Cardboard while driving, walking, or otherwise by being distracted from real world situations
- If you have had or could be prone to seizures, consult a doctor before using Cardboard

[Google Cardboard Product Safety](#)

# What ARE VR, AR, and R? ;-P

## Virtual Reality

- takes place within a completely simulated environment that incorporates sensory feedback, mainly auditory and visual
- can be similar to the real world or it can be fantastical, creating an experience that is not possible in ordinary physical reality
- completely replaces the user's real world environment with a simulation
- Computer-generated or 360° video



Uses a headset, smartphone, or tablet device to give the user the ability to view three-dimensional images.

Devices must have a processor, display, sensors and input devices, including a camera and sensors such as accelerometer, GPS, and solid state compass

# What is AR?

## Augmented Reality

- interactive experience of the real world
- objects are "augmented" by computer-generated perceptual information
  - Auditory
  - Haptic (perception of an object by a moving subject)
  - Somatosensory (sense of touch, position, and movement)
  - Olfactory
- can add to or mask the natural environment
- layers virtual information over a live camera feed
- alters one's ongoing perception of a real world environment



# Other Realities ;-P

## Mixed Reality

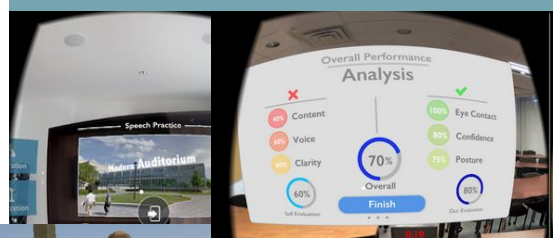
- physical and digital objects co-exist and interact in real time
- picture surgeons overlaying virtual ultrasound images on their patient while performing an operation



## Why VR in the library?

Introduce patrons to technology that education, industry, and entertainment are beginning to employ for vibrant, engaging experiences

### Practice public speaking



# How Does the Viewer Work?

- Phone
  - Gyroscope, accelerometer and a magnetometer
  - VR apps, VR videos, or 360 video
- Lenses
  - Allow you to focus on the screen when it's so close to your eyes
  - Works best with glasses off
- Magnet
  - Slides up and down to create a button for your phone
  - Acts as a compass or a click in some games



[Google Cardboard: How It Works! video](#)

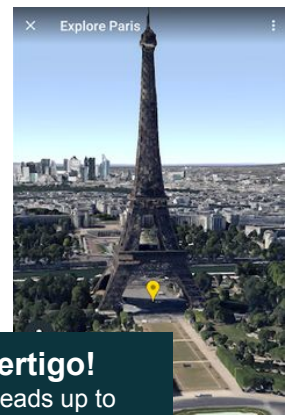
# Let's install an app

Connect to wifi. Go to the Google Play store or iOS App store. Start with:

- [Google Cardboard](#) has a tutorial and demos.
- **Beyond VR** is a public speaking app with simple controls. Look at controls to activate them.
- In **Google Earth**, search for your location or take a tour of a famous landmark or location.
- **Walk the Plank VR** requires walking and responds to movement.

Search YouTube for 360 Video or VR video

- **National Geographic**
- **Gorillas in the Congo**



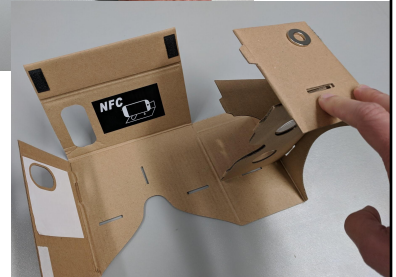
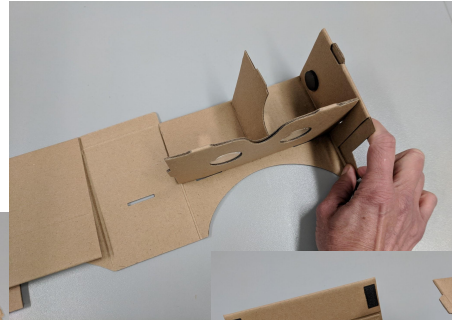
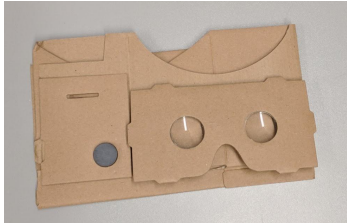
## Beware of vertigo!

Give patrons a heads up to

- start simply and slowly
- first try an app that allows them to be seated

**iOS users can search for VR apps on the App Store**

# Let's Build a Viewer



## Tips

- Unfold lens panel and center support panel first
- Start assembly at the right-hand side
- Then "roll" viewer into cube shape

What if I want to buy?  
[Get Cardboard](#)

# Viewer Building Tips

- Don't fold the camera flap to more than a right angle
- Align **front left corner** to "square up" the viewer before running tape around the body
- Ask a buddy to hold while you tape

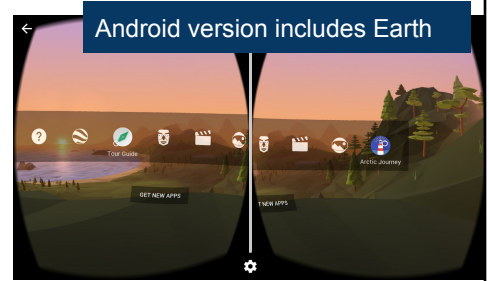
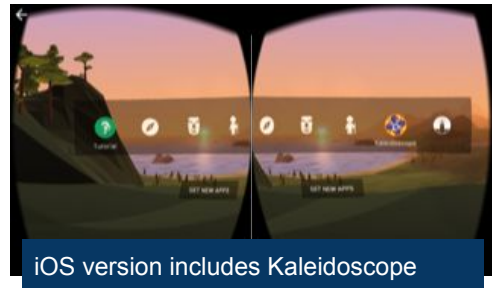


[A 2014 TechCrunch article called Google Cardboard "Mockulus Thrift" and shows assembly in action](#)



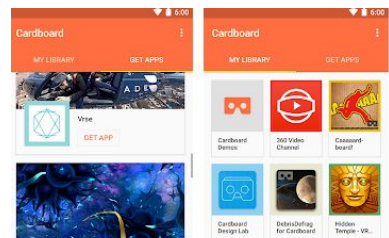
# Let's Use the Viewer

- Open the Google Cardboard app
- Tap Launch Cardboard Demos and follow on-screen instructions
- Insert your phone into the viewer
- To control the app
  - Move your head, look around the environment
  - When you look at a screen option, a circle will appear.
  - To make choices and switch screens, slide the magnet/button down and release
  - To exit a demo app, tilt the viewer to the side & pause
- When ready, get a partner and try the Google Earth demo - with your partner as your guide, stand up, move around, and explore



# How do I find more VR apps?

- [Google Daydream](#)
- [Google Expeditions](#)
- [NYT VR app](#)
- [Google Arts and Culture VR App](#)
- [International Space Station Live](#)
- WITHIN VR
- [20 Top Virtual Reality Apps that are Changing Education](#)
  - [Quizlet Flashcard VR](#)
- Search your app store for VR.  
Look for apps with 4 star+ rating



# Tips & Troubleshooting

- Use maximum brightness for best viewing
- Avoid your power/sleep button so you don't interrupt the app
- Phone size may affect viewing
- You may need to remove your phone case
- Google Cardboard requires
  - Android 4.1 or higher
  - iOS 8.0 or higher
- Adjust the QR code to match your viewer to Cardboard
  - <https://vr.google.com/cardboard/viewerprofilegenerator/>
  - [https://youtu.be/WpujLh\\_nGrk](https://youtu.be/WpujLh_nGrk)



# Links and Next Steps



[Cardboard Camera App](#)

[Google Tour Creator](#)

Create your own VR tour

- [Google Blog Post](#)
- [TechCrunch Article](#)

[Google Poly World of 3D](#)

Share in Google Poly

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LIBRARY SYSTEM  
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