

Examples of Implementing Google Cardboard in the Classroom

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Art Course

Sketchfab (App Store/Google Play) lets users create 3D renderings of many things and upload them to their gallery. The range of exhibits is broad, from a beating heart to a sculpture of Napoleon.

Biology/Ecology Course

Explore various environments while students describe different elements that are occurring in nature. Use **Google Cardboard Camera** or **Streetview** to create 360 virtual environments.

Foreign Language Course

Language VR: Immerse yourself in the culture and language of a different country through virtual reality. Experience culture and travel around the world with beautiful 360° images of different landmarks and locations quickly. Learn vocabulary more quickly with the visual word association in their photo realistic environments.

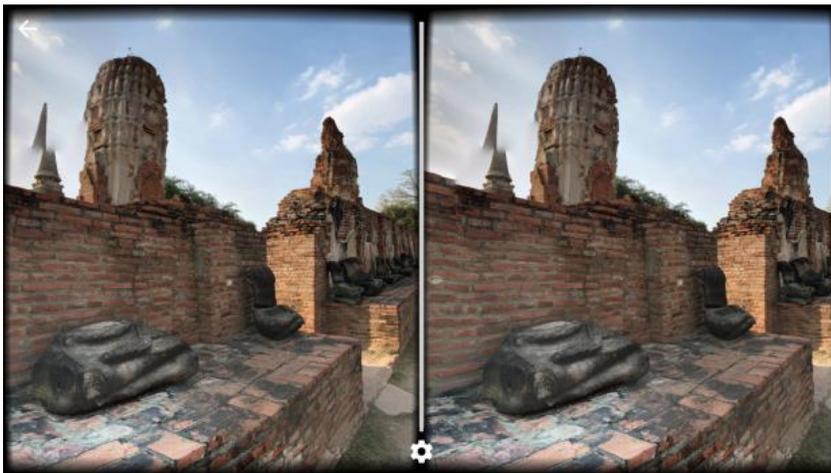
Foreign Language

Take 360 images of different environments (kitchen, living room, etc.) and have students identify objects in English, then identify the name of the object in the respective language they are attempting to learn. Use **Google Cardboard Camera** or **Streetview**.

Geography Course

Explore different areas of the world, more of a realistic visual (rather than looking at textbook images).

Download Google **Streetview** and explore a place, anywhere in the world. Look for the Cardboard logo to view an area in 360 degrees (there are even underwater ones!). Famous monuments are also covered so ask your students to find one and explore it during a history lesson.



Go to **Google Earth** and explore a place from high up in the air. This is absolutely fantastic for Geography, especially when focusing on a country or area. You can really see what it is like.

Geometry (Mathematics) Course

Take 360 images of various environments and identify different mathematical concepts (angles, geometric figures, etc).

Health Science Course

Cardio VR is a game that will let you enter a virtual reality doctor's surgery where you will have to search for your patient's ailment using x-ray vision.

Health Science Course

Random 42: Take a visually stunning and scientifically accurate 3D ride inside the human body. Watch red blood cells floating past, follow a signaling pathway into the nucleus or see bacteria dividing right next to you. This app showcases the power of medical animation and how new technology can be harnessed today to understand complex scientific subjects.

History Course

HistoryView VR is the educational platform for teachers and students to access 3D Virtual Reality Field Trips powered by Matterport. Working with museums and historical sites, HistoryView is able to share historical experiences and bring history to life for classrooms worldwide.

History Courses (Cultural Studies)

In real life, it's not always logistically possible to visit distant places. What's great about VR, though, is that with **Streetview** you can visit almost anywhere in the world. For instance, a class studying Hinduism, looked at different Hindu temples around the globe in this 3D setting. Afterwards, students can research all of the things they observed.

Human Anatomy/Allied Health/Biology Courses

Explore the brain or a cell — Two games, **InCell** (App Store / Google Play) and **InMind** (App Store/Google Play), take students on a microscopic mission inside the human brain and inside a cell.

Mathematics (Remedial Math/Algebra)

Agent Cayley is, hopefully, the "killer math game app" of 2016. Agent Cayley, custom built for iPhone & Google Cardboard, will engage students in a virtual reality iOS app while delivering and assessing the entire Algebra 1 curriculum. Each episode consists of the player immersed in a virtual reality environment where she or he solves crimes using mathematics. It is based on Henry Pollak's belief that the application comes first, and the math comes later.

Yet at the end of each episode, there will be measurable outcomes based on standards for Algebra 1. If Agent Cayley is built to completion, it will deliver, and assess the learner on, every topic covered by the algebra 1 course.

Music Course

Google has created **Inside Abbey Road**, which takes you behind the scenes at this world-famous recording studio. Watch as a symphony orchestra performs and as the staff prepare for and execute recordings. It has wonderful connections to music, technology and history.

Music Courses

Watch or create various concerts of all types of genres of music. Describe the musical elements, identify genres of music, instruments being played, and discuss various musical elements (tone, pitch, etc.). **Youtube VR** has a wide selection of concerts to choose from.

Physics Course

Bring physics alive — Many roller coaster apps are available for Google Cardboard (like VR Roller Coaster for Google Play). They can vividly illustrate the concepts of potential and kinetic energy as well as the forces involved in roller coasters.

Science Course - Astronomy (Solar System)

Even with a really simple VR technology like the Cardboard, **Titans of Space** manages to convey the wonders of our universe in an incredible VR experience.

Science Course

InMind VR is a great educational VR game that will take you on a journey into a patient's brain in search of the neurons that cause mental disorder. This experimental project made by Nival is a great way to navigate into a human brain in Virtual Reality.

Science Course (Biology)

Molecule VR: VR breaks the borders of reality and takes you everywhere! Now with Molecule VR, you can even explore the basic unit of life. Molecule VR is a virtual reality tour, supporting and integrating classic teaching, expressing complex concepts of biology and medicinal chemistry, and enhancing mnemonic techniques through a visual and interactive format.

Speech Course/Business Course

In **Virtual Speech** for VR headsets, you're dropped into a board room in front of a committee/panel for a job interview. Choose specific fields (IT, Engineering, Human Resources, Sales, etc.) or actual companies (Microsoft, Apple, Google, etc.) and interview for the job of your dreams. The app asks you common interview questions and you can practice answering them in a 3D job interview environment.

Study Skills (COLS 1010) or ANY Course

Turn study time into game time by entering Virtual Reality! **FlashcardVR** for Google Cardboard takes you from the reality of sitting at a desk, flipping mind numbing flashcards and transports you into a fascinating electronic world where learning is a side effect of the experience.

There are two modes of interaction: "Flashcards" deals cards to you in groups of five at a time, and allows you to study new material for the first time. "Game" mode sends you off into space, where your job is to defend the planet from alien intruders by matching weapon cards to the appropriate intruder's term. "Miss" your shot and both cards are placed back in the deck for another round.

Studying your flashcards in VR lets you see written words and images, as well as, have them read aloud, aiding both the visual and auditory learner. All external, visual, and auditory distractions are eliminated: it's just you and the flashcards (and maybe a few alien insects!)

FlashcardVR can read cards in multiple languages, including French, Spanish, German, and English. Hearing foreign vocabulary words as well as seeing them is a huge boon for foreign language students.

Flashcard information comes from Quizlet.com, one of the world's largest collections of flashcard data. You can select from millions of pre-existing flashcard sets, or create your own custom sets. Quizlet integration requires full activation via an In App Purchase.

Writing Courses (Especially remedial ELA Courses)

Students could download and use the App 'Google Cardboard Camera' to take 360 pictures of rooms or places and then write setting descriptions.

Writing Courses

VR gives such rich experiences, it's perfect for engaging writers; especially reluctant ones. For instance, a class went on a terrifying virtual roller-coaster ride (several roller-coaster apps, but **FullDive** is good). Afterwards, you can discuss feelings and emotions and what they experienced on the virtual ride.

Other

Chemistry VR

This is a fun game that requires you to search around a lab looking for the required elements to make a particular compound. It's great for students studying basic compounds or the periodic table. Chemistry VR is only available for Android at this time.

Discovery VR

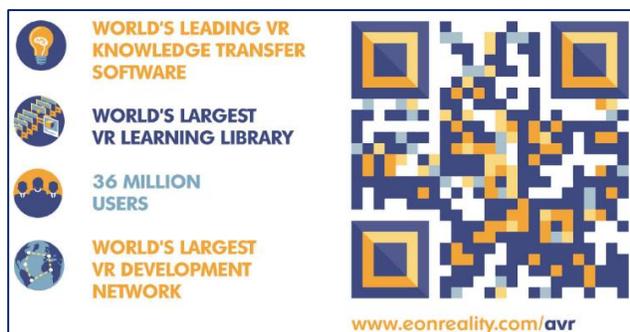
The makers of the Discovery Channel have a huge collection of educational virtual reality experiences. I took a trip inside an energy-efficient car with theoretical physicist Michio Kaku with the app.

Google Cardboard

This is kind of the "Welcome to Google Cardboard" app. It has a mix of various experiences, including a kaleidoscope, a visit to an art exhibit, and more. It's a great app to have on hand.

EON Experience

Fly to the Moon. Dive into the deep seas. Explore the human body. It's all possible on the EON Experience Portal, home to thousands of free 3D lessons, 3D scenes, 3D components, and other blended learning resources that connect to Wikipedia, PowerPoint, Qwiki, YouTube, annotations, quizzes, and more.



WORLD'S LEADING VR KNOWLEDGE TRANSFER SOFTWARE

WORLD'S LARGEST VR LEARNING LIBRARY

36 MILLION USERS

WORLD'S LARGEST VR DEVELOPMENT NETWORK

www.eonreality.com/avr

The image features a QR code on the right side, which likely links to the EON Reality VR website. The statistics are presented in a clean, modern font with blue and orange accents.

Orbulus VR

Orbulus is a hands free VR experience controlled simply by looking at where you want to go. This gives users an above standard "pick up and go" VR experience that they could quickly identify with, be engaged with, and share. Travel the world, stand on Mars, experience the magic of King Arthur's Glastonbury Tor, get married, visit the Salt Flats, experience New Year's Fireworks on Hong Kong Harbour, or chill looking at the Northern Lights. Orbulus is available in both the Google Play Store and Apple's App Store.

YouTube VR Mode

YouTube (VR Mode) is within YouTube's mobile app; to access the VR function, search for the videos by typing #360Video into YouTube's app search field. YouTube has a large selection of 360-degree videos. Take students skydiving, underwater in search of sharks, and on a tour of a particle collider in full 3D! If you have the **YouTube** app (App Store/Google Play), you already have access to its Google Cardboard features. Search for videos and then use the 360 filter in your search.

