

# CARDBOARD 3D VIRTUAL REALITY GOGGLES

## AN INTRODUCTION



**ATTRIBUTION-  
NONCOMMERCIAL-  
NODERIVS**

Can someone use my  
work to make money? ☒

Can someone  
change my work? ☒

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The background of the entire slide is a deep space scene. It features a dark, star-filled sky. Several celestial bodies are visible: a large, detailed Earth with blue oceans and green continents is positioned in the lower-middle section. To its right, a ringed planet like Saturn is visible. Other smaller, brownish and blue spheres representing various planets or moons are scattered throughout the scene. The text is overlaid on this background in a clean, white, sans-serif font.

**Imagine** the difference between reading about things and experiencing them.

**Imagine** the possibilities with a device (with the right support and software) that will let you travel through time and explore everything virtually.

**Imagine** seeing all the planets lined up next to each other.

**Imagine** seeing the pyramids without taking a flight to Egypt.



# What Is “Cardboard” by Google?

It's Folded Cardboard And A Pair Of Lenses Which Turn Your Phone Into Virtual Reality Goggles. It Also Has Magnets, Velcro, And A Rubber Band To Keep Everything In Place.

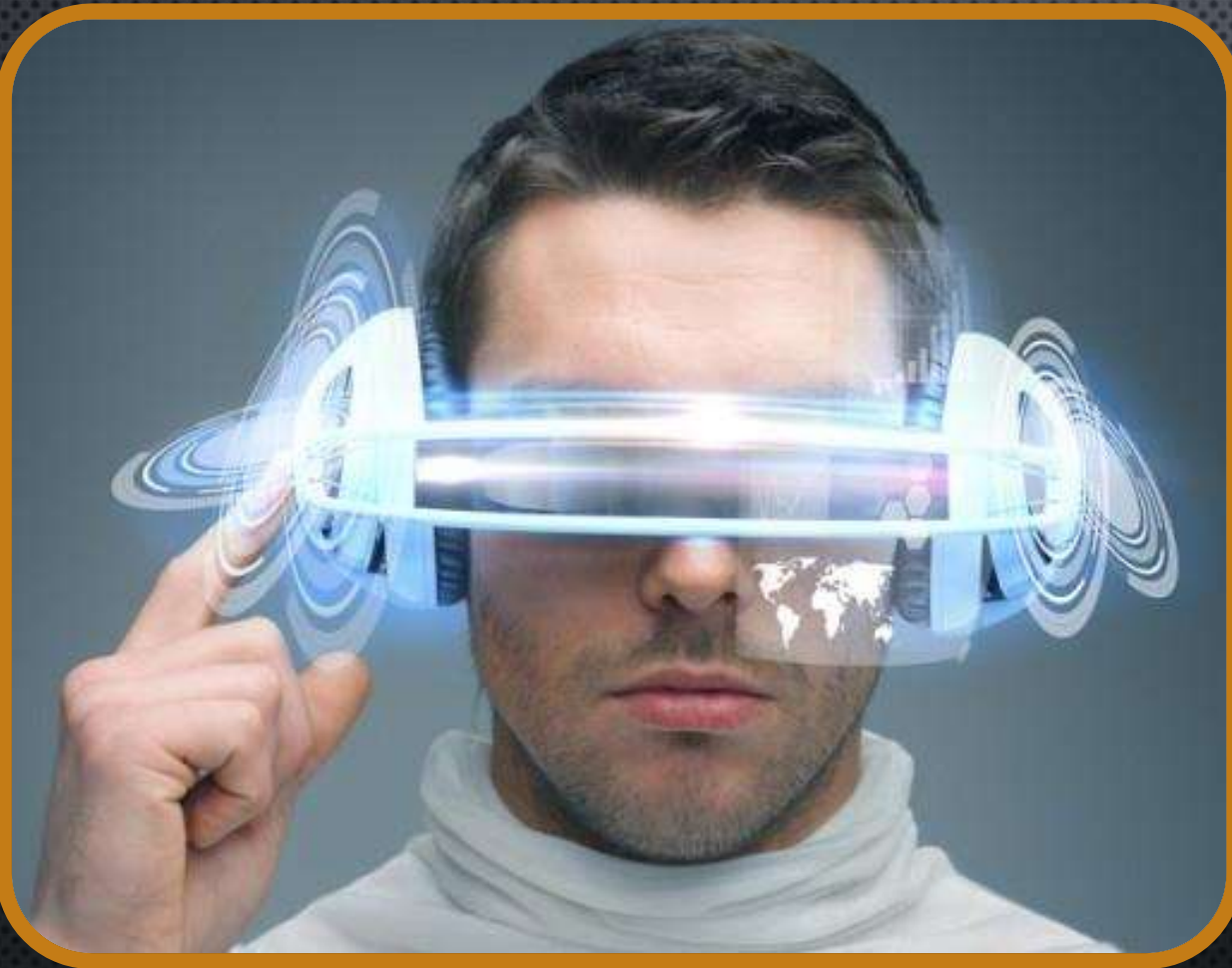
Once Its Put Together, You Set Your Phone Into It And Look Through The Lenses.

When You Have Compatible Apps, This Simple Setup Can Turn Your Mobile's Screen Into A 3D Experience.





# PHRASES TO KNOW



## ISTE NETS-S STANDARD 6 USE IT!

- **Virtual reality (VR):** An artificial environment that is created with software is presented in a way that the user can accept it as a real environment. On a computer, virtual reality is experienced through two of the five senses: sight and sound.

<http://whatis.Techtarget.Com/definition/virtual-reality> How VR works: <http://electronics.howstuffworks.com/gadgets/other-gadgets/virtual-reality.htm>

- **Three-Dimensional (3D):** In computers, 3D describes an image that provides the illusion of depth. When 3D images are made interactive so that users feel involved with the scene, the experience is called virtual reality. You usually need a special app or hardware to view and interact with 3-D

**images.** <http://whatis.Techtarget.Com/definition/3-d-three-dimensions-or-three-dimensional>



# PHRASES TO KNOW

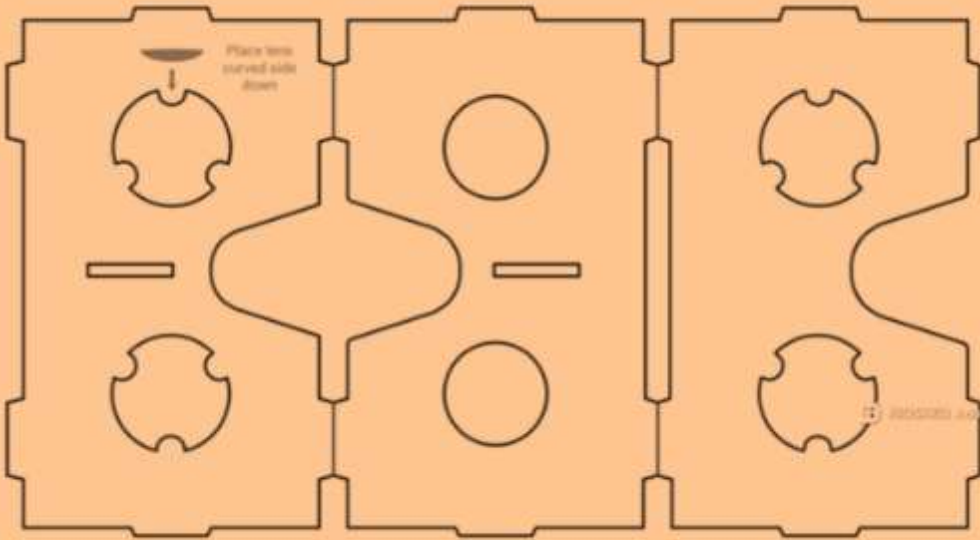
## ISTE NETS-S STANDARD 6 USE IT!

- **Augmented reality (AR):** Unlike virtual reality, which creates a totally artificial environment, augmented reality uses the existing environment and overlays new information on top of it.  
<http://whatis.techtarget.com/definition/augmented-reality-ar>
- **Magnetometer:** The sensors in your mobile which tell the phone where it is in relation to the Earth's magnetic field. How to use Cardboard with phones that have no magnetometer:  
[https://www.youtube.com/watch?v=o\\_Pk\\_kipYto](https://www.youtube.com/watch?v=o_Pk_kipYto)



- **Make-your-own Cardboard** plans have been downloaded more than **Can You Guess?** times. You can make it out of a pizza box!
- There are dozens upon dozens of compatible apps and some companies are also creating plastic versions.
- You can even buy Cardboard from companies like SOUQ and Amazon if you don't want to make one yourself.

Should I make one?



Want to do it yourself? Google provides the plans, but you'll need a few additional parts beyond some decent cardboard.

**Whether you plan to build or buy, it's easy to get started with this entry-level, inexpensive VR experience.**

<http://www.greenbot.com/article/2885333/laptop-computers/how-to-get-started-with-cardboard-googles-diy-virtual-reality-headset.html>



Web-based experiences --  
what Google is calling  
Chrome Experiments -- let  
you play a simple coin-  
collecting game, visit the  
Great Barrier Reef in a  
helicopter, and ride a roller  
coaster.



The magnet on the side  
functions as a slider /  
controller by using your  
phone's magnetometer.





**The fact that The New York Times recently supplied more than Can You Guess? subscribers with Google Cardboard to access its VR experiences has advanced mainstreaming of the device.**



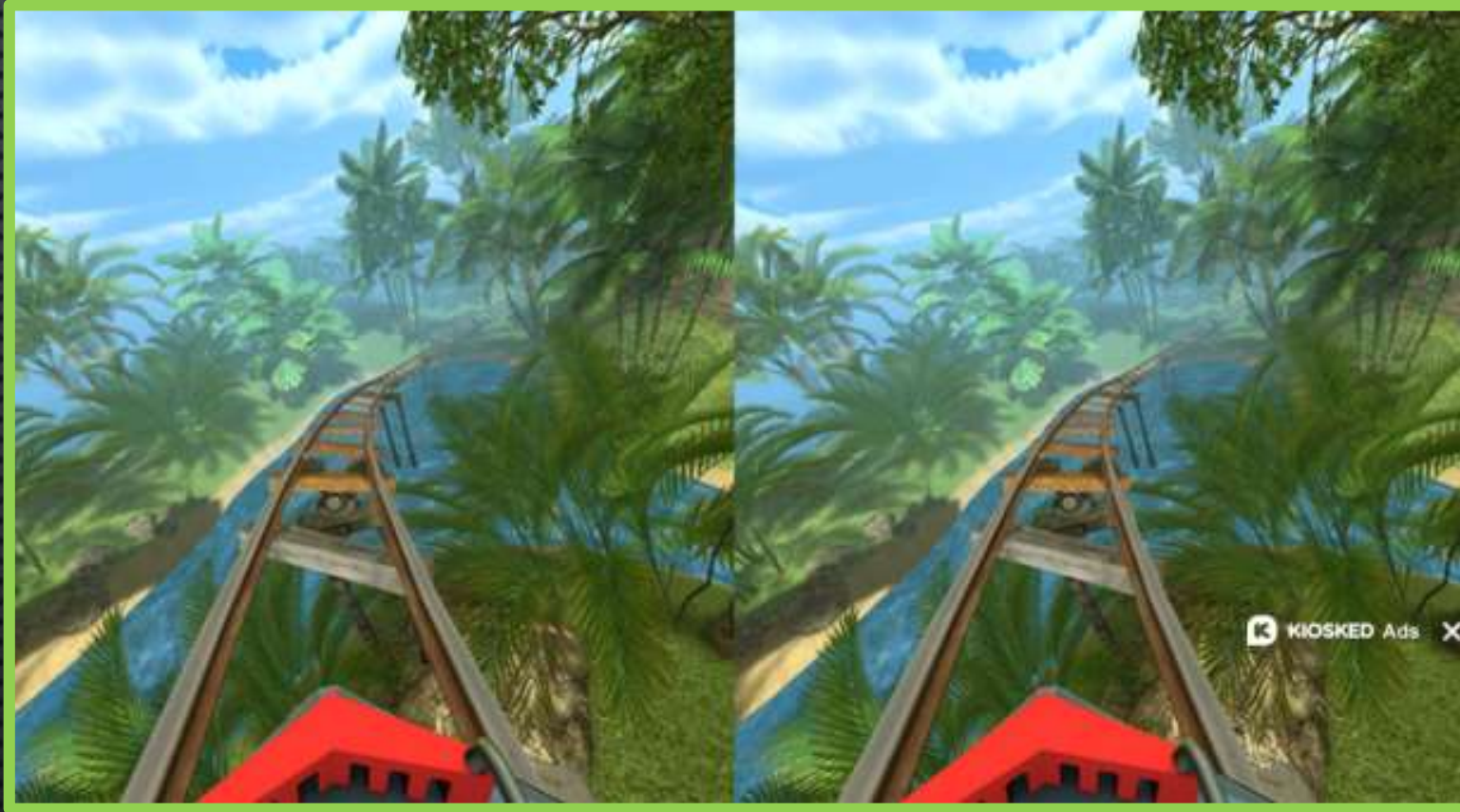
# KIDSREVIEW

## GOOGLE CARDBOARD



[https://www.youtube.com/watch?v=itKfPjc\\_KhQ](https://www.youtube.com/watch?v=itKfPjc_KhQ)

# BUT WHY BOTHER?



**It's an easy way to get a feel for what's possible with modern virtual reality, and beyond the low cost of the headset, most of the available apps are free.**





**ESPECIALLY  
FOR  
TEACHERS**

**GOOGLE CARDBOARD TUTORIAL AND REVIEW**

**[HTTPS://WWW.YOUTUBE.COM/WATCH?V=HJFZEG7LLVE](https://www.youtube.com/watch?v=HJFZEG7LLVE)**

# BONUS: DEEPER CONTENT

## DESIGNING FOR VIRTUAL REALITY AND THE IMPACT ON EDUCATION

VR can be for everyone



*For example, how do we keep people from getting sick while using VR?*

[HTTPS://WWW.YOUTUBE.COM/WATCH?V=DQMA5NNHN58](https://www.youtube.com/watch?v=DQMA5NNHN58)



## REMINDER:

The Little Magnet On The Side Is Actually A Button Which Acts as a Controller!

Since You Can't Touch Your Phone's Screen While It's Inside The Cardboard, When You Move The Magnet, It Acts As If You've Pressed Your Screen.

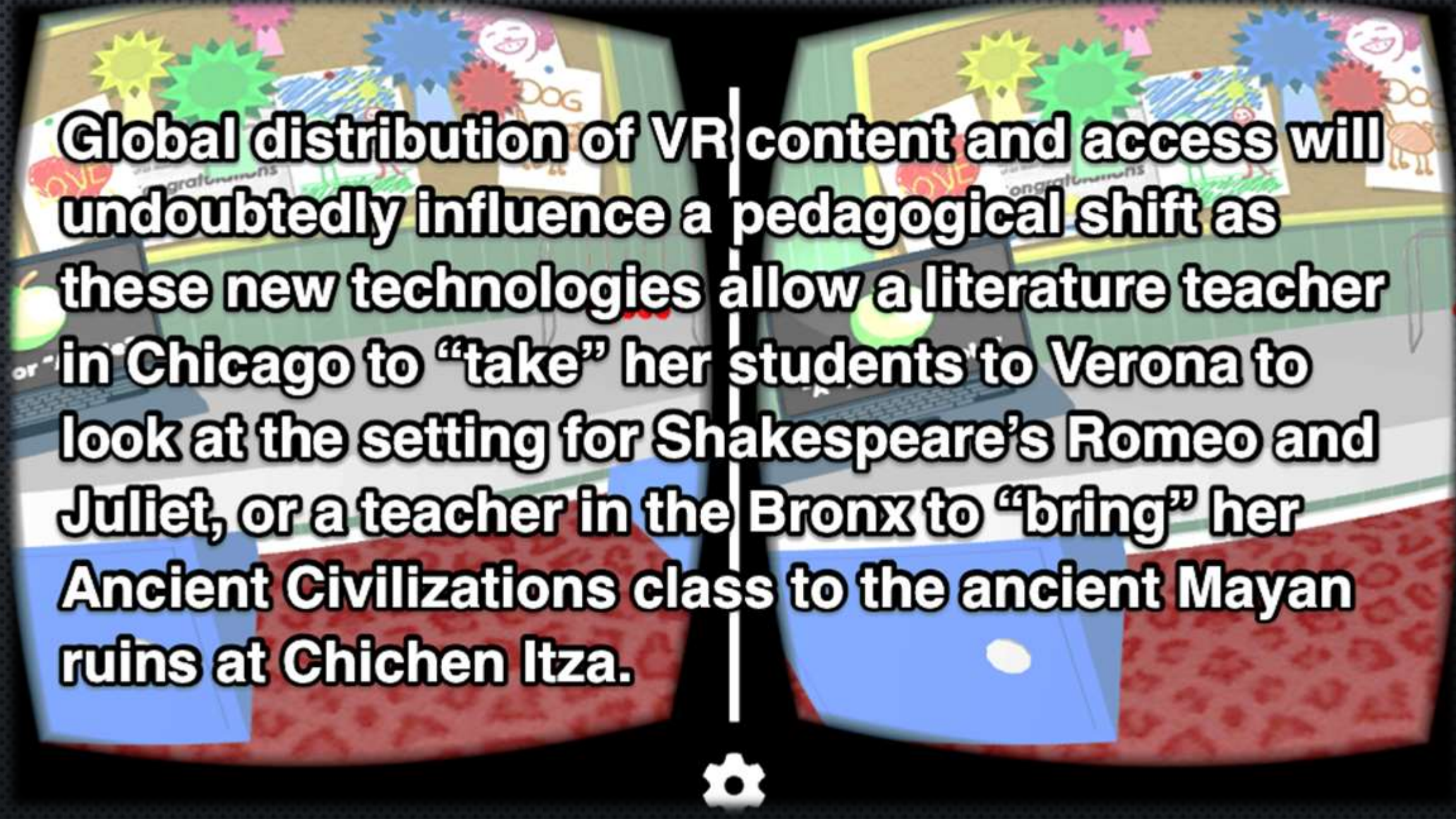


**WHY IS GOOGLE  
CARDBOARD  
GOOD FOR  
EDUCATION?**

**ESPECIALLY  
FOR  
TEACHERS**

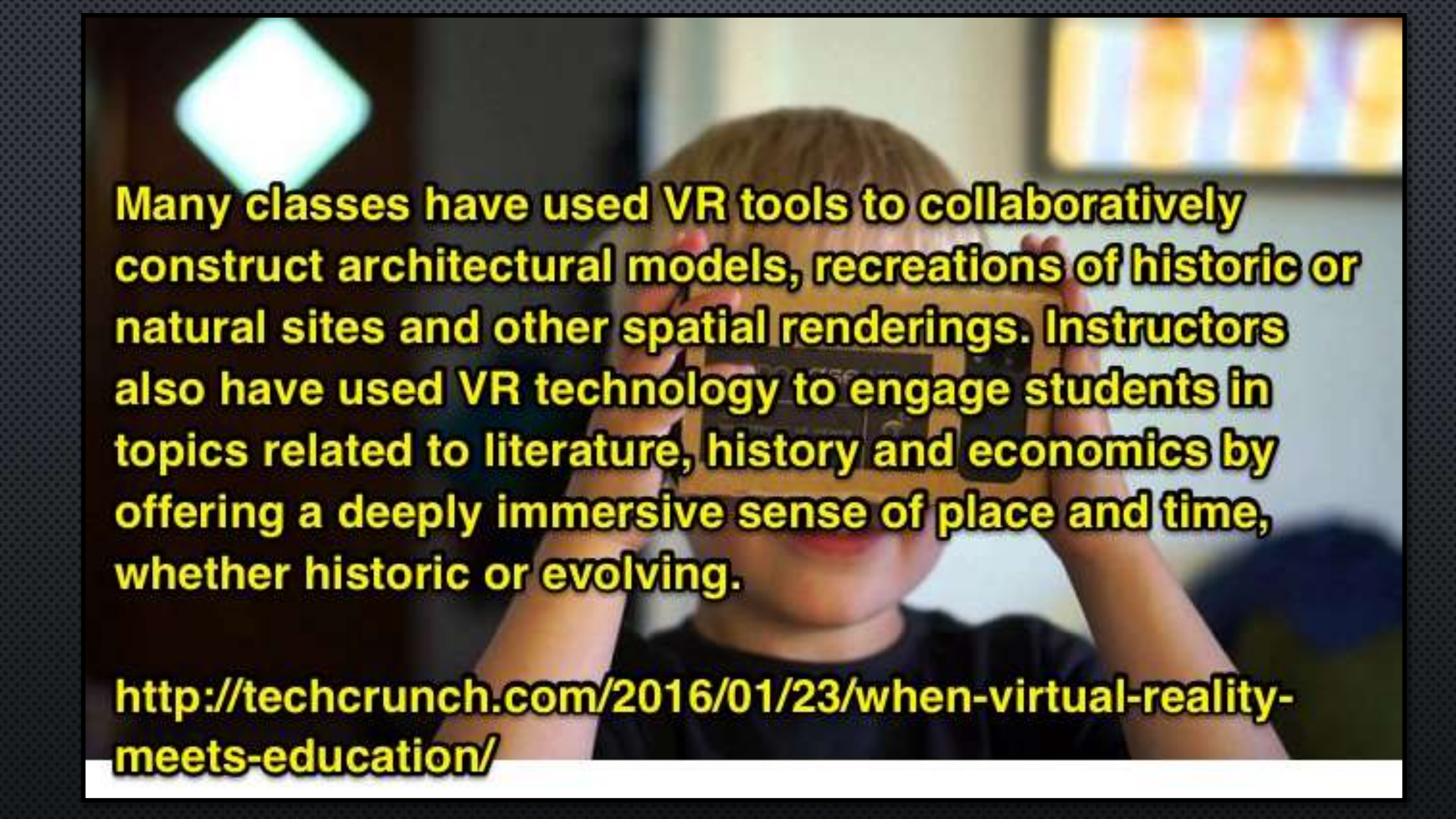
<https://www.youtube.com/watch?v=yA1GVX3Gtpw> Start at 2:37





**Global distribution of VR content and access will undoubtedly influence a pedagogical shift as these new technologies allow a literature teacher in Chicago to “take” her students to Verona to look at the setting for Shakespeare’s Romeo and Juliet, or a teacher in the Bronx to “bring” her Ancient Civilizations class to the ancient Mayan ruins at Chichen Itza.**



A young child with light brown hair is wearing a VR headset, holding the sides of the cardboard frame with both hands. The child's face is partially visible through the front of the headset. The background is blurred, showing a bright blue diamond-shaped light fixture on the left and a colorful, abstract light pattern on the right.

**Many classes have used VR tools to collaboratively construct architectural models, recreations of historic or natural sites and other spatial renderings. Instructors also have used VR technology to engage students in topics related to literature, history and economics by offering a deeply immersive sense of place and time, whether historic or evolving.**

**<http://techcrunch.com/2016/01/23/when-virtual-reality-meets-education/>**



**Virtual reality introduces new approach to rewards . . . “Success is acknowledged,” said Wilde. “There are rewards for achievements. Failures are generally ignored. This kind of rewards engage the brain and keep learners questing for more. Emotional reward cannot be ignored either. Students’ rewards are both individual and collective.**

# 5 OF THE BEST EDUCATIONAL VR EXPERIENCES ON CARDBOARD:

## 1. Titans of Space

[Titans of Space](#) is, in our own opinion, the best educational app available for the Google Cardboard

## 2. Discovery VR

[Discovery VR](#) is a VR adventure that will let you explore our world with 360° dynamic videos.

## 3. InMind VR

[InMind VR](#) is a great educational VR game that will take on a journey into the patient's brains in search of the neurons that cause mental disorder.

## 4. Mars is a Real Place VR

[Mars is a Real Place](#) is a short slideshow of stereoscopic 3D Martian landscapes that will let you discover more than 50 high-resolution images hand picked.

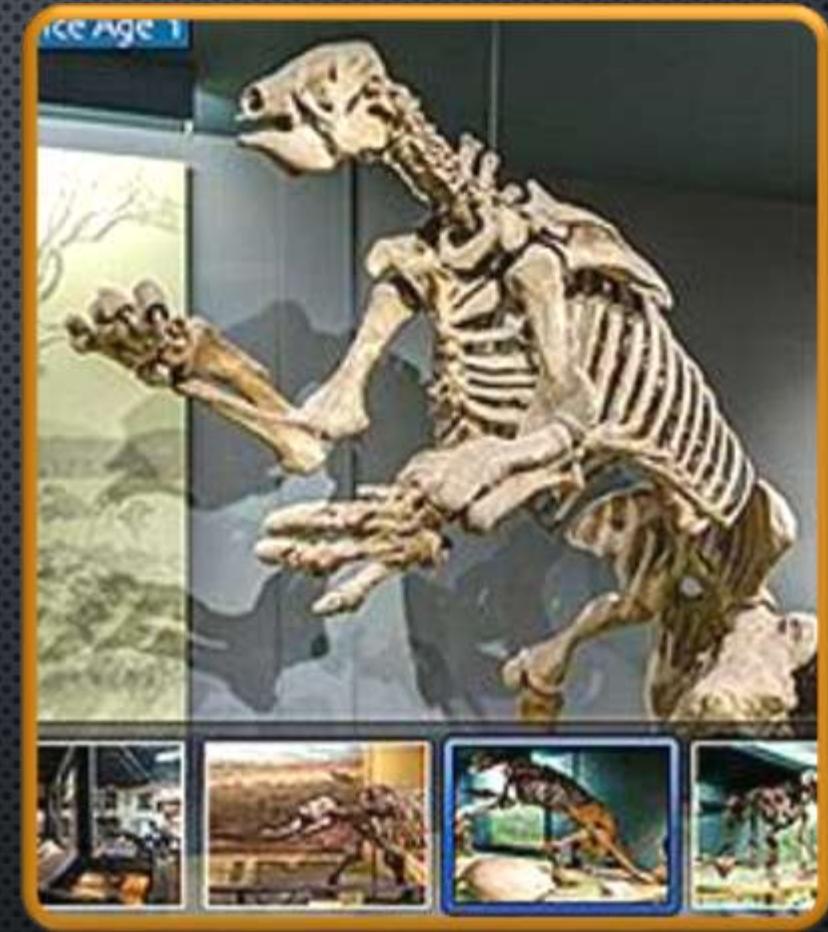
## 5. Cardio VR

We are ending this top 5 with [Cardio VR](#), 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.



# Interesting Virtual Museums and Activities

1. The [Vatican Museums website](#) hosts a [virtual tour of the Sistine Chapel](#).
2. The [European Virtual Museum](#) is twenty-seven European museums.
3. [Tenement Museum](#) is an interactive virtual museum of Ellis Island.
4. [The JFK Presidential Library and Museum](#) website has four exhibits.
5. The [Museum of Obsolete Objects](#) features videos about objects that once represented cutting edge technology and are now obsolete.
6. [Virtual Jamestown](#) is digital recreations of the Jamestown settlements.
7. Smithsonian National Museum of Natural History [virtual tour](#).



[http://naturalhistory.si.edu/panoramas/giant\\_sloth\\_mobile\\_tour\\_200.jpg](http://naturalhistory.si.edu/panoramas/giant_sloth_mobile_tour_200.jpg)

[http://www.freotech4teachers.com/2011/12/5-interesting-virtual-museums-and.html?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+freotech4teachers%2FcGEY+%28Free+Technology+for+Teachers%29#.VtLPF\\_197cs](http://www.freotech4teachers.com/2011/12/5-interesting-virtual-museums-and.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+freotech4teachers%2FcGEY+%28Free+Technology+for+Teachers%29#.VtLPF_197cs)

# Bonus Material

Egyptian Mysteries, an immersive investigation game in the ancient Egypt.

Random 42 will let you take a visually stunning and scientifically accurate 3D ride inside the human body.

Don't forget that you can find even more great educational apps for your Google Cardboard here.



VR Sickness: WHAT Is It And WHY we get it (It's motion sickness.)

<https://unimersiv.com/post/the-best-educational-vr-apps-for-the-google-cardboard-36/>



# GOOGLE EXPEDITIONS

## USING CARDBOARD

<https://www.youtube.com/watch?v=mlYJdZeA9w4>



[https://www.youtube.com/watch?v=FQ\\_whw6oSv4&ebc=ANyPxKqoZloPyAYxtncvhad1rdgp\\_fpWeGa0DTMFt7\\_HxFkQaK7e20fMHZwz8DxLQ1xD79C9Ey3Sg7eTXfh2eg95gOG\\_x--5A](https://www.youtube.com/watch?v=FQ_whw6oSv4&ebc=ANyPxKqoZloPyAYxtncvhad1rdgp_fpWeGa0DTMFt7_HxFkQaK7e20fMHZwz8DxLQ1xD79C9Ey3Sg7eTXfh2eg95gOG_x--5A)

# THE EXPEDITIONS PIONEER PROGRAM

<http://www.google.ae/edu/expeditions/>

Expeditions teams will visit selected schools around the world, including the United States, Australia, New Zealand, the United Kingdom, Brazil, Canada, Singapore and Denmark. Each team will bring a complete Expeditions kit with everything the teachers need to take their students on journeys anywhere. The team will show teachers how Expeditions works and help set it up before class.

*There is no charge or cost involved in the program.*





# BRING EXPEDITIONS TO YOUR SCHOOL

**What you need:**



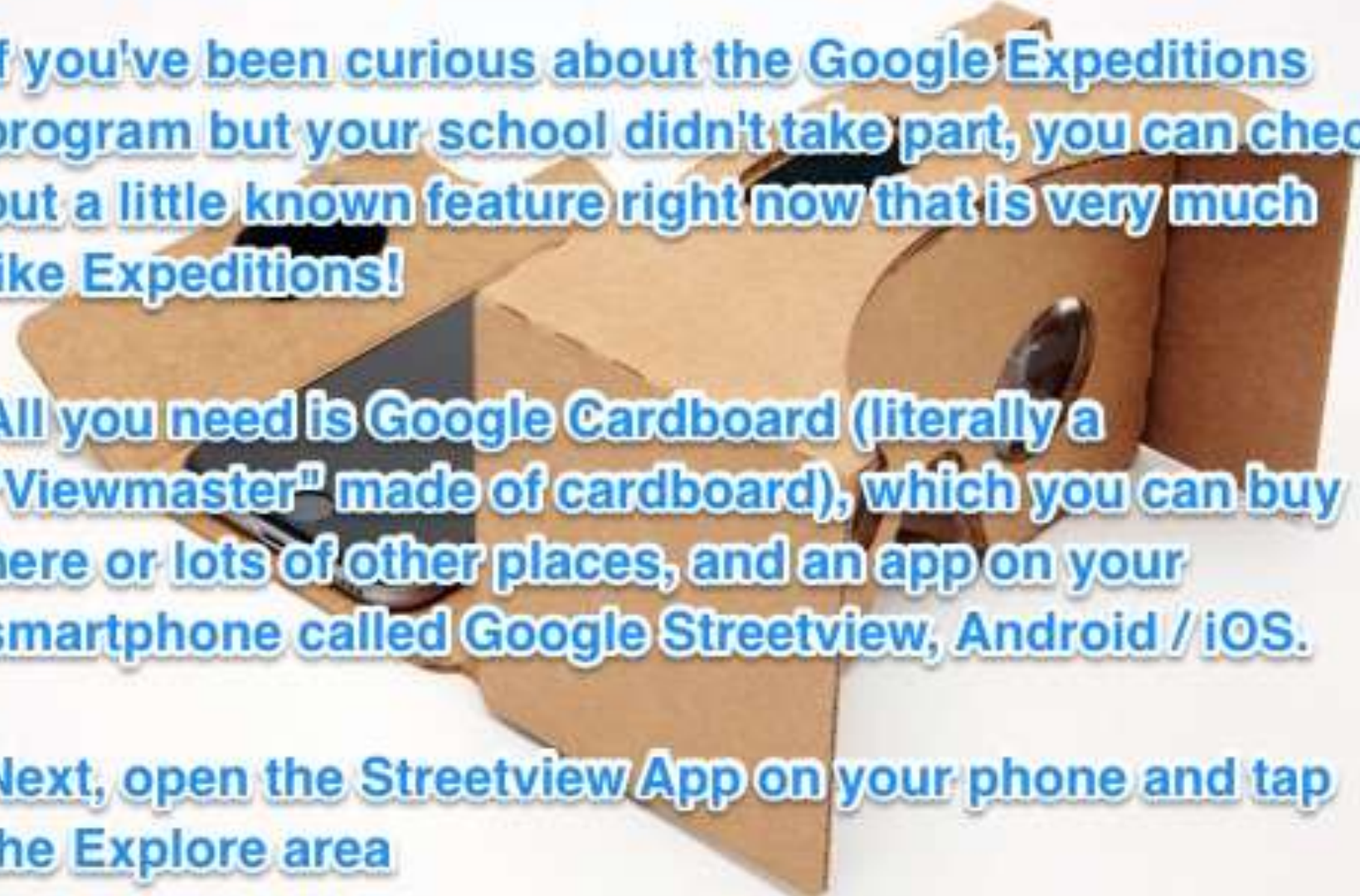
A minimum of 6 interested teachers. In order to take as many students as possible on an Expedition, we'll visit schools showing the most interest first.

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<http://www.google.ae/edu/expeditions/>

A committed point person to help schedule the school visit and coordinate the day of the experience.

# BONUS



If you've been curious about the Google Expeditions program but your school didn't take part, you can check out a little known feature right now that is very much like Expeditions!

All you need is Google Cardboard (literally a "Viewmaster" made of cardboard), which you can buy [here](#) or lots of other places, and an app on your smartphone called Google Streetview, Android / iOS.

Next, open the Streetview App on your phone and tap the Explore area