

5 (or so) sites & 10 videos

AR

Read this column online, with links, at www.littleclickers.com/ar

You've heard about AR (Augmented Reality). What is it, and how does it work? Imagine being able to look inside your chest to see your heart beating or flapping your arms to fly between New York City skyscrapers. Or how about trying out a new chair before you buy it, or playing checkers with someone who looks like they are sitting next to you, but is physically around the world. Let's learn more about AR!

1. Can you explain "Pepper's Ghost?" At <http://bitly.com/2qpTlBr> you learn how to make ghosts appear in your attic using reflections on glass. The AR-like effect dates back to 1862 and has been used to spook visitors to places like Disney's Haunted Mansion.

2. What's the difference between AR, VR and MR (Mixed Reality)? At Franklin Institute <https://www.fi.edu/difference-between-ar-vr-and-mr> you learn that the best term might be "mixed" reality, because of the way computers can be used to blend real and abstract information.

3. Which two AR systems should you know about? How much do they cost? For about \$2300 you can purchase Google's Magic Leap. Microsoft's HoloLens costs a bit more. Both represent the current state of the art for Augmented Reality. Unlike the VR headsets, AR systems have see-through screens that layer your digital information over what you see. Learn more:

- Magic Leap --> <http://bitly.com/2Qcnp0b>
- HoloLens --> <https://www.microsoft.com/en-us/hololens>

4. How will construction workers use AR? At <https://mixedreality.trimble.com/> you can see contractors use a special HoloLens hardhat to map blueprints over a construction site.

5. What about pilots? Visit <https://glass.aero> to learn about a company that attempted to create an AR system for pilots. Find out what they learned, at <http://bitly.com/2qljPFs>

6. Can AR turn you into a bird? Yep! Here's an example of a Senior Thesis project that turned into a cool business. Birdly is a flying simulator that lets you flap your arms to glide. You can buy one for about \$135,000! <http://birdlyvr.com/>



APPLICATION: Make some AR

It's easy -- get a whiteboard marker and look into a mirror. Draw a mustache on your face, and take a picture. You've "augmented your reality." If you want to learn AR on a computer, it's a bit more complicated. Learn Unity3D, Vuforia AR, ARKit and ARCore, and all you can about interfaced design. Here's a link to get started.

<https://unity3d.com/learn/learn-arkit>



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Augmented Reality on YouTube

Want more? Here's a video playlist that go along with this column:

<https://www.youtube.com/playlist?list=PLcBVHzUUEKwk8q3r8y6A0OObaOkwZuwGZ&jct=HmnMrGlxo8AyFKkRyeoJoWCnaD2DRw>

