Augmented Reality Sandbox
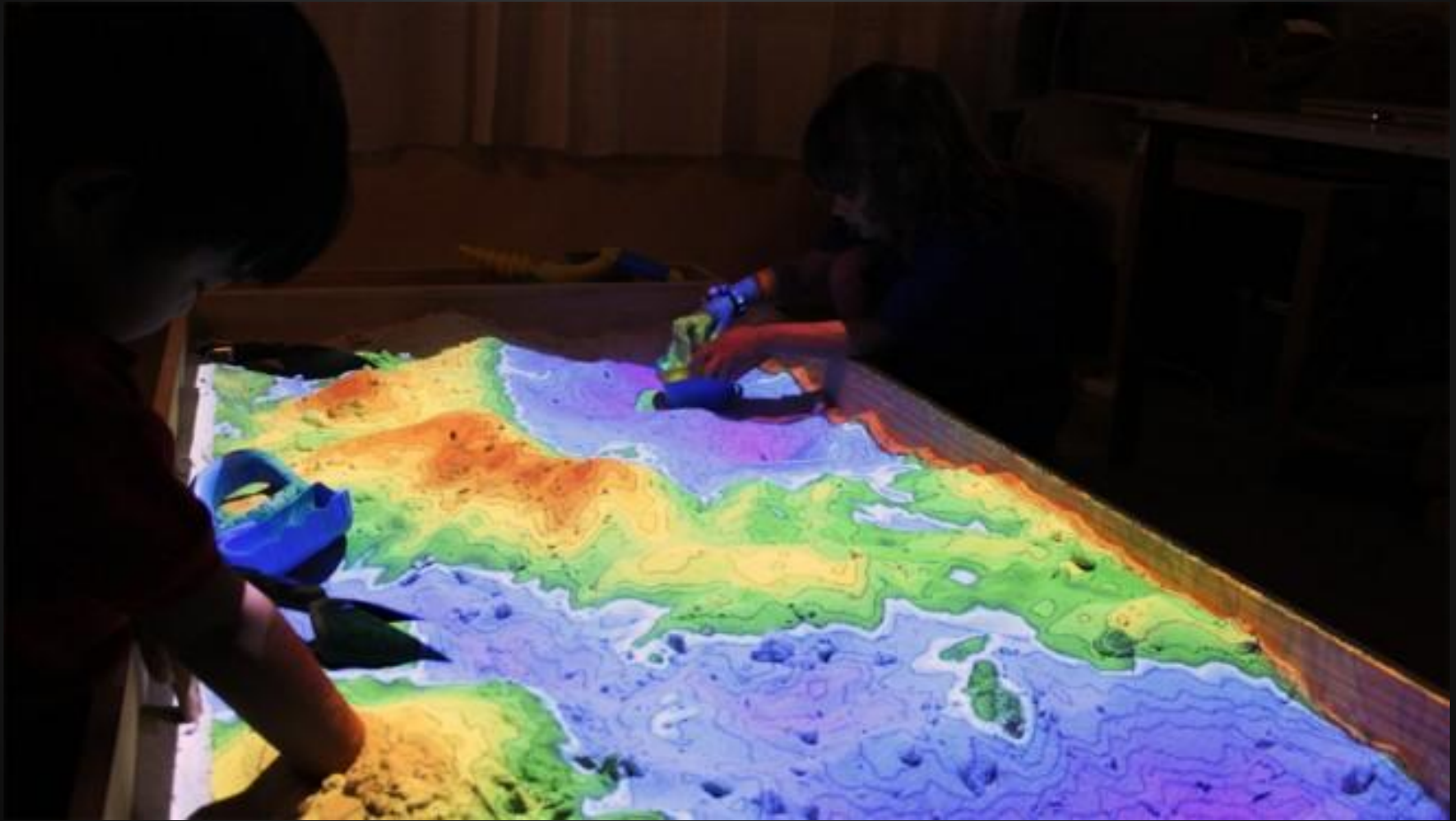
...there's no app for that

AR Definition

Augmented reality (AR) allows for a digitally enhanced view of the real world. AR can add layers of digital information on top of items in the world around us.

layar.com

AR Sandbox teaches kids about Topography and Lake Science

Players

- National Science Foundation-funded project began in 2012
- Developed at UC Davis's W. M. Keck Center for Active Visualization in the Earth Sciences (KeckCAVES)
- In conjunction with:
  - Lawrence Hall of Science, Berkeley
  - Tahoe Environmental Research Center, Lake Tahoe
  - ECHO Lake Aquarium and Science Center, Lake Champlain, Vermont

Lesson

AR Sandbox teaches:

- How to read a topographic map
- What are contour lines*/how do they work
- Introduces lake science
  - Purpose/function of watersheds
  - Water activity with virtual rain simulation
- Allows kids to visualize different ecosystems

*Contour lines are the lines on the map that signify different landscapes and terrains

Requirements

AR Sandbox requires:

- Sandbox Mircosoft Kinect
- Projector
- Computer
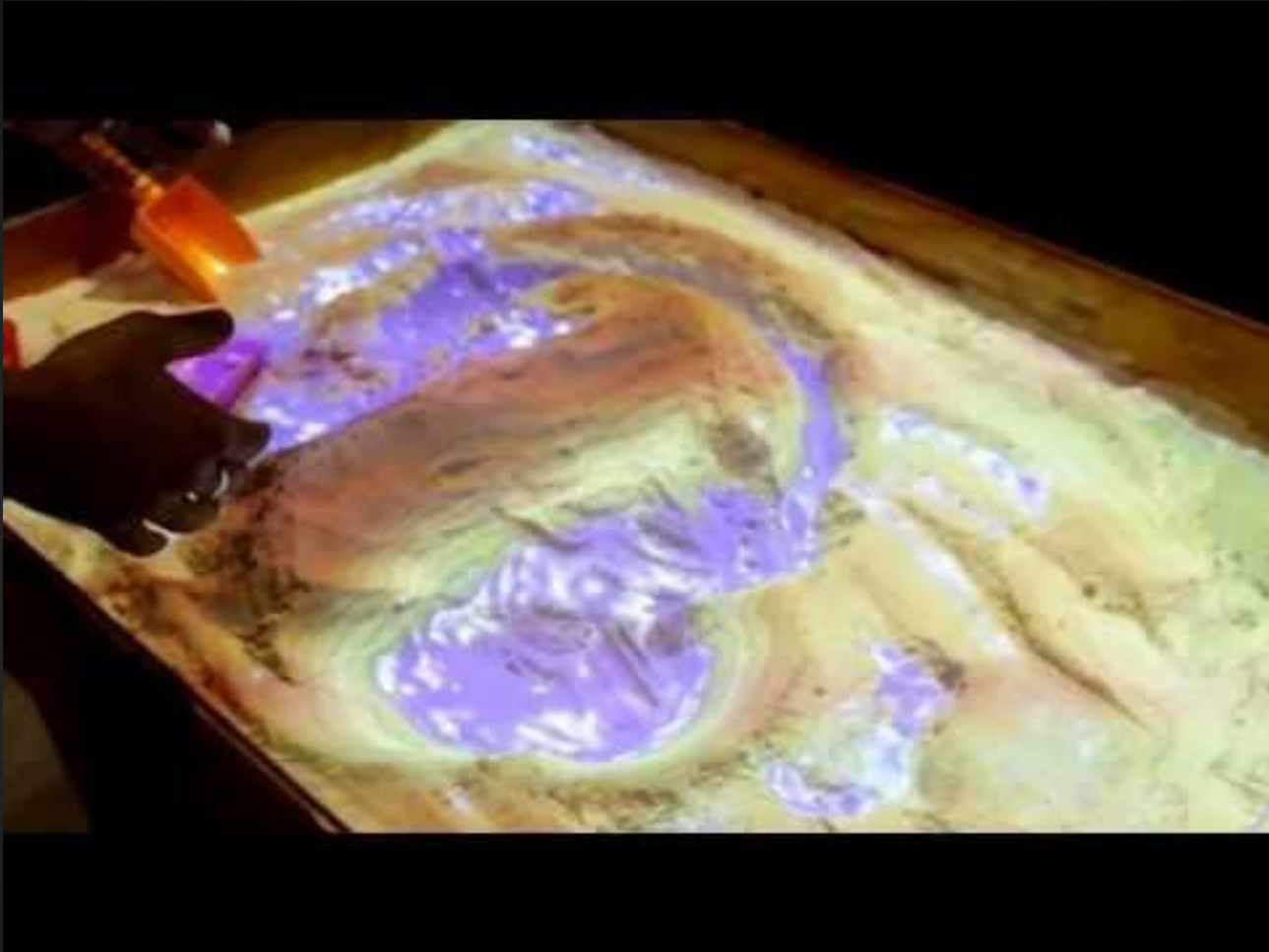- Code

Microsof Kinect

Simulation

Why It's Cool

"I'm a huge proponent of VR, obviously, but there's simply no way we could let people just come in and design their own landscapes on the spot in real time without any training… With the sandbox, it's literally child's play."

-Oliver Kreylos one of the lead UC Davis researchers on the project

Source

- Wired Magazine Article "This Augmented-Reality Sandbox Turns Dirt Into a UI" By Kyle Vanhermert - August 30, 2013

http://www.wired.com/design/2013/08/this-augmented-reality-sandbox-turns-dirt-into-an-interactive-interface/

How It Works