



A.D. HENDERSON & FAU HIGH SCHOOL

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THE CANE INSTITUTE FOR ADVANCED TECHNOLOGIES

Hello ADHUS and FAUHS Students (and Parents)!

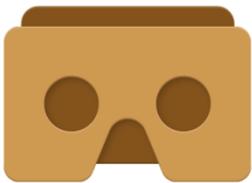
The Cane Institute (TCI) is excited to provide you with some sensational activities to supplement your distance learning with some cutting-edge technology to help you on your online journey this Fall. We hope these surprises you receive in the mail will be engaging and exciting!

This first TCI mailer includes a set of Google Cardboard Virtual Reality (VR) Glasses. Below are some VR apps to get you started on your virtual journey! Feel free to explore and learn about the world around you! Your teachers may send out more VR content through **NearPod VR**, other VR apps, Google Expeditions, virtual field trips, and links to YouTube VR videos that relate to your specific grade-level curriculum. You will need to have access to a smartphone to download content and view through these Virtual Reality Glasses.



Please make sure you use your Cardboard VR viewer with adult supervision. With your parents' permission, you may also download other VR content. Look for apps that have the Cardboard logo () to find things compatible with this viewer.

I recommend starting with the Google Cardboard VR app to become acquainted with VR and how to navigate through virtual reality. If you are having challenges with focus, visit the "Sites in VR" app, and go to "viewer settings" to calibrate your Cardboard. Search the Google Play Store or Apple App Store for these apps and more!



Cardboard

Google LLC Libraries & Demo

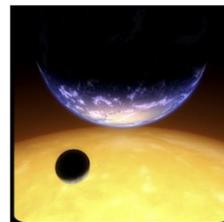
 Everyone



Expeditions

Google LLC Education

 Everyone



Titans of Space®

DrashVR LLC Educational

 Everyone



YouTube VR

Google LLC Entertainment

 Teen

RESEARCH CONNECTION

VR in the K-12 Classroom

Virtual reality can be used to enhance student learning and engagement. Here are just a few current sources on virtual reality research in the K-12 classroom.

Al-Azawi R., Albadi A., Moghaddas R., Westlake J. (2019) **Exploring the Potential of Using Augmented Reality and Virtual Reality for STEM Education.** In: Uden L., Liberona D., Sanchez G., Rodríguez-González S. (eds) *Learning Technology for Education Challenges. LTEC 2019. Communications in Computer and Information Science*, vol 1011. Springer, Cham. https://doi.org/10.1007/978-3-030-20798-4_4

Baumgartner, E. (2020). *The Impact of Virtual Reality and 360-Degree Video on Spatial Reasoning Skills in Elementary Students.* (Electronic Thesis or Dissertation). Retrieved from <https://etd.ohiolink.edu/>

Cortiz, D. & Silva, J. (2017). "Web and virtual reality as platforms to improve online education experiences," *2017 10th International Conference on Human System Interactions (HSI)*, Ulsan, pp. 83-87, doi: 10.1109/HSI.2017.8005003.

Papanastasiou, G., Drigas, A., Skianis, C., Lytras, M., & Papanastasiou, E. (2018). **Virtual and augmented reality effects on K-12, higher and tertiary education students' twenty-first century skills.** *Virtual Reality*. 10.1007/s10055-018-0363-2.

Tilhou R., Taylor V., Crompton H. (2020) **3D Virtual Reality in K-12 Education: A Thematic Systematic Review.** In: Yu S., Ally M., Tsinakos A. (eds) *Emerging Technologies and Pedagogies in the Curriculum. Bridging Human and Machine: Future Education with Intelligence.* Springer, Singapore. https://doi.org/10.1007/978-981-15-0618-5_10



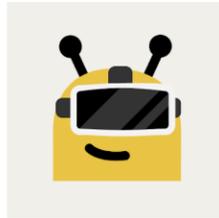
Sites in VR

Ercan Gigi Education

Everyone



Use this "Sites in VR" app and look for the "Viewer Settings" to help calibrate your VR Cardboard viewer.



Gizmo VR Video Player: 360 Virtual Reality Videos

Gizmo VR LTD: Virtual Reality Video Players & Editors ★★★★★ 1,674

Everyone



Astronaut VR Google Cardboard

Muchoviento.net Adventure

★★★★★ 1,103

Everyone



Solar System Scope VR

INOVE, s.r.o. Education

★★★★★ 1,235

Everyone



VR Video 360 Nature

Axact Apps Entertainment

★★★★★ 268

Everyone



VR Education & learning 360

Free Music Cloud, VR videos, games and apps Education ★★★★★ 25

Everyone

Please share your VR learning experience with our TCI learning community by posting pictures to The Cane Institute Facebook and Twitter! If you have questions or comments, feel free to reach out via email at aphipps@fau.edu.

Sincerely,

Allan Phipps
District K-12 STEM Coordinator and Director of The Cane Institute