**Project Title:** Google Cardboard – Create A VR Experience For Environmental Education

**Project Description:** Use the open source Google Cardboard SDK to develop virtual reality experiences that promote environmental education. Base idea for the project: a prairie plant and prairie ecology identification tool. <https://developers.google.com/cardboard>

**Background:** Google Cardboard is a relatively low-cost solution that allows users to insert their phone into a cardboard “viewer” to immerse themselves in a virtual reality experience. Many educators have taken advantage of this to provide virtual field trips and guides for students using existing apps. Virtual reality devices are also used at the Seamans Center on campus, which may be a helpful resource for going about this project. In this project, you can choose between:

1. Develop A Program

Recommended for students with strong computer and coding skills. Develop a program that educates users of the Google Cardboard using the open source developer tool. Think about topics that would benefit from the user being in the environment. A key example of this might be prairie plant identification. This can be used to educate a wide audience on species names, ecological function, controlled burns, and benefits of prairies while “immersed” in a prairie environment. If you are interested in other issues related to environmental issues or sustainability, you can create a lesson on that. What problem are you interested in solving? What about creating a program to educate people on what they can or can’t recycle?

1. Identify A Selection Of VR Apps for Environmental Education and Evaluate Their Usefulness

Examine virtual reality applications made for the purpose of environmental or sustainability based education and evaluate their strengths and weaknesses. How might you design a curriculum around these? How can virtual reality help raise awareness of environmental issues? How can VR help train people in skills like species identification or environmental design?

**Helpful Materials:** “12 Ways to Use Google Cardboard in Your Class,” <https://ditchthattextbook.com/12-ways-to-use-google-cardboard-in-your-class/>

Google Cardboard helpful resources:

<https://play.google.com/store/apps/details?id=com.google.vr.cardboard.apps.designlab>

<https://designguidelines.withgoogle.com/cardboard/>

**Desired Outcomes:**

* Successful design of an environmental education VR program for use in Google Cardboard. Or, a thorough written report and evaluation of VR programs for environmental education and their potential use in the classroom for students of all levels.

**Potential Collaborators/Stakeholders:**

* **Office of Sustainability and the Environment**

**Evaluation:** Effectiveness of VR lesson or thoughtfulness of a report on virtual reality in the classroom as a resource for environmental students.

**Course Group Relevance:** Engineering, Computer Science, Education\*