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Virtual Reality as a Means to Inclusive Participation

We would like to acknowledge and thank our funder, the United States Department of Agriculture (USDA), National Institute of Food and Agriculture (NIFA) – Food and Agriculture Non-formal Education (FANE) Projects for their support of the ROOTED in Ag project. SF-425 2022-69018-36297



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Respecting Our Origins in Technology Through Education in Agriculture



Youth:

- **explore agri-science** through an historical lens
- making connections to local **cultural practices**
- **place agriculture within the larger context**
- **technology-focused learning experiences**

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Where in the World?

Hawaii

- Kauai
- Laupahoehoe
- Kona
- Waimanalo
- Molokai
- Kula

Nebraska

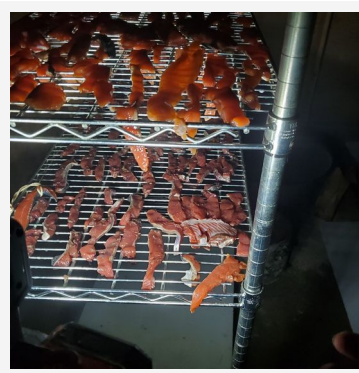
- Mead
- Geneva
- Bruning
- Shickley
- Lincoln

Alaska

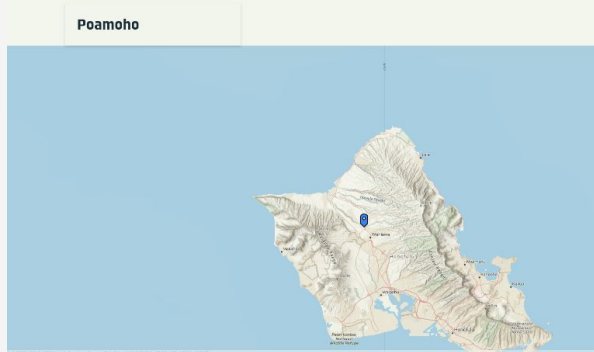
- Matanuska-Susitna
- Delta Junction
- Southeast Alaska



What in the World?



Technology and Process



ArcGIS StoryMaps

Papaya trees

Papaya (*Carica papaya*) is a healthy fruit, rich in Vitamin C, and grow on herbaceous “trees” as tall as 30 feet! Papaya, like other fruits, begin green in color but transform into a yellow-orange color as it becomes ripe. At the CTAHR Poamoho Research Station, different papaya varieties are grown for seed, which are then grown by local farmers and gardeners...eventually ending up on the breakfast plates of students!



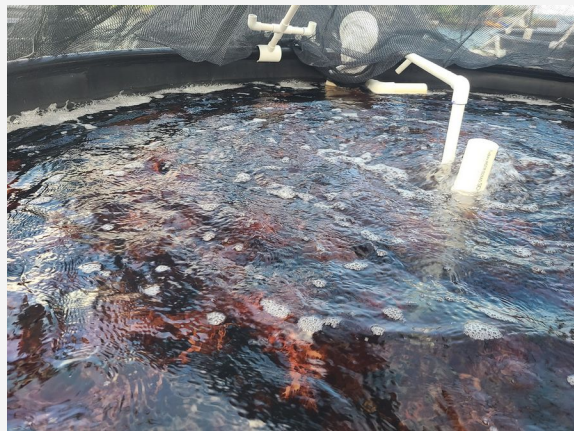
Equipment



Greater Connections



Exposure and Experience



Why This Works



There is some information that helps show how VR can help **those with disabilities** feel more like they are **part of an experience** or understanding of what it might be like to travel to various places.... (Wilson PN, Foreman N, Stanton D., 1997)

The use of VR technology in education allows learners to have **deeper connections with the content** and a **sense of collaboration** with others comparable to face-to-face and online learning. This **enhances student engagement** and supports a more favorable viewpoint of scientific content (Fegely & Churner, 2021).

VR blended with gamified design and adaptive techniques has the potential to deliver **effective educational experiences** that not only attract but also **motivate learners...** (Marougkas, A., Troussas, C., Krouska, A. et al., 2024)

Virtual Participation

Harvesting, feeding, pesticide application, planting, & more



Virtual Participation



Experience the sound; what do you hear?



Virtual Participation

Experience the feeling



Accessibility

Literally viewing the world through a virtual lens allows access to areas and information not readily available.



Hands On Rotation Guided Tours Story Maps





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