

Making Waves with Radio: Empowering Informal Educators | 2053160



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Project Description

This project is designing and evaluating mobile-ready resources for informal educators to raise awareness and build understanding of radio frequency communications and wireless technologies for youth, families, and the general public.

Audience & Settings

Informal science educators, youth, & the general public; Museums, science centers, camps, and community spaces.

Disciplinary Area:

General STEM

Key Achievements & Learnings

- Radio activities and media available in English and Spanish
- Formed informal science educators online Community of Practice (CoP) to serve Latiné community and audiences
- Mobile apps with interactive radio concepts
- Codesign process can promote high quality materials design
- Youth show creativity and empathy in radio camp when using wrong theory design in making and coding projects



Access & Inclusion Participatory design approaches like codesign and values mapping are used to ensure a diversity of voices are considered during the development process of educational materials. Learning resources are available in Spanish and English.



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Making Waves with Radio: Empowering Informal Educators to Prepare Future Generations in Wireless Radio Communications with Mobile Resources (2053160)

Enviemos una selfie o autorretrato

“Estos filtros son muy chistosos. Voy a enviar una selfie chistosa a mi amigo James.”

1. Las ondas de radio creadas por la antena del teléfono llevan los datos de la selfie de Dolores a través del aire hasta que chocan con la torre celular más cercana.

2. La torre celular receptora envía la información a través del cable de fibra óptica a la computadora de la compañía de telefonía celular, la cual identifica una torre celular transmisora cerca de James.

3. Entonces, la computadora envía los datos específicamente a la torre de celular transmisora a través del cable de fibra óptica.

4. La torre celular transmisora envía las ondas de radio en todas direcciones y son captadas por la antena del teléfono de James, el cual lee los datos de la selfie.

“Estos filtros para selfie están saliéndose de control.”

MAKING WAVES WITH RADIO

Radio Explorers



Radio Silence



Messages from Space



Wi-Fi Detective

Radio Futures



You Decide



I Spy Radio

+Spanish versions
 +mobile apps
 +activity training videos
 +content training video
nisenet.org/radio

Wi-Fi Detector app

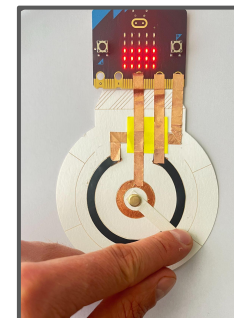
- Minimal, sleek, kid-friendly
- Multiple Visualizations
- Historic Data Graph
- Audio Representation
- Spanish Translation
- Accessible Contrast Modes
- QR Code sign available



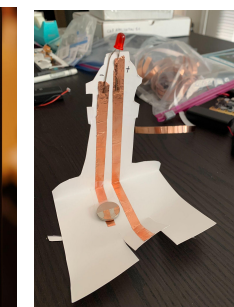
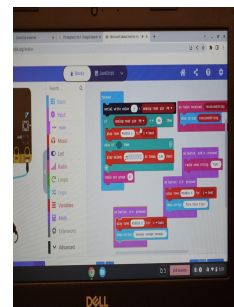
bit.ly/wifidetector



Radio Makers



Codesign



Dixon, C. G., Hsi, S., & Van Doren, S. (2023). Keeping Voices in the Room: Values Clarification in Codesign for Equitable Science and Technology Education. *Curator: The Museum Journal*, 66(1), 9-28.