Quake - Alert: Eyes for the Deaf, Ears for the Blind

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People with special needs have necessities that require a more detailed planning in case of emergency. The special needs population must have an alert system that can save their lives in a natural disaster such as earthquake. Early warning alerts, along with applying the “Drop, Cover, and Hold On” protocol, are essential in that moment. The purpose of this investigation is to design and build a device that emits light and sound to alert visually impaired and deaf people during a seismic event. The investigation will study how effective is the Quake - Alert device emitting light and sound to alert audio-impaired and blind people during a seismic event. The hypothesis states that the Quake - Alert device will emit light and sound to alert people who are blind, and audio impaired in a seismic event. The prototype created is a home alarm and seismograph that detects seismic movements while recording them. The effectiveness of the device functionality was determined through home tests to see if the device emits light and sound. Three trials were conducted, and observations were recorded. The hypothesis stated was accepted. During the simulated earthquakes, the Quake - Alert automatically activated emitting sound and light. The prototype turned on the light, which alerts the deaf people and emits a sound for the visually disable people. This device will serve to protect the lives of the visually impaired and deaf persons during a seismic event.

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