**THE BAT HAT**

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**Eighth Grade**

**Research**

**Sound as a Means for Perceiving the Environment**

Echolocation is a technique used by bats to detect what is in their surroundings using sound. Daniel Kish used this technique to use sound waves to perceive what is in the environment. Using this technique, he was able to visualize the surroundings using sound and was able to carry out activities (biking, skate boarding, etc) like a normal person would do.

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**Sound is not affected by Light**

I read an article about how sound can go, sense, and rebound off things anywhere, and is also not affected by the light. This article made me choose sonar Sensor for my device.

**Devices for Helping the Visually Impaired**

There are more than two million blind people in US. Most of them use canes, which can detect the obstacles, holes, uneven surfaces, steps and other hazards low in the ground. There are some sensor based devices called Electronic Travel Aids which were used for detecting obstacles high above the ground but did not get popular due to fact the user has to actively scan the environment in order to detect obstacles.

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