

Sound Science

Pillar: STEAM

Outcomes: Utilize problem solving skills and the scientific method to discover the science of how we hear and gain an understanding about communication when hearing is impaired



Most people don't know that Juliette Gordon Low, Girl Scout founder, was deaf. She began to lose her hearing when she was 17 and became almost totally deaf in adulthood. Girls will learn about sound and the science behind how we hear, learn about the language deaf people use to communicate, then use sign language to promote Girl Scout traditions.

1. Find out about the anatomy of the ear and how we hear (Discover)
 - a. Here is a diagram of the ear: <https://www.stanfordchildrens.org/en/topic/default?id=anatomy-and-physiology-of-the-ear-90-P02025>
 - b. How do we hear? Check out this fun video : https://www.google.com/search?q=youtube+how+do+we+hear&rlz=1C1GCEU_enUS820US821&oq=youtube+how+do+we+hear&aqs=chrome..69i57j69i64.7611j0j15&sourceid=chrome&ie=UTF-8#kpvalbx=DH9fX-j9CM22tAaZ7LS4BQ26
 - c. Here is more about hearing from TED-ed: <https://www.youtube.com/watch?v=LkGOGzpbRcK>
2. Learn about Sound (Discover)
 - a. Check out this video about sound: <https://www.youtube.com/watch?v=3-xKZKxXuu0>
 - b. How does sound travel? Learn about sound wavelength, pitch, and frequency. <https://www.pinterest.com/pin/73113193925764023/>
 - c. Learn about different ways you can see sound
 - a. Here are some YouTube videos to see sound: <https://www.youtube.com/watch?v=7VGLBZOywlG>
 - b. Here is another interesting one: <https://www.youtube.com/watch?v=px3oVGXr4mo>
3. Learn about American Sign Language (Discover, Connect)
 - a. Learn about sign language: <https://www.nidcd.nih.gov/health/american-sign-language>
 - b. Some things to know about sign: <https://www.youtube.com/watch?v=wa0nxppMJ-Q>
 - c. Learn the alphabet in sign language
 - d. Look up common phrases in sign language and teach them to your family.
4. Learn Girl Scout traditions in sign language (Discover, Take Action)
 - a. Here is a video a Girl Scout troop put together to teach sign: <https://www.youtube.com/watch?v=mhJ7AUc5tNU>
 - b. Record a troop video or other media format a song and share it!
5. Spread the word! (Connect, Take Action)
 - a. Teach a troop or someone else a song in sign language
 - b. Record a troop video or other media format a song and share it!

Are you loving these STEAM activities? Do you want more to extent your learning? Check out our Sound Science Pinterest board full of hands on learning here: <https://www.pinterest.com/gprograms/stem-activities/sound-science/>

