Feature Story: How'd They Makeds That Sound?

National Standards: 1, 7-9, 10, 11

So much of what we hear in media, in the movies or on TV – and in music today, is assembled from bits or "samples" of music created, collected and catalogued in music "libraries." The practitioners who do this mix, alter and remix these sounds are known as sound designers, and many have unique specialties. This story
provides background on libraries and the technology used to manipulate sound with computer software, and then profiles the work of a sound designer who has found a career niche in hunting down ambient sounds around the world for use in video games, and especially in virtual reality environments.

The story is interesting from a career prospective, but also as an introduction to electronic instruments for use in music creation.

Prepare
Play some different sounds on a keyboard and discuss how they relate to acoustic instruments and sounds.

Play a video game, isolate different sounds and imagine how they were produced.

Key points in the article:
  • There are composers who create musical parts and sell them to collectors, who assemble sound "libraries."
  • There are artists who use computer software to alter sounds, or create new ones, for artists to use in their compositions.
  • There are sound designers who collect "ambient" sounds in nature and the world to give TV, film, music and video game soundtracks real life elements.
  • Almost like "CGI" engineers – video artists who create film screen magic – there are audio engineers who dream up and create audio compositions using computers and manufactured sounds.

Begin
Download a sound library and play some of the electronic instruments.

• Ask your students to identify where the sound came from and what it sounds like.
• Ask your students to imagine what is missing or could be added to the library.
• Ask your students to describe unique sounds in life; foley sounds like a door closing or shoes on a floor, that could be used in a visual production.

Review vocabulary words from the article below:

- **FOLEY -** the reproduction of everyday **sound** effects that are added to films, videos, and other media

- **VIRTUAL REALITY:** a simulated experience that can be similar to or completely different from the real world

- **BINAURAL:** relating to or used with both ears.

- **AMBIENT:** relating to the immediate surroundings of something.

- **ANALOG:** not digital; not computerized

- **SYNTHESIZE:** produce (sound) electronically.

Discuss

Ask students to pick a favorite sound that they would record for use in music or a video game, and then how they would do it.

Ask students to suggest a sound that could then be modulated and be used as an electronic instrument. For example, a whistle could be tuned to a succession of frequency, and the "played" as an instrument. What other sounds could be managed in this way?

Expand

Where are sounds used in media today? In our computers, in the sounds of our phones, the chimes in door alarms, in our cars…where else?

What skills would a person need to have a career in sound engineering? Math? Why? In an understanding of audio equipment? What would that take. Where might someone learn these skills?

Close

The worlds of electronic sounds, music creation and the fundamentals of music creation, arrangement theory and physics all collide in the creation of media today. How important is it to learn the science and how important is it to learn musical theory and technique? How successful can someone be when they can learn and combine art and science skills?

Q&A

1. Where can composers sell their sounds?
2. In computing, what is a plug-in?
3. Name at least three companies/entities that Jason Lassen has done sound production work for.
4. What type of headset did Lassen bring with him for his sound expedition described in this article?
5. Name at least four settings he recorded audio at.
6. What does Lassen need on his VR microphone while recording outdoors?
7. What is a benefit to binaural microphones?
8. What is used in caves and tunnels to trigger recording from afar?
9. What is an example of recording foley sounds?
10. How many spatially categorized folders are inside of Lassen's own music library?

Answers
1. Sound and music libraries
2. A piece of software component that adds a specific feature to an existing computer program.
3. iZotope, Cakewalk, Intel, DTS, Sony, Disney, Konami, Skybound, Hasbro, Lakeshore, Interplay, the United States Department of Defense
4. Sennheiser AMBEO* Smart Headset
5. Castles, cathedrals, catacombs, churches, caves, forests, jungles, temples, cities, markets, mansions, halls, concert venues, rivers, streams, tunnels, passages.
6. A windscreen (or a beanie hat)
7. They are easy to prepare and trigger quickly.
8. Bluetooth® technology
9. Recording audio inside the kitchen of a Michelin-starred restaurant.