



CENTER FOR
RESEARCH &
EVALUATION

The sound of culture:

**Exploring acoustical features of sounds
perceived in free-choice learning environments**

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What does this sound mean to you?



What if I told you...

- that this sound was recorded in a place intended for learning?
- that people come to this place expecting to have fun?
- that this sound holds *opposite* meanings for many of those people?

How would all of these things affect your approach to exploring acoustics in this kind of environment?



Photo courtesy of COSI / Anna Trankina



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The Sound Travels project

Through a combination of traditional research and practice-based exploration, we are investigating how sounds around us (soundscapes) impact people and their learning in spaces like parks, zoos, and science centers.



DRL AISL #2215101

Our research questions

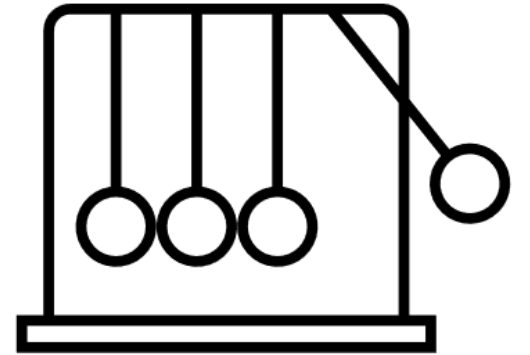
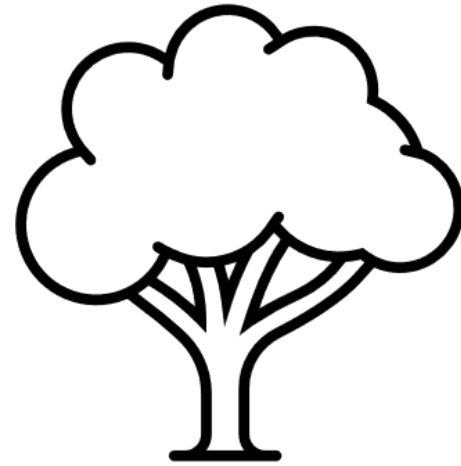
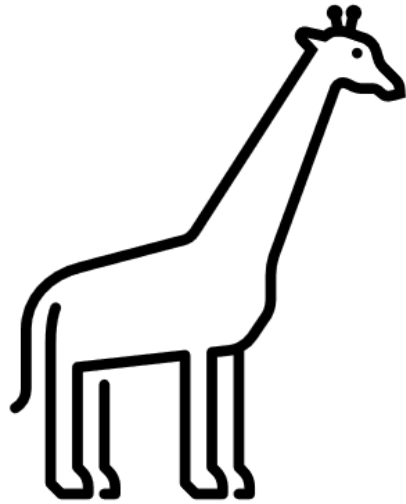
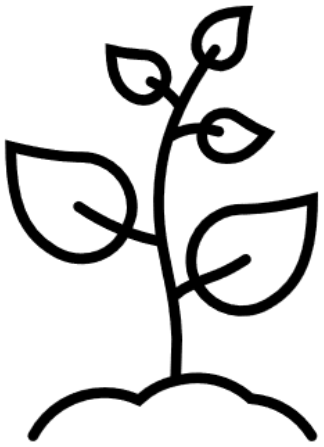
R1: How are soundscapes used by informal science learning (ISL) practitioners?

R2: What are the qualities of soundscapes at different ISL sites?

R3: How do informal learners at ISL sites experience sound? To what extent does sound impact attention attraction, dwell time and shared learning in these learners?

R4: How do qualities of the soundscape correlate with indicators of learning: attraction, attention maintenance, and shared learning?

Our research contexts



Rigor, usability, and value

visitor-facing data collection means thinking about...

- unique visitor experience of each site
- interests and needs of partners
- aggregating data across sites and methods, including technical study of sound



Photos courtesy of Martha Merson and Laura Weiss

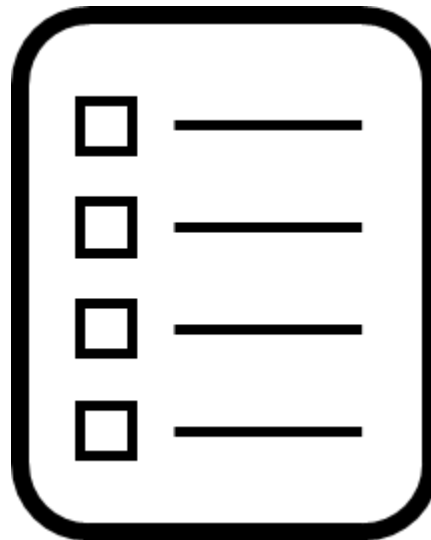
Collecting data at project sites

What we've done so far:

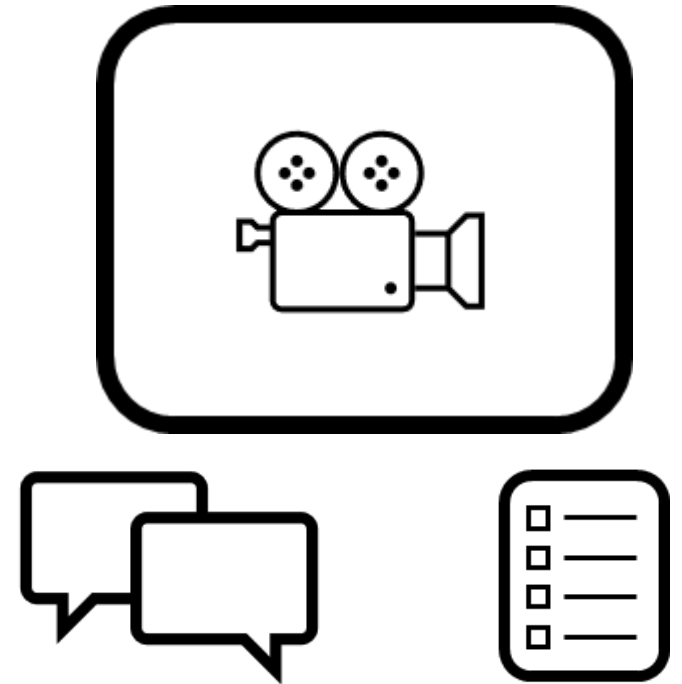
Ambient recording



Visitor questionnaire



Sound Search protocol





curious?



energized?



uneasy?



peaceful?

date

data collector
response # for day
tablet
adjective

Built-in filters give us options for exploring data as we come up with new questions.

What were they talking about? Let's check the video.

stuff happens. Don't forget to consider context!

People are having really different responses the same experience. What might explain these differences?

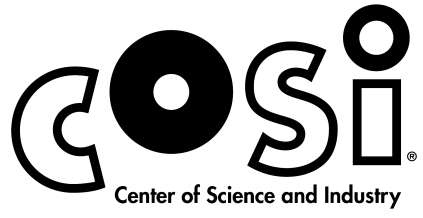
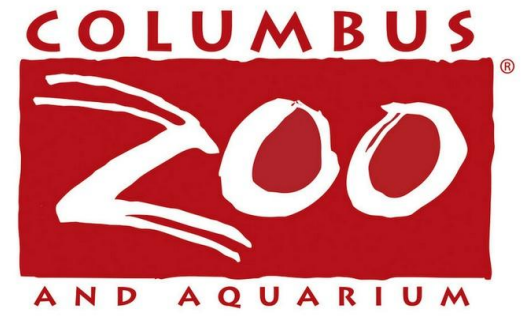
What's going on with water? It keeps coming up!

File Name	Date	Initials	Site	Zone	Adjective	Annotations	What is captured in the video?	Data management notes
4.26.DH.1.B_peaceful	4.26	DH	FPC	Pacific Island Water Garden	Peaceful	peaceful. White noise, hum of machine.	Video aimed upward toward HVAC. Image depicts glass ceiling and plants.	
4.26.DH.3.A_peaceful	4.26	DH	FPC	Pacific Island Water Garden	Peaceful	Peaceful - calming water quiet, serene, drowns out p noise	Video depicts water feature with koi and spherical art objects.	
5.5.DH.5_curious	5.5	DH	FPC	Children's Garden	Curious	curious chimes	Video depicts striking windchimes	
6.14.PN.2.A_Uneasy_2	6.14	PN	Zoo	Africa	Uneasy	engine sound	video depicts plane by lion habitat	respondent talking over video recording
8.9.DH.6.C_Energized	8.9	DH	Blacklick	Nature Center	Energized	moving water	video depicts waterfall inside nature center	
8.10.gt.10_Peaceful2	8.10	GT	Blacklick	Nature Center	Peaceful	sound of water trickling	video depicts waterfall inside nature center	

Making sense of culture and sound

- deductive coding about how people describe sound
- inductive coding about the sound sources people identify
- triangulating individuals' qualitative and quantitative responses
- exploring patterns: relationships between variables, common themes across adjectives, common themes across sites and zones

We would like to acknowledge and thank...



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NORTH PARK VILLAGE
NATURE CENTER



Get in touch!

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<https://www.terc.edu/soundtravels>

You can also find our work in the community repository on informalscience.org!