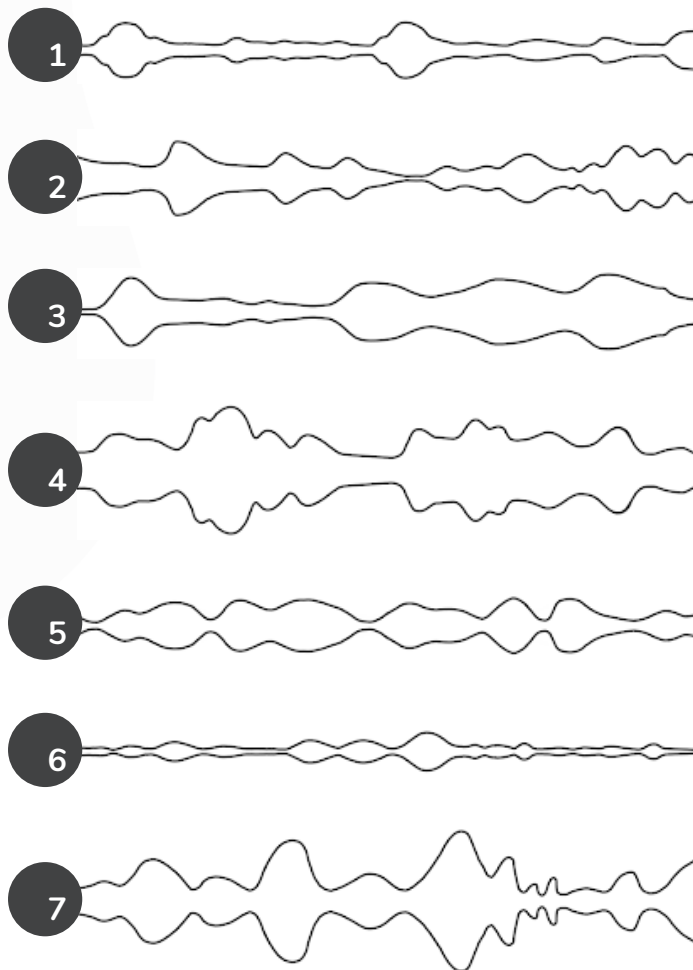Date: _____   Name: _____

Seeing Sound

This activity was created by Brandi

Sound waves can be visualized by looking at a "waveform". Waveforms vary in size and shape depending on the volume, the instruments, voices, pitch, and more! Try to match the waveforms below with the genre of music they came from using the following qualities:
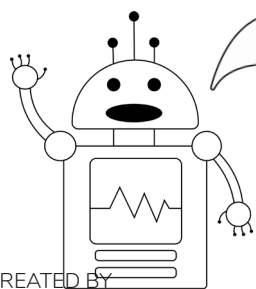
AMPLITUDE (height of a wave) tells us how loud the sounds are.
WAVELENGTH (width of a wave) tells us how long a sound is held or how smooth it is.
FREQUENCY (spacing of waves) tells us how quickly sounds are being made / how many

1

2

3

4

5

6

7

○ **Hip hop:** fast vocals, lots of bass, drums, electronic sounds

○ **Techno:** usually repetitive, quick beats, electronic sounds, often no vocals

○ **Folk:** varies in style, but often quiet, slow and calming

○ **Pop:** often upbeat and repetitive, with vocals, guitar, bass, drums, piano

○ **Rock:** loud with strong chords/beats, vocals, electric guitar, drums and bass

○ **Jazz:** often smooth, uses brass, bass, and piano

○ **Classical:** varies in speed / volume, many instruments, strings, no vocals

Look at you using all kinds of computer science skills in this activity: you're problem-solving, matching, and using abstraction. **Abstraction** is all about focusing on the important details and forgetting the rest, which is exactly what you're doing when you're looking at those bumpy sound waveforms.

CREATED BY
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ENGINEERING FUN SCIENCE

SLO: 4-3-01, 4-3-04, 4-3-07, 4-3-08