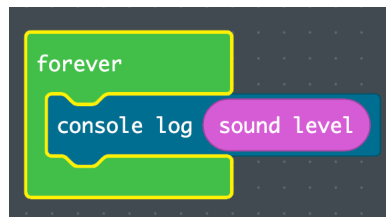


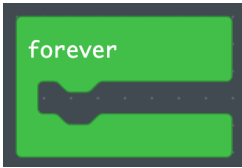
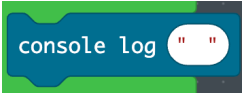
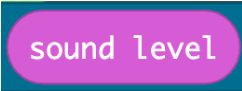
### Testing the Sound Sensor

1. Choose one partner to log in to [MakeCode](#), and create a new project.

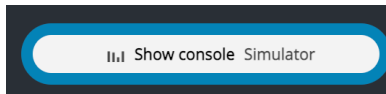
The Circuit Playground Express has a sound sensor that calculates the amount of sound entering it. A lot of factors could influence the readings of the sensor, and we are going to do some tests to determine the best way to turn on your Ledger Art Project by telling the story that inspired it.

2. We want to print out the current sound level being read by the Circuit Playground Express. In words, “forever, print out the sound level.”



Block	Location	What It Does
	LOOPS	The blocks inside a forever loop will run over and over as long as the circuit is plugged into a power source.
	ADVANCED → CONSOLE	Prints out whatever is in the empty space in the Serial Monitor.
	INPUT	A variable that stores the current sound level being read by the sound sensor on the Circuit Playground Express.

3. Plug in the Circuit Playground Express, click the play button in MakeCode, and click “Show Console Simulator.”



4. You should see numbers on the screen. Those numbers represent the current amount of sound being read by the sensor. Try talking and blowing into the sensor. If the numbers are not changing, contact your teacher.

In this activity, you will test the sound sensor and record your data. There are two measures you are going to collect: distance from the sensor and the person talking. We are going to determine if there are differences in the sound level if someone is closer and further away from the sensor as well as if there are differences in who is speaking. You and five classmates are going to test your sensor at three different distances from the sensor: next to your mouth, the distance you would normally talk to someone, and far away. Stand at three different distances from the sensor. You are going to record the lowest number and highest number you get at each of the three positions.

	Next to Mouth		Normal Conversation		15 feet away	
	Lowest	Highest	Lowest	Highest	Lowest	Highest
You						
Peer #1						
Peer #2						
Peer #3						
Peer #4						
Peer #5						

Did each person have the same values? (Circle one)

Yes	No
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If NO, why might each person have different numbers?

If you were creating a device with voice activation like Alexa or Siri, what would you think about when designing for every person in the world?