

Guided Lab - Part 1 Design and code a program that measures sound level.

1



Sound Sensor

Vernier

 CONNECT

2

program start

3

program start

repeat forever

do

4

program start

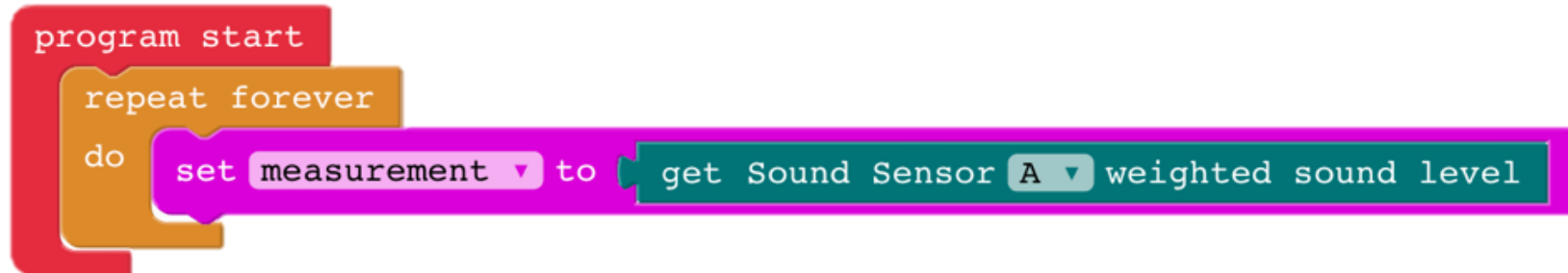
repeat forever

do

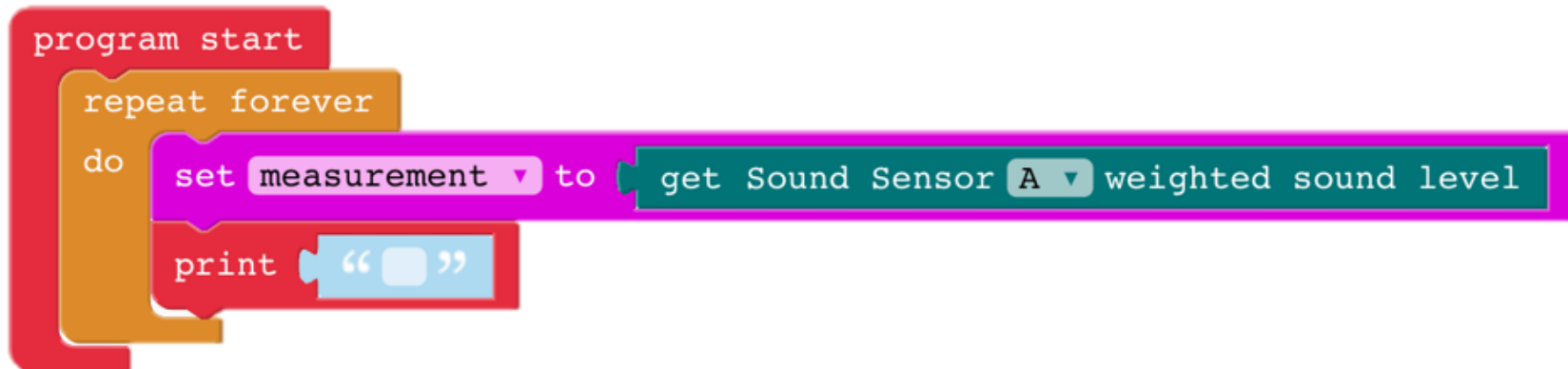
set measurement ▾ to



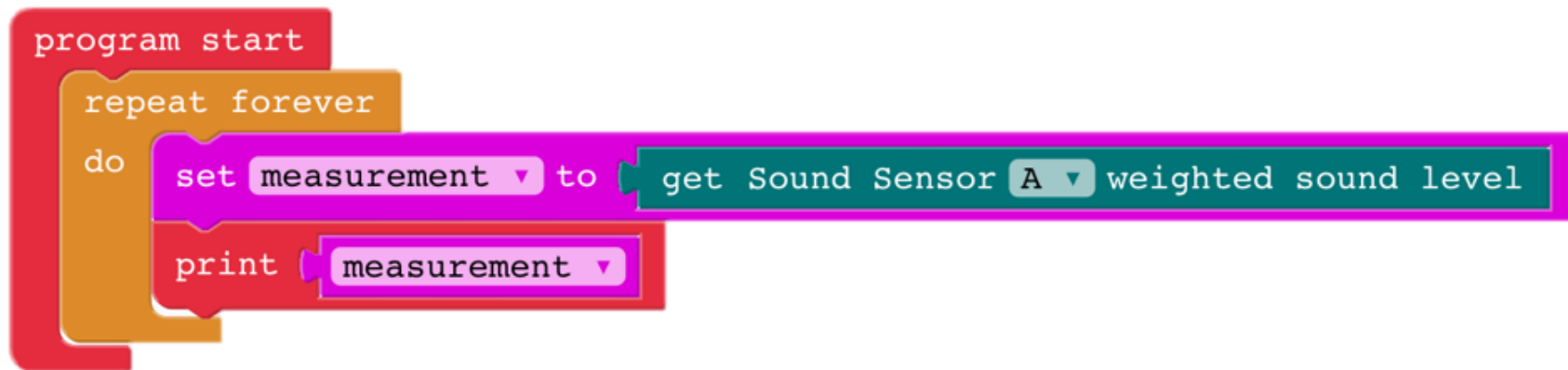
5



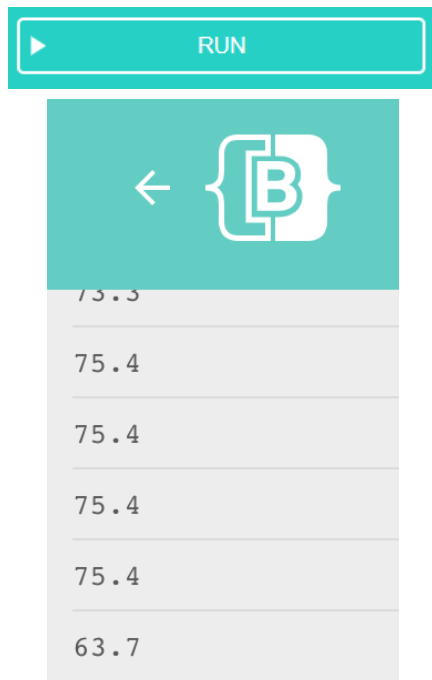
6



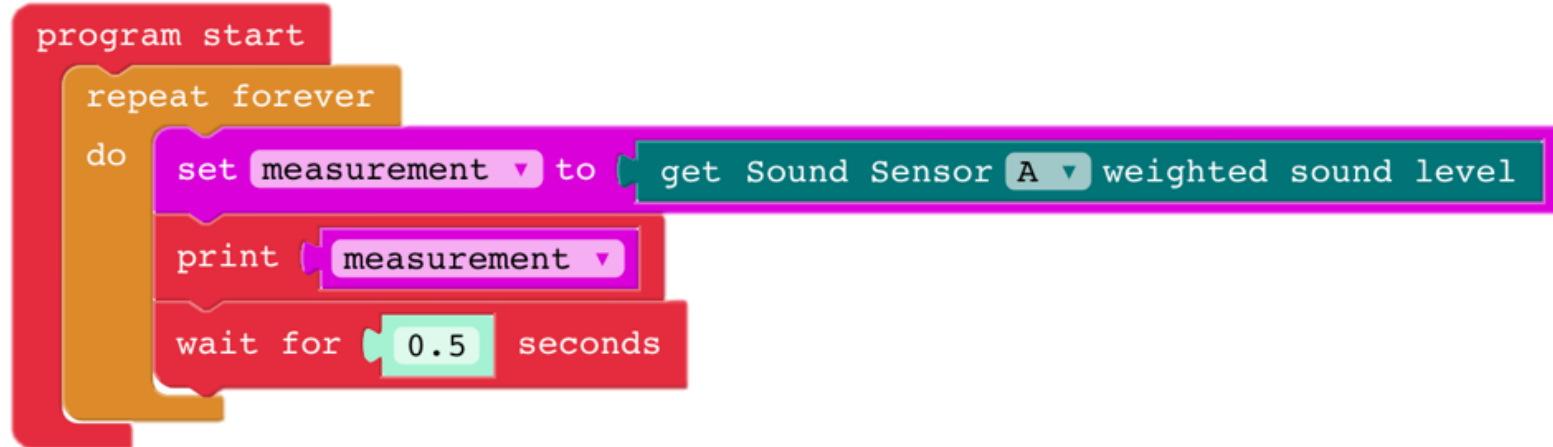
7



8



Debug The data is printed to the console too quickly. How can I slow down the readings to better understand the data?

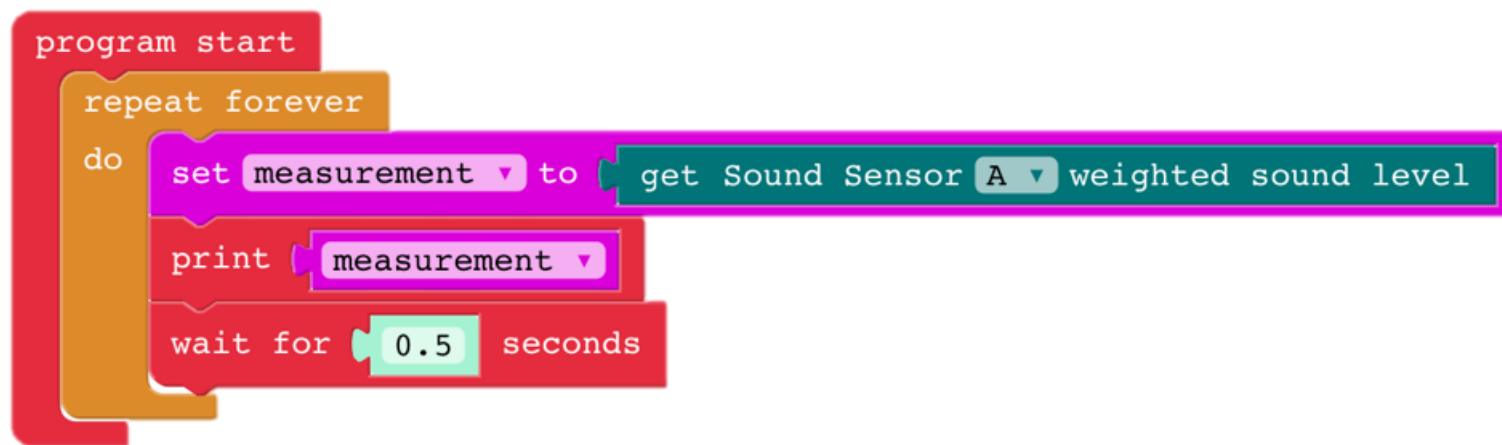


```
program start
repeat forever
do
  set measurement ▾ to get Sound Sensor A ▾ weighted sound level
  print measurement ▾
  wait for 0.5 seconds
```

The image shows a Scratch code snippet. It starts with a 'program start' block, followed by a 'repeat forever' loop. Inside the loop, there are three blocks: 'set measurement ▾ to get Sound Sensor A ▾ weighted sound level', 'print measurement ▾', and 'wait for 0.5 seconds'.

Guided Lab - Part 2 Design and code a program that gives students feedback to how loud their environment is.

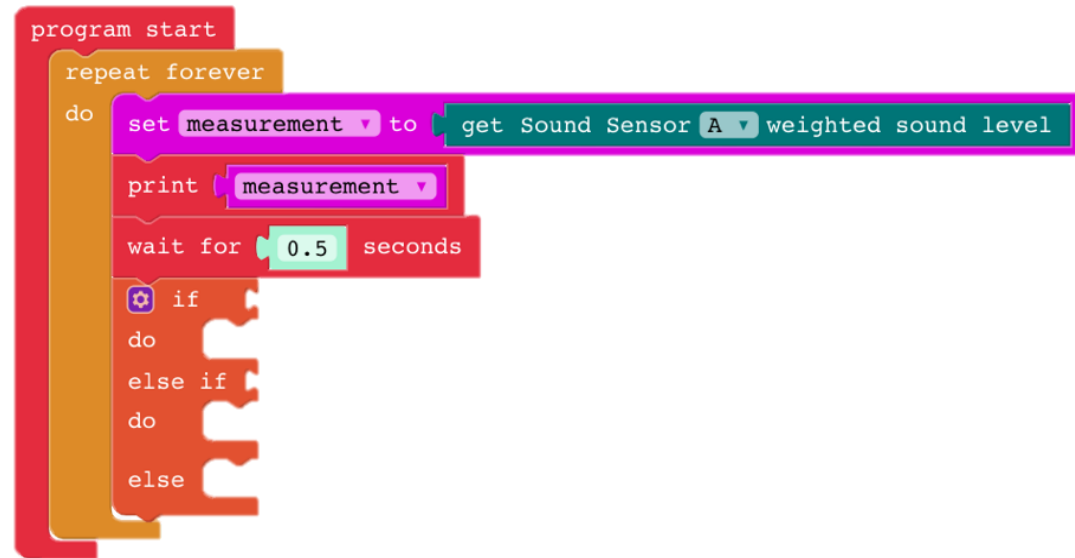
1



```
program start
repeat forever
do
  set measurement ▾ to get Sound Sensor A ▾ weighted sound level
  print measurement ▾
  wait for 0.5 seconds
```

The image shows a Scratch code snippet, identical to the one above. It starts with a 'program start' block, followed by a 'repeat forever' loop. Inside the loop, there are three blocks: 'set measurement ▾ to get Sound Sensor A ▾ weighted sound level', 'print measurement ▾', and 'wait for 0.5 seconds'.

2



3



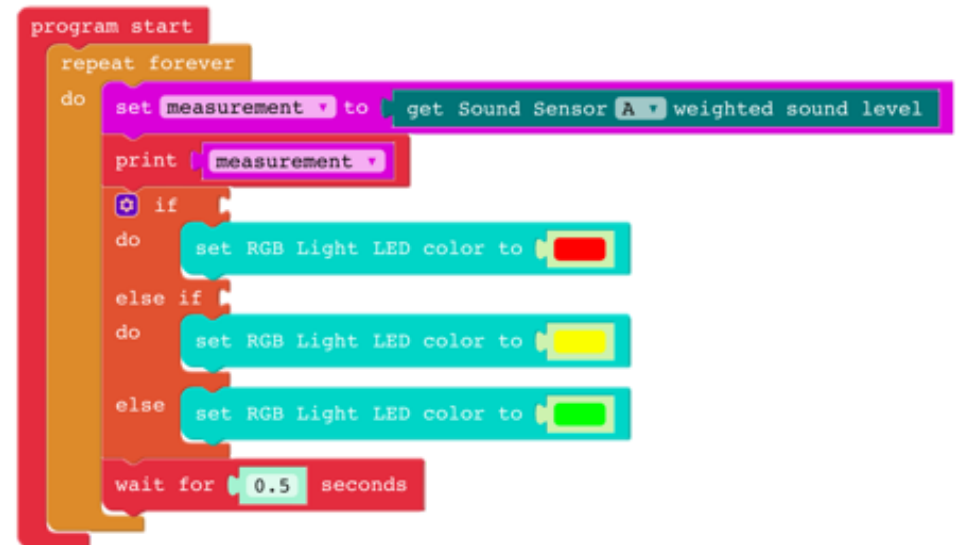
RGB Light

SAM Labs

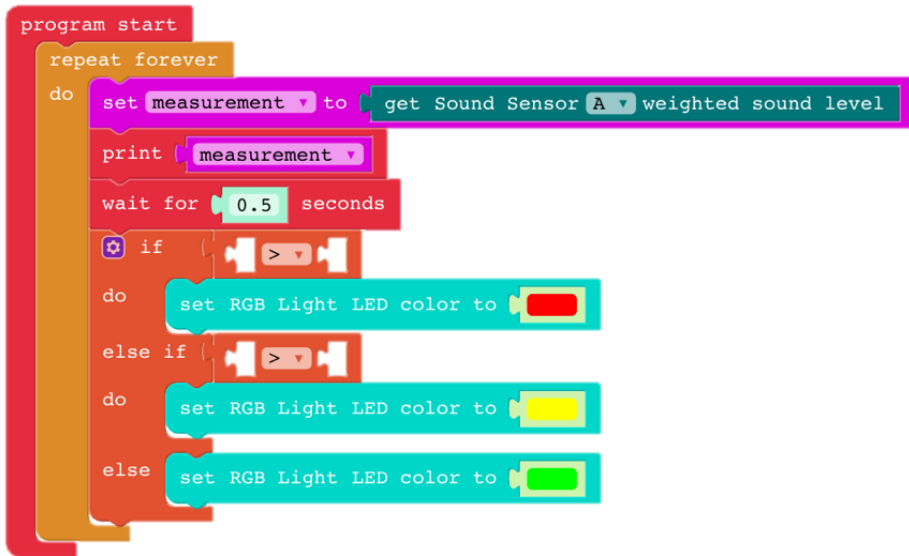


CONNECT

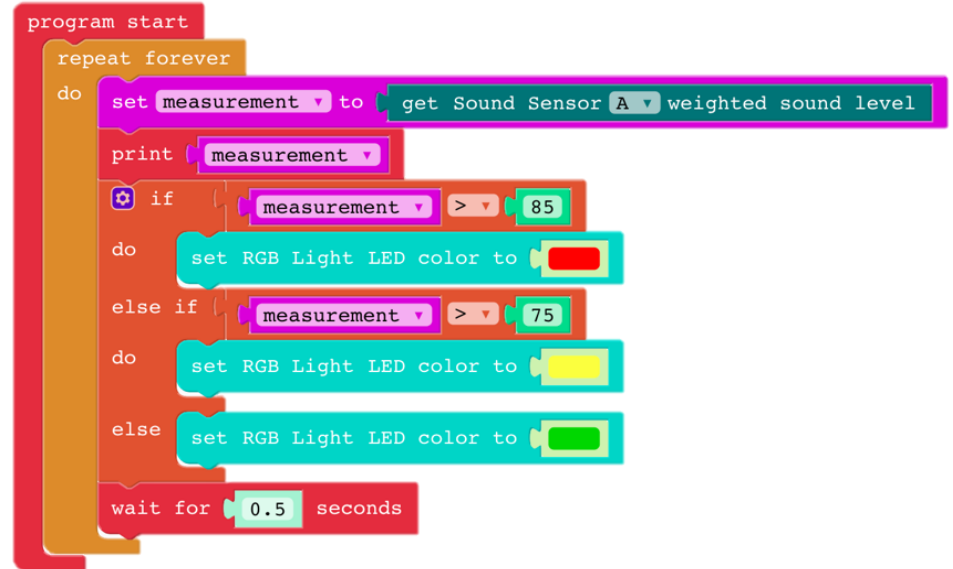
4



5



6



Extension Activities Choose your own!

Option 1 Google Sheet

Record sound level data to a Google Sheet. Collect sound data in various rooms or periods throughout the day. Analyze how and why sound levels changed throughout the day.

Option 2 Buzzer

Trigger a Buzzer block as additional feedback when the room's sound level grows too large. Encourage students to discuss a reasonable wave amplitude and frequency for the buzzer sound.

Option 3 Prototype

Using classroom materials or 3-D printed materials, 3 RGB LEDs, and the Sound Sensor, design a Sound Level stoplight prototype for daily use.