Thinking about programming a quiz buzzer (Classic Crumble)

This is a piezo buzzer. We pass electricity through it to make a sound.

Most buzzers would be attached to A, B, C or D.

We want to find out how the sound changes when we pass more electricity through the piezo buzzer so we are using a motor connection.

```
motor 2 FORWARD at 20 %
wait 1 seconds
motor 2 FORWARD at 35 %
wait 1 seconds
motor 2 FORWARD at 80 %
wait 1 seconds
motor 2 STOP
```

Circle the change that you predict will happen as the program above increases the power through the piezo from 20% to 35% and then to 80%. QUIETER, LOUDER, HIGHER PITCH, LOWER PITCH

Make a prediction.

Attach your piezo buzzer to motor 2. Make sure the longer leg is attached to the +. Attach your button to input A.

Algorithm

When the program starts, check forever to see if the button attached to A is pressed down.

If button A is pressed down, make the piezo buzz at 20% power for a second before increasing to 35% and 80% for one second each before stopping.

```
program start
motor 2 STOP
if ⬡ then
end if
do forever
loop
motor 2 FORWARD at 20 %
wait 1.0 seconds
motor 2 FORWARD at 35 %
motor 2 FORWARD at 80 %
wait 1.0 seconds    A is HI    wait 1.0 seconds
```

Use the algorithm, the code blocks and maker cards to help you build the quiz buzzer program. Can you design your own unique sound?

Thinking about programming a quiz buzzer (Crumble Playground)

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motor  2  FORWARD  at  20  %
wait  1  seconds
motor  2  FORWARD  at  35  %
wait  1  seconds
motor  2  FORWARD  at  80  %
wait  1  seconds
motor  2  STOP
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Algorithm

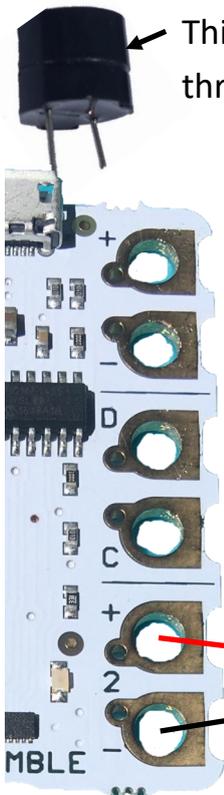When the program starts, check forever to see if the button attached to A is pressed down.

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program start
motor  2  STOP
do forever
loop
wait  1.0  seconds
motor  2  FORWARD  at  20  %
motor  2  FORWARD  at  35  %
motor  2  FORWARD  at  80  %
wait  1.0  seconds
A  is  HI
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if        then
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Use the algorithm, the code blocks and maker cards to help you build the quiz buzzer program. Can you design your own unique sound?

Name _____ Class _____

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end if
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```
A is HI
```

```
motor 2 STOP
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wait 1.0 seconds
```

```
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Draw lines to match the algorithm to the code blocks. Build the program on the Crumble. Can you adapt the program to build your own unique sound?

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Name _____ Class _____   **QB5**

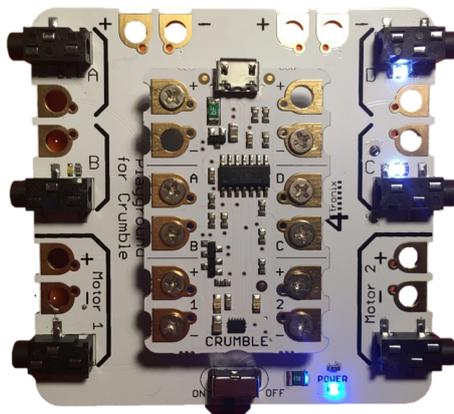Thinking about designing my own sound project using a piezo buzzer.

 This is a piezo buzzer. We pass electricity through it to make a sound.

Fill in your idea and add your inputs and outputs to the chart.

My program will

by

What will the user see and do?

Input/ Output	Name of device attached	What the device does (include as much detail as possible)
A INPUT	Push button	When the button is pushed, it stops the buzzer attached to Motor 2.
A		
B		
C		
D		
Motor 1		
Motor 2		

Draw your devices and the wires that connect them.

Name _____ Class _____

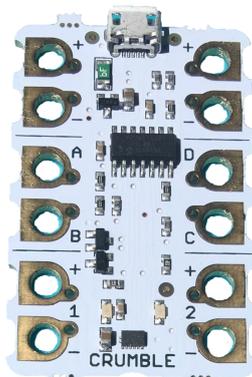# Thinking about designing my own sound project using a piezo buzzer.

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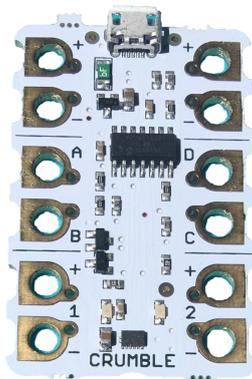# Thinking about designing my own sound project using a piezo buzzer.

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Quiz Buzzer Assessment Sheet QB7 Name _____ Class ____

😊 I did this well

😐 I did this ok or I did this a little

☹ I tried this but it didn't work or I didn't do this at all

I predicted what would happen to the buzzer sound when electricity is increased.	
I created my own unique signature sound.	
I used a repeat x times loop to repeat my signature sound.	
I turned the algorithm on my sheet into working code.	
I look for a range of solutions to the same problem.	
I debugged code that didn't work.	
I tested my code regularly to see if the changes I made worked.	
I looked at how I could extend my project.	
I extended my project by….	

Sticker	I got this sticker for
Sticker	I got this sticker for
Sticker	I got this sticker for