

Doorbell Assessment Sheet

DB9

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 wired up my doorbell.	
I programmed my doorbell to turn on or off using the button.	
I listened to my partners ideas.	
I contributed good idea to my partner.	
I persevered when the wiring or programming didn't work.	
I came up with criteria to decide what a good doorbell looks, works and sounds like.	

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

Name _____ Class _____

Thinking about wiring a door bell **DB1**



Buzzers

Buzzers are **outputs** because they **put out** information from the program. These can output a single sound tone.

Buttons are **inputs** because they **put in** information into the program. They can do two things; one when they are pressed and one when they are not pressed.

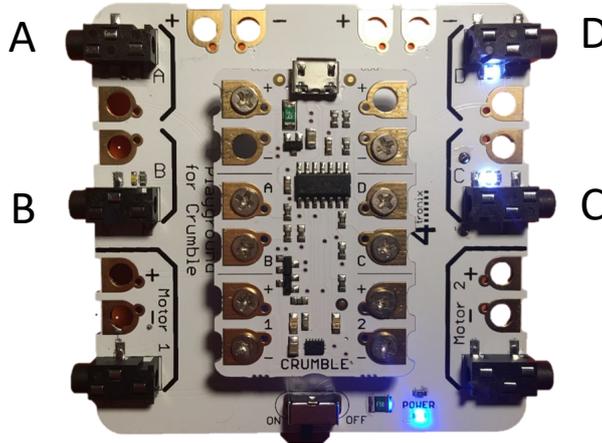


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell **DB2**



Buzzers

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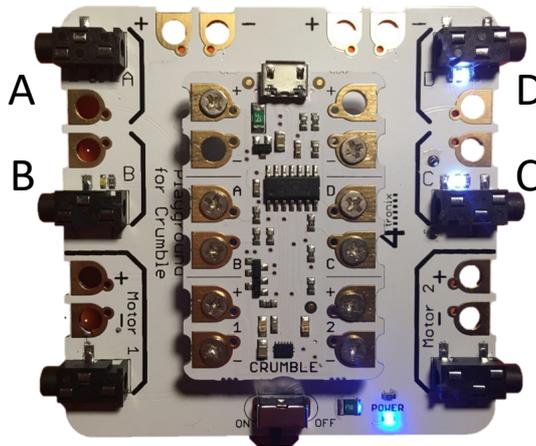
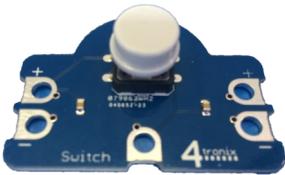


Push Buttons

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Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell DB3



Buzzers

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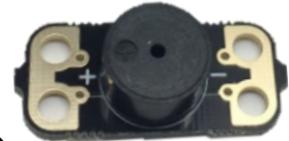
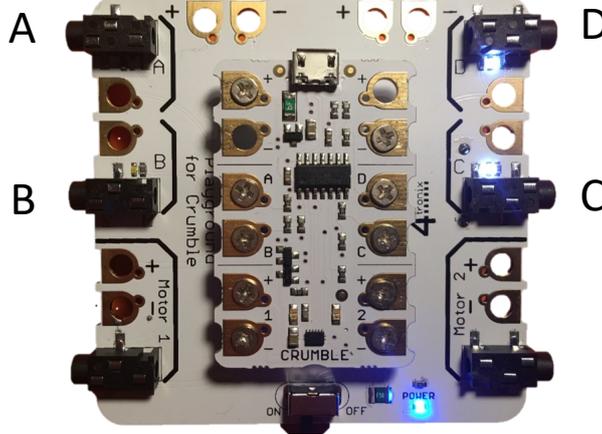


Push Buttons

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Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell **DB4**



Buzzers

Buzzers are **outputs** because they **put out** information from the program. These can output a single sound tone.

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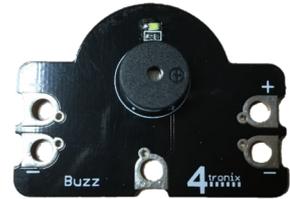
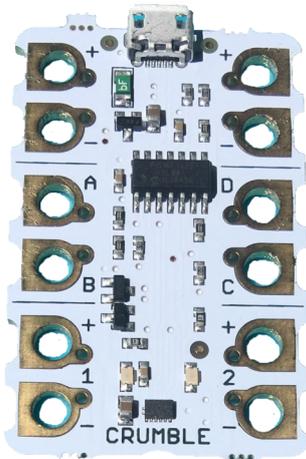


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell **DB4**



Buzzers

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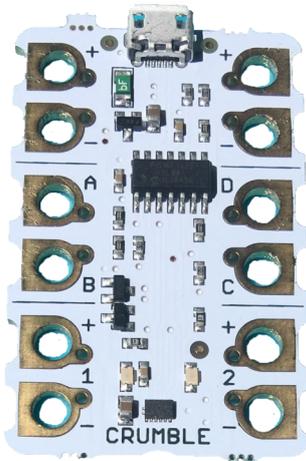


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell **DB5**



Buzzers

Buzzers are **outputs** because they **put out** information from the program. These can output a single sound tone.

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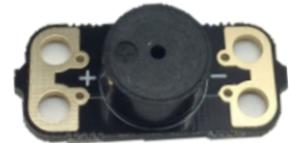
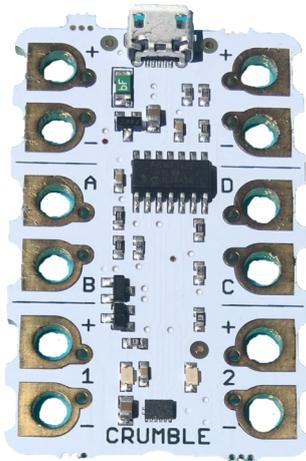


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell DB5



Buzzers

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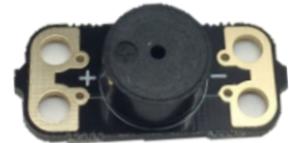
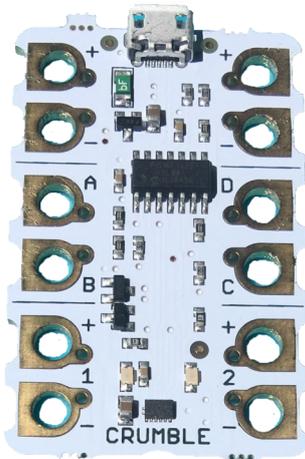


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell **DB6**



Buzzers

Buzzers are **outputs** because they **put out** information from the program. These can output a single sound tone.

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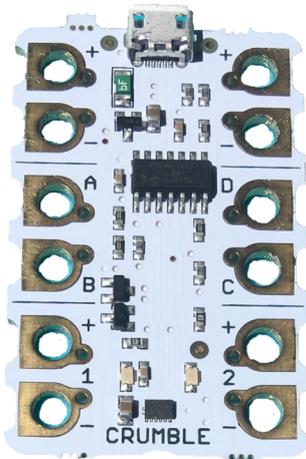


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell **DB6**



Buzzers

Buzzers are **outputs** because they **put out** information from the program. These can output a single sound tone.

Buttons are **inputs** because they **put in** information into the program. They can do two things; one when they are pressed and one when they are not pressed.

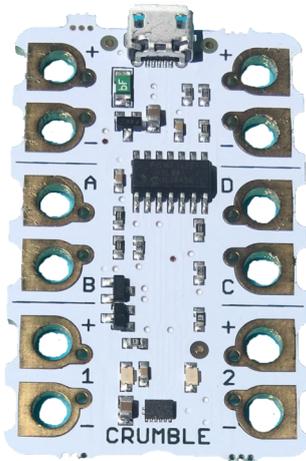


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Name _____ Class _____

Thinking about wiring a door bell **DB7**



Buzzers

Buzzers are **outputs** because they **put out** information from the program. These can output a single sound tone.

Buttons are **inputs** because they **put in** information into the program. They can do two things; one when they are pressed and one when they are not pressed.

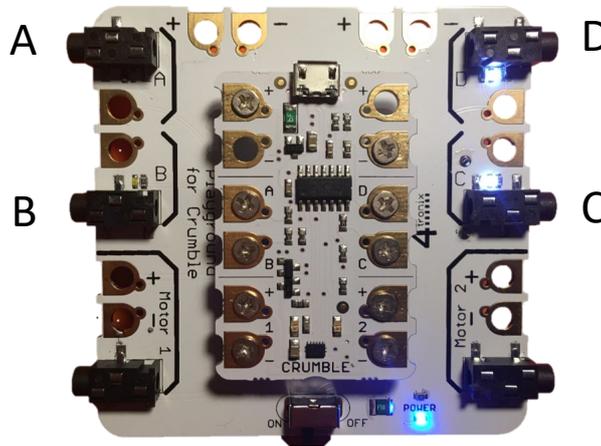


Push Buttons

The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.

Draw the wires to show what connections you will use

One letter one device only!



Fill in the chart to show your wires

Letter	Name of the device	Input or Output

Thinking about programming a door bell



The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.



Antonio came up with an idea for his program first.

Program Idea
Switching the buzzer on or off with a button

He then thought about it in more detail and came up with an algorithm.

Algorithm
When the button is pressed down the buzzer will sound, when the button is de-pressed the buzzer will be silent.

It would only run the choice once, straight after the program was started. He then added a forever loop to check if the button is pressed over and over again.

```

    program start
    do forever
    if button is pressed down then
    Turn buzzer on
    else
    Turn buzzer off
    end if
    loop
  
```

Forever loop

Because there was a choice in his program he used a conditional selection block.

```

    program start
    if button is pressed then
    Turn buzzer on
    else
    Turn buzzer off
    end if
  
```

Conditional selection block

Turn buzzer on	set C HI
Button is pressed	A is HI
Button is de-pressed	A is LO
Turn buzzer off	set C LO

The Crumble need to know where things are plugged in (A, B, C or D) and if they are on (HI) or off (LO).

Can you decide where the programming blocks will go in these two doorbell programs? Draw arrows to show.

Make the button, attached to input A, turn the buzzer attached to output C **on** when pressed (HI) and **off** (LO) when depressed.

Make the button, attached to input A turn the buzzer attached to output C **off** when pressed (HI) and **on** (LO) when depressed.

```

    program start
    do forever
    if A is HI then
    else
    end if
    loop
  
```

button

buzzer

```

    set C LO
    set C HI
  
```

```

    program start
    do forever
    if A is HI then
    else
    end if
    loop
  
```

```

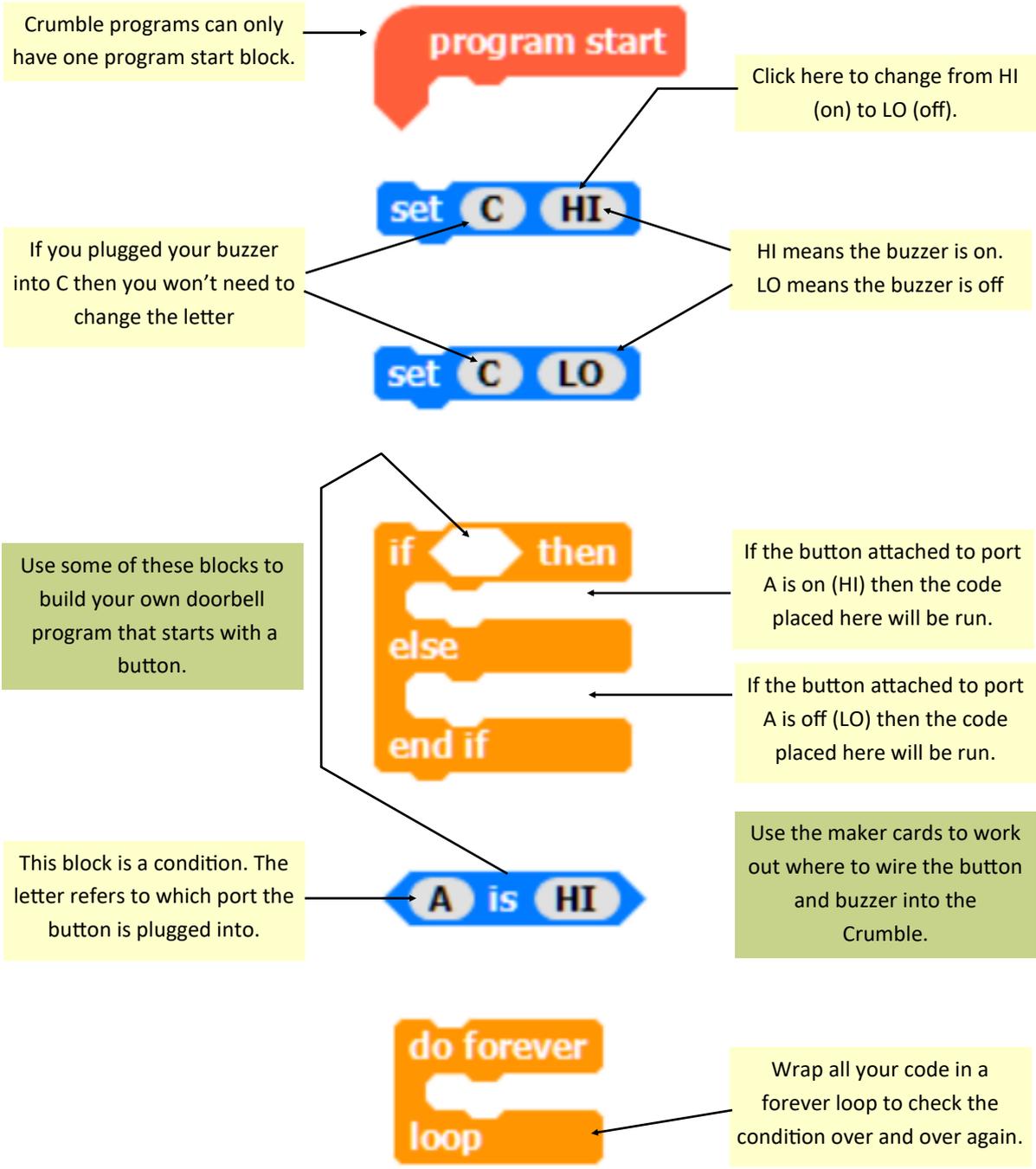
    set C LO
    set C HI
  
```

Tick the best program for a house bell.

Thinking about programming a door bell



The electrician's job is to wire these up so they can work properly. The programmer's job is to make the button turn the buzzer on or off.



Name _____ Class _____ DB10

Thinking about designing my own project that uses a buzzer



These are buzzers

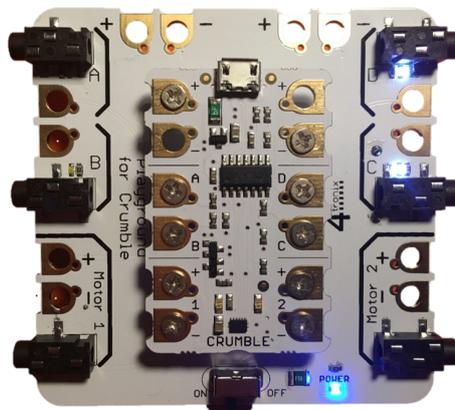


Fill in your idea and add your inputs and outputs to the chart

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 output	A buzzer	Buzz in a pattern when the button is pressed.
A		
B		
C		
D		
Motor 1		
Motor 2		



Draw your devices and the wires that connect them

Name _____ Class _____

DB11

Thinking about designing my own project that uses a buzzer



These are buzzers

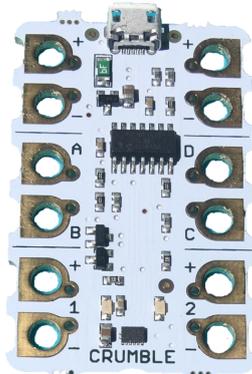


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A		
B		
C		
D		
Motor 1		
Motor 2		



Draw your devices and the wires that connect them

Name _____ Class _____

DB11

Thinking about designing my own project that uses a buzzer



These are buzzers

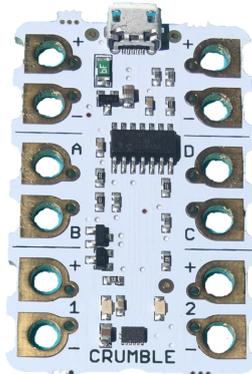


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D		
Motor 1		
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Draw your devices and the wires that connect them