



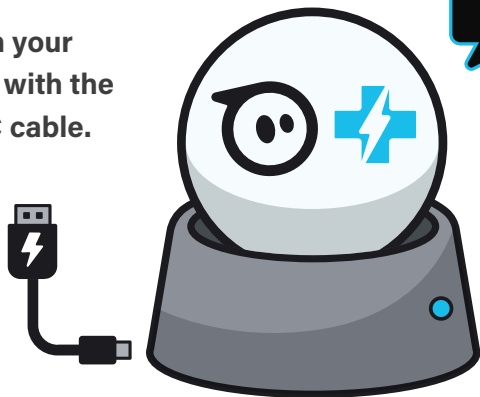
**BOLT** 

*QUICK START GUIDE*

GETTING STARTED

# ***CHARGE YOUR ROBOT***

Plug in your  
cradle with the  
USB-C cable.

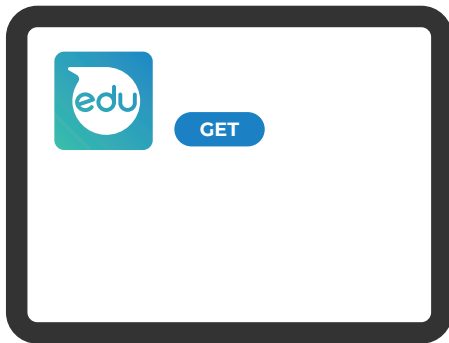
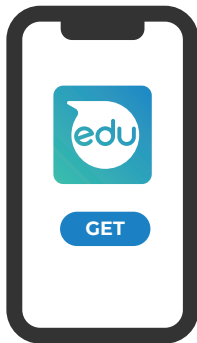


*See my lights?  
**I'm ON!***

Put BOLT+ on the  
cradle to turn it on  
for the first time.

GETTING STARTED

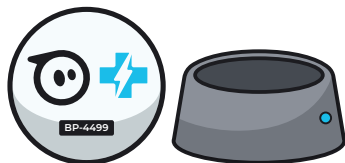
# ***GET THE PROGRAMMING APP***



Go to [sphero.cc/edu-d](https://sphero.cc/edu-d)

# GETTING STARTED

## ***CONNECT***



**1.** Take BOLT+ off the cradle.



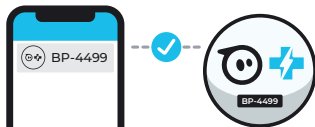
**2.** Select Connect.



**3.** Select BOLT+ as your robot type.



**4.** Find your robot ID in the app.



**5.** Connect!

*Did I turn off?  
Shake to turn ON!*



GETTING STARTED

# YOU'RE CONNECTED!

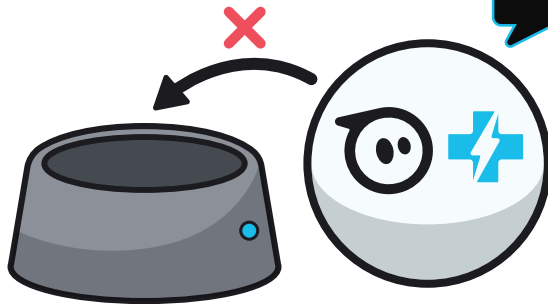
Select



to check your battery level.



Placing BOLT+  
back on the cradle  
will disconnect it  
from your device.



*I'm ready to  
**ROLL!***

# GETTING STARTED

## AIM



**1.** Select **Drive**.



**2.** Select **Aim**.

*It helps to point me in the **same direction** your body and device are pointed.*



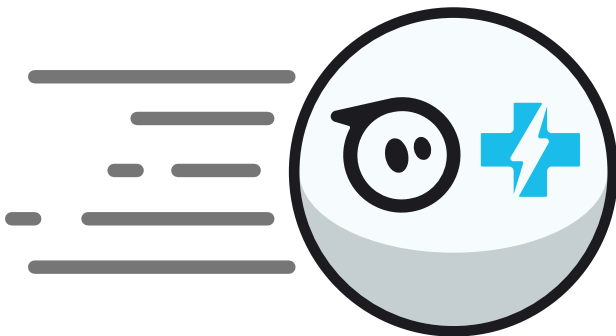
**3.** Aim BOLT+ in the same direction as your body.

# GETTING STARTED

# *DRIVE*

## *Take your robot for a spin!*

Try controlling your robot with  
the **speed** and **color** controls.



Depending on your device,  
BOLT+ can be driven in  
joystick or keyboard mode.

# GETTING STARTED

# **PROGRAMS**



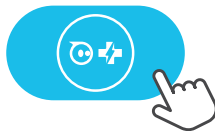
**1.** Select **New Program**.

My First Program

**2.** Name your Program.



**3.** Choose a **program type**.



**4.** Choose **BOLT+**.

# STARTER PROGRAMS

1. Draw
2. Movements
3. Lights
4. Display
5. Matrix
6. Sounds
7. Controls
8. Drive
9. Events: Buttons
10. Events: Lights
11. Loops & Operators
12. Events: Collisions

***Build the programs on the following pages to learn about what I can do!***



STARTER PROGRAM #1

**DRAW**



**PROGRAM**



**Press**  **Start**  
to run the program.





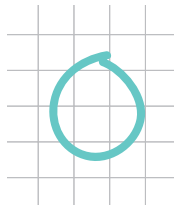
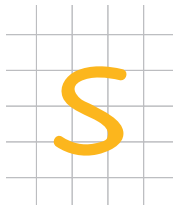
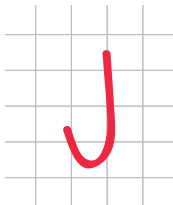
program type: draw



PLAY

1. Draw other letters.

2. Change the **color** and **speed** of the lines.



# STARTER PROGRAM #2

# ***MOVEMENTS***



## ***PROGRAM***

on start program

roll 0° at 100 max speed for 200cm

Select a **number** to change.

100

Press  Start to watch me roll!





program type: **block**

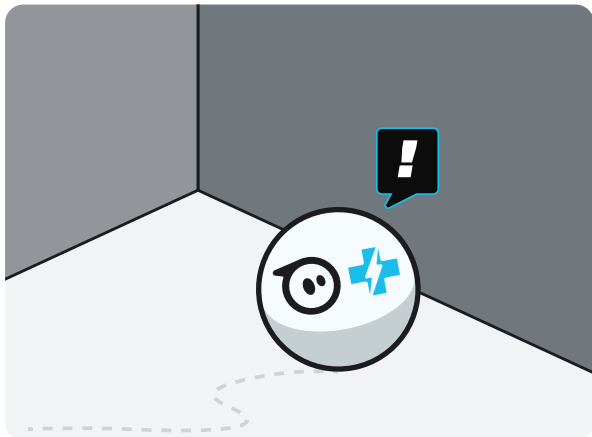


**PLAY**

**1.** Make BOLT+ roll up to a wall and **stop** before crashing.

**2.** Try the same thing with

roll 0° at 0 speed for 0s



# STARTER PROGRAM #3

# LIGHTS

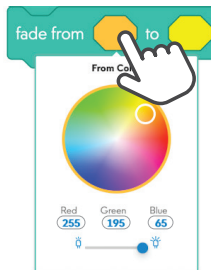
## PROGRAM

on start program

fade from  to  over 2s

fade from  to  over 2s

**Change an LED Color**  
with the color wheel and dimmer slider.

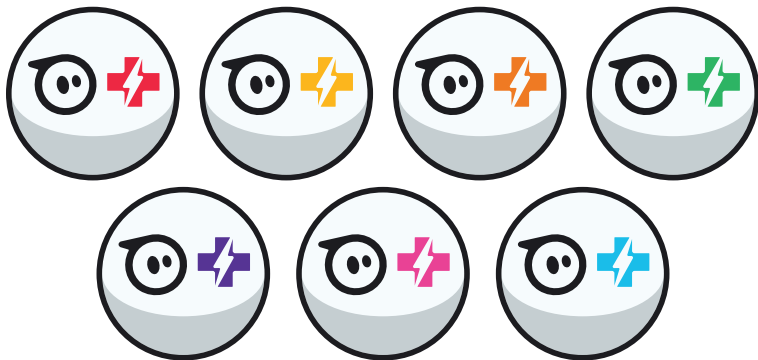




program type: **block**



Make BOLT+ show all  
the colors in a **rainbow**.



STARTER PROGRAM #4

# DISPLAY



PROGRAM

on start program

display image



Use **search** and  
**category filters**  
to find images.





program type: **block**



- 1. Find images for your favorite food, animal, and hobby.**



- 2. Replace**

display image



with

display animation



loop

Pick your favorite animation.

- 3. Replace**

display image



with

display

Hello!

in



on



Make a message of your own.

## STARTER PROGRAM #5

# MATRIX



## PROGRAM

on start program

matrix animation



loop

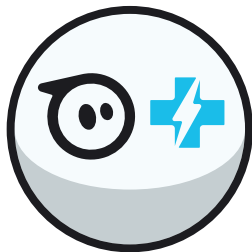
matrix animation



loop



Tap the **matrix image** and  
scroll through animations  
to find a **smiley face**!

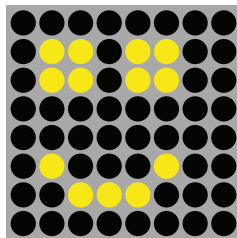




program type: **block**



**1.** Make your **own animation**.



**2.** Replace

matrix animation



loop

with

scrolling text

oh hello!

in



at

15 fps

and

wait

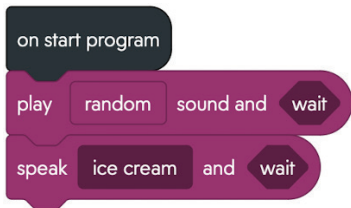
Type a **superpower** you wish you had.

# STARTER PROGRAM #6

# ***SOUNDS***



## ***PROGRAM***



***Sound*** comes from  
your ***programming***  
***device***—not me!





program type: **block**



**PLAY**

**1.** Explore the **different sounds** and try some out!

**2.** Type your **own message**.

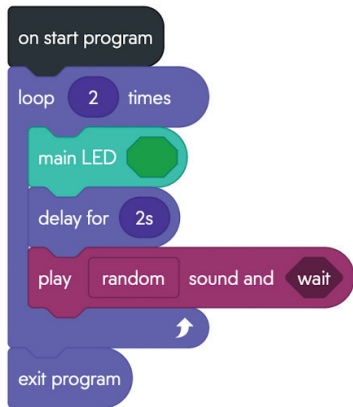


# STARTER PROGRAM #7

# **CONTROLS**



## PROGRAM



delay for 0s *is really useful! It makes sure blocks have enough time to work.*





program type: **block**



**1. Remove**

exit program

What happens when you run your program?

**2. Play around with the **number** in**

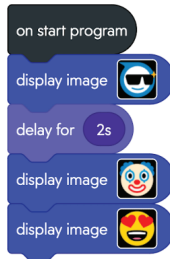
loop 1 times

**3. Try using**

delay for 2s

with some of the blocks  
you've already learned about.

**What happens** with a program like this?

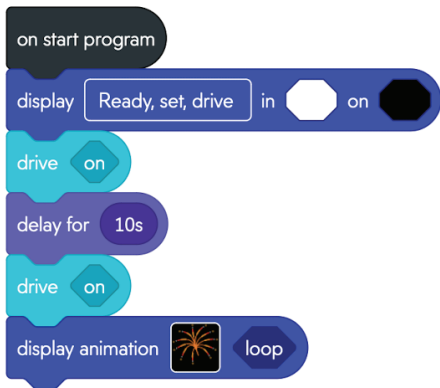


## STARTER PROGRAM #8

# DRIVE



## PROGRAM



You can **drive** me  
while I'm running  
a **program**!



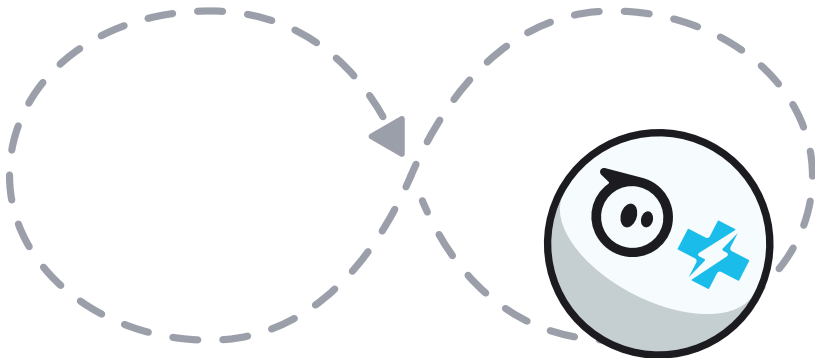


program type: **block**



**PLAY**

Drive your BOLT+ in a **figure 8**  
before time runs out.



## STARTER PROGRAM #9

# EVENTS: BUTTONS



## PROGRAM

on start program

display How are you feeling? in  on 

 on button 1

display image



 on button 2

display image



 on button 3

display image



*Where are the buttons?  
**Look at the app** while  
a program is running!*

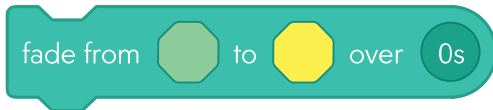
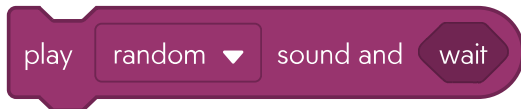




program type: **block**



Add blocks to go with each **emotion**.



## STARTER PROGRAM #10

# EVENTS: LIGHT



## PROGRAM

on start program

display image



on ambient light is > ▼ 10lux

display image



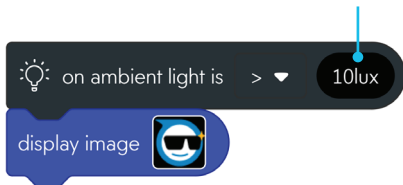
**Ambient light** is measured  
in "**lux**" units - and there  
are a lot of them!





# PLAY

**1.** Play around with **how many lux** will trigger the **event**:



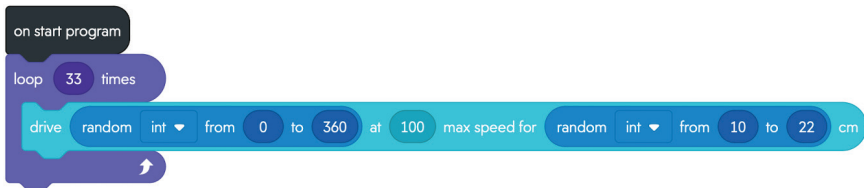
**2.** Add **sounds** or **movements** to your program to make things a bit more exciting.

## STARTER PROGRAM #11

# LOOPS & OPERATORS



## PROGRAM



***That's a long block!***  
***What happens when you***  
***start the program?***

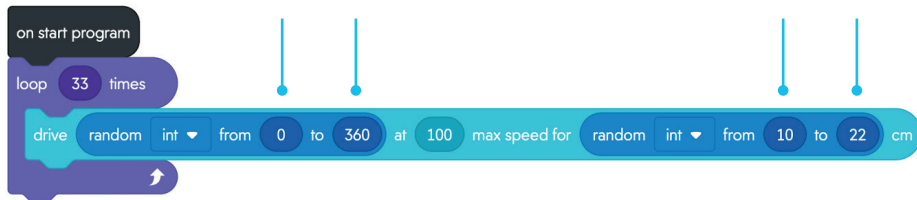




program type: **block**



Play around with **different values** and see what happens to BOLT+.

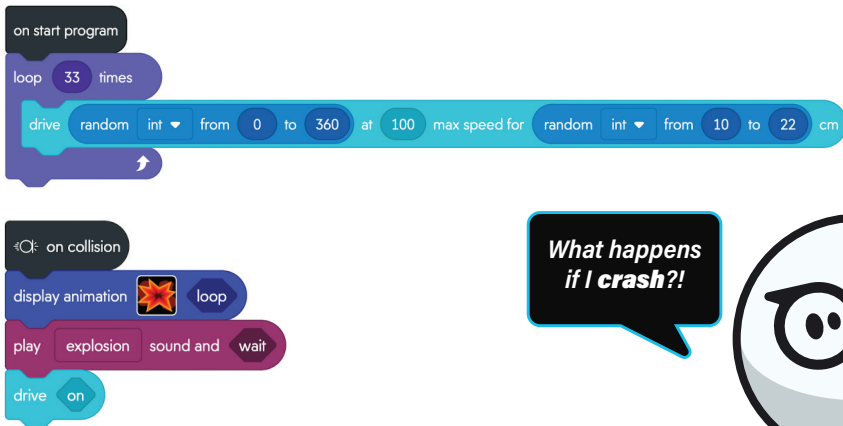


## STARTER PROGRAM #12

# EVENTS: COLLISIONS



## PROGRAM



What happens  
if I **crash**?!





program type: **block**



**PLAY**

1. If BOLT+ **crashes** into something you can take over **driving**.
2. Can you modify the program so that you can only drive for **5 seconds**?



# BLOCK CANVAS GUIDE

The screenshot displays the Bolt+ Block Canvas interface, which is used for programming the Bolt+ microcontroller. The interface is divided into several sections:

- Top Bar:** Contains a back arrow, a "Start" button (labeled 4.), and a "Connect" button (labeled 6. and 7.).
- Block Canvas:** The main area for building programs. It shows a sequence of blocks:
  - on start program** (labeled 2.)
  - display image** (with a cat icon)
  - loop** (labeled 3.) containing:
    - roll** (0° at 100 max speed for 150cm)
    - roll** (180° at 100 max speed for 150cm)
    - play bell sound and wait** (labeled 5.)
    - play applause sound and wait**
    - display animation** (with a starburst icon and a loop block)
- Bottom Bar:** A palette of block categories: Movements, Lights, Display, Matrix, Sounds, Controls, Operators, Comparators, Sensors, and Communications. The "Movements" category is currently selected, showing various motion blocks like "roll", "drive", "spin", and "raw motor left".
- Right Side:** A vertical toolbar with navigation and zoom controls (labeled 8.), including arrows for navigation and a magnifying glass for zooming.



- 1.** Drag blocks from the **block library** onto the program canvas.
- 2.** Connect blocks to **on start program**.
- 3.** Select **inputs** to modify a block.
- 4.** Click or tap **Start** to run (execute) a program.
- 5.** Right click or long press on a block for options like **duplicate** and **delete**.
- 6.** **Aim** or **Drive** your BOLT+.
- 7.** Select the three dots to access a menu to view **sensor data**, **JavaScript code**, and **more**.
- 8.** **Undo** or **Redo** last action.

BOLT+ RESOURCES

# LESSON IDEAS



*Are you looking for lesson ideas?*

Check out: [sphero.cc/bplus-lessons](https://sphero.cc/bplus-lessons)

# BOLT+ RESOURCES **SUPPORT**



***Need help?***

Check out our support page: [sphero.cc/bplus-support](https://sphero.cc/bplus-support)



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