



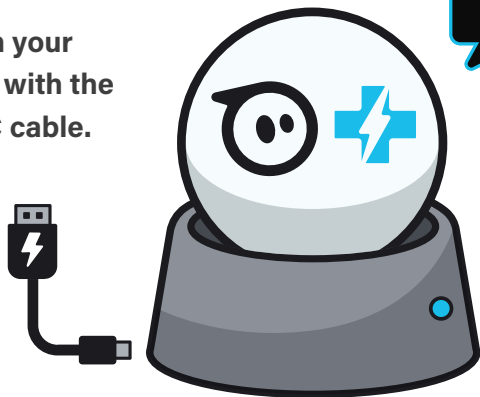
BOLT 

QUICK START GUIDE

GETTING STARTED

CHARGE YOUR ROBOT

Plug in your
cradle with the
USB-C cable.

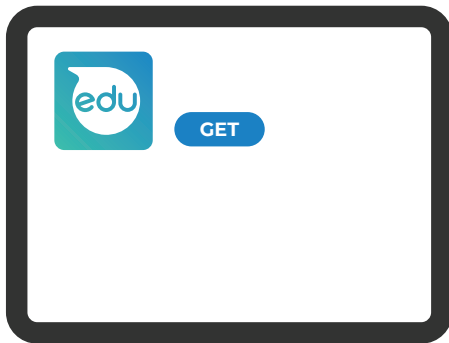
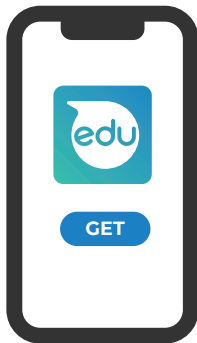


*See my lights?
I'm ON!*

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

GETTING STARTED

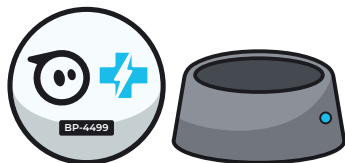
GET THE PROGRAMMING APP



Go to sphero.cc/edu-d

GETTING STARTED

CONNECT



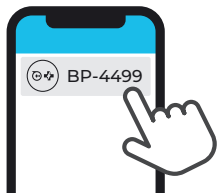
1. Take BOLT+ off the cradle.



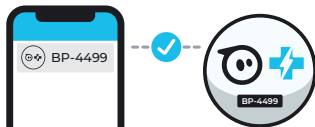
2. Select Connect.



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



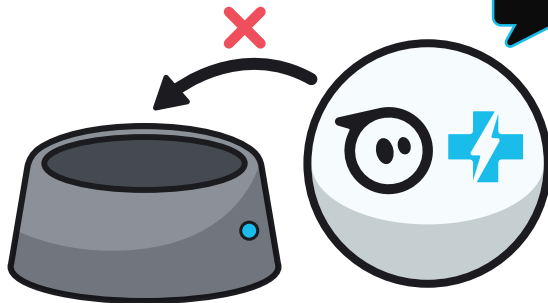
to check your battery level.



*I'm ready to
ROLL!*



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



GETTING STARTED

AIM



1. Select **Drive**.



2. Select **Aim**.

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



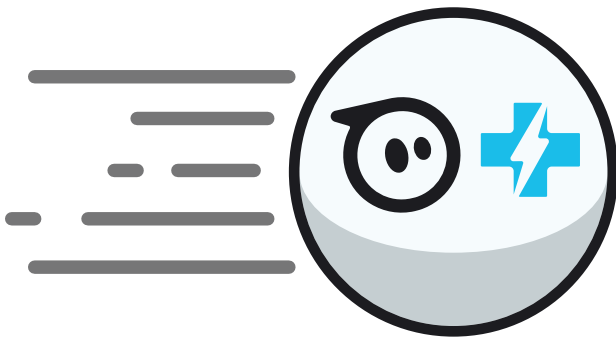
3. Aim BOLT+ in the same direction as your body.

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



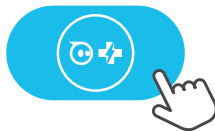
1. Select **New Program**.

My First Program

2. Name your Program.



3. Choose a **program type**.

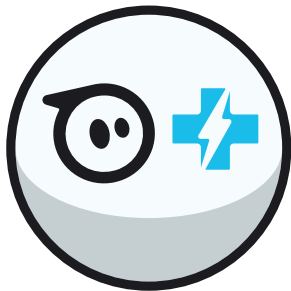


4. Choose **BOLT+**.

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.





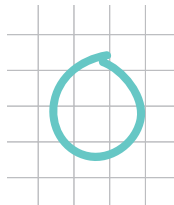
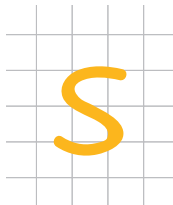
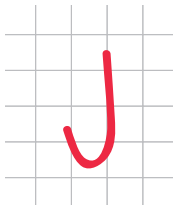
program type: draw



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**

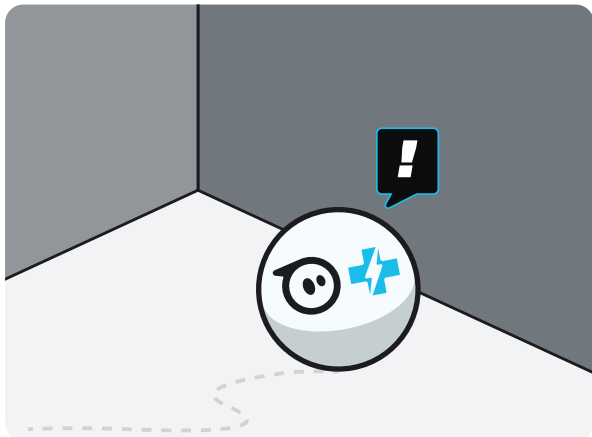


PLAY

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

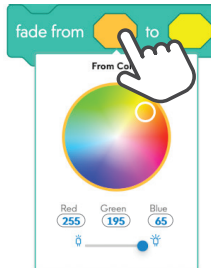
PROGRAM

on start program

fade from  to  over 2s

fade from  to  over 2s

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

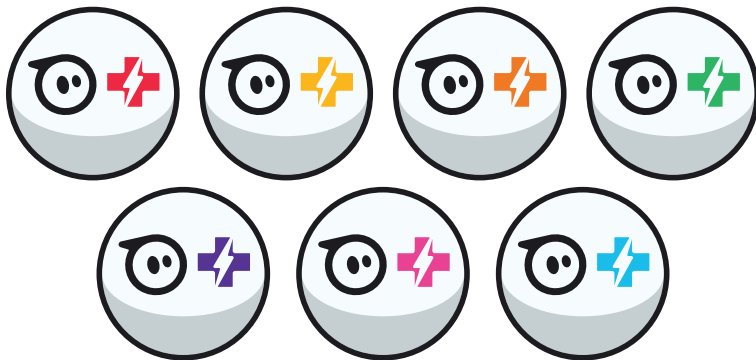




program type: **block**



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



STARTER PROGRAM #4

DISPLAY



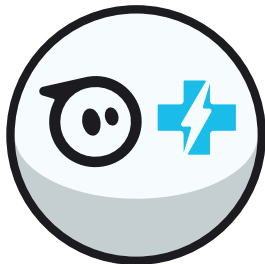
PROGRAM

on start program

display image



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





program type: **block**



PLAY

- 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

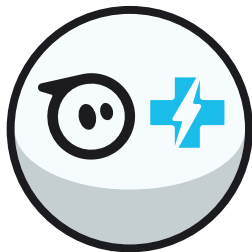
matrix animation



loop



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

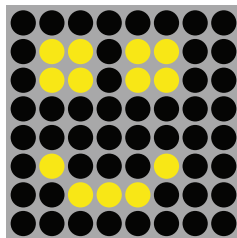




program type: **block**



1. Make your **own animation**.



2. Replace

matrix animation



loop

with

scrolling text

oh hello!

in



at

15 fps

and

wait

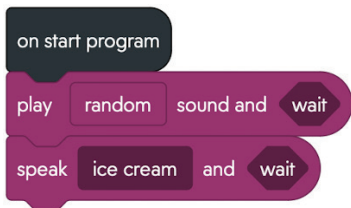
Type a **superpower** you wish you had.

STARTER PROGRAM #6

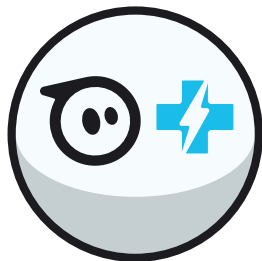
SOUNDS



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**.

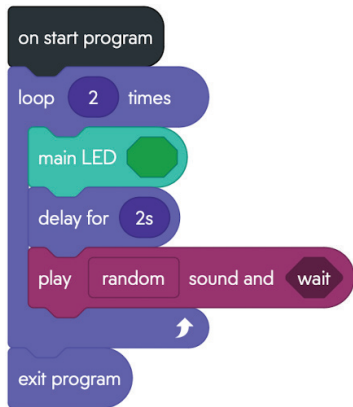


STARTER PROGRAM #7

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**

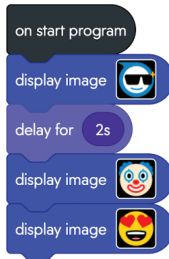
loop 1 times

3. Try using

delay for 2s

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

What happens with a program like this?

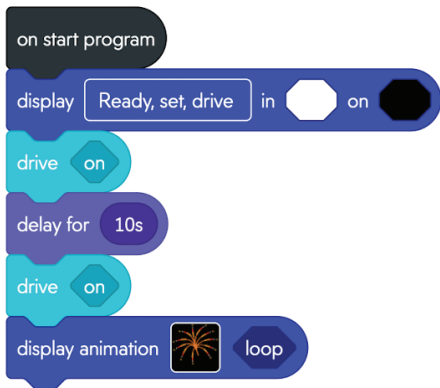


STARTER PROGRAM #8

DRIVE



PROGRAM



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



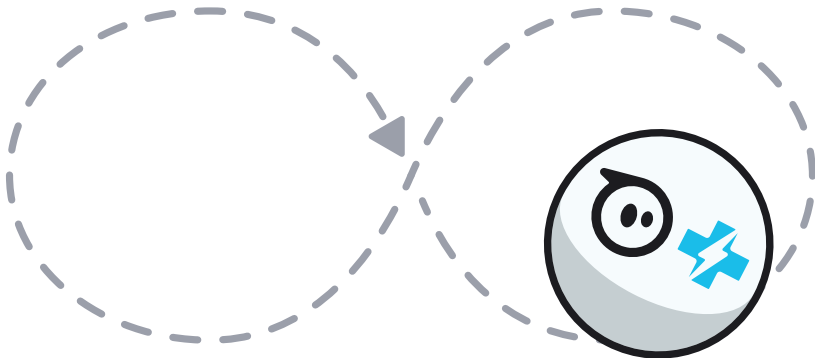


program type: **block**



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!*

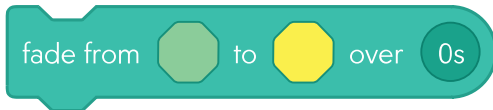
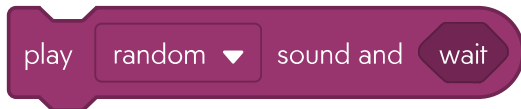




program type: **block**



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



STARTER PROGRAM #10

EVENTS: LIGHT



PROGRAM

on start program

display image

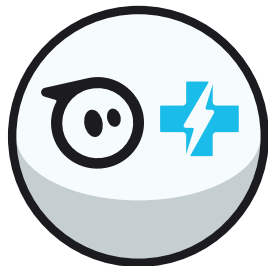


on ambient light is > ▼ 10lux

display image



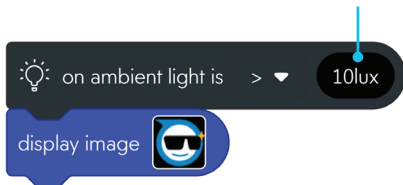
Ambient light is measured
in "**lux**" units - and there
are a lot of them!





PLAY

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



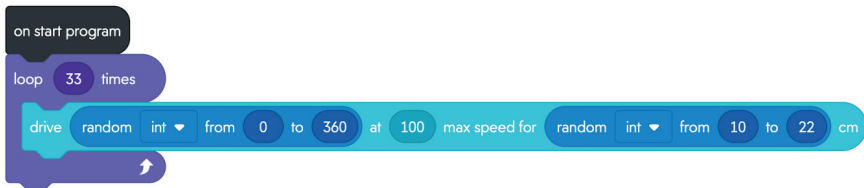
2. Add **sounds** or **movements** to your program to make things a bit more exciting.

STARTER PROGRAM #11

LOOPS & OPERATORS



PROGRAM



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

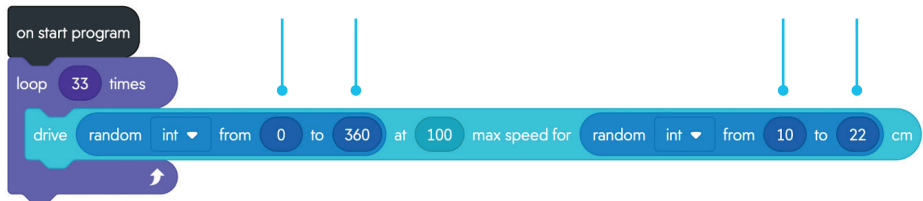




program type: **block**



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

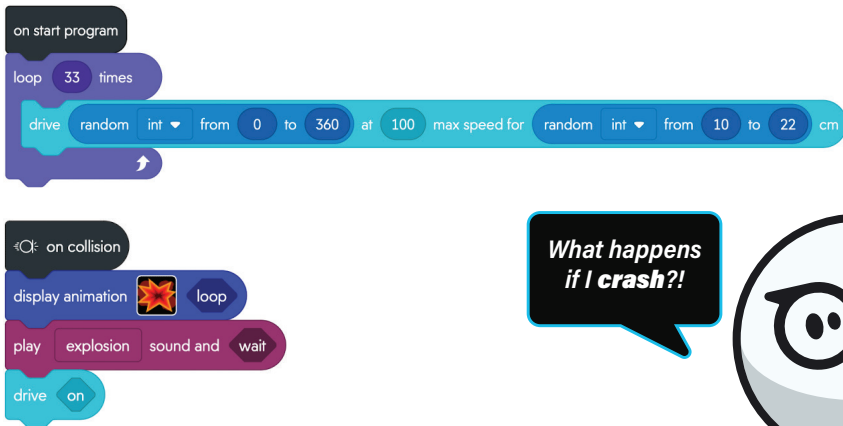


STARTER PROGRAM #12

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 image shows the Bolt+ Block Canvas interface with the following components and numbered callouts:

- 1.** Points to the **Movements** category in the bottom toolbar.
- 2.** Points to the **on start program** block.
- 3.** Points to the **4 times** loop count in the **loop** block.
- 4.** Points to the **Start** button in the top right.
- 5.** Points to the **wait** block in the **play bell sound and wait** block.
- 6.** Points to the **App** icon in the top right.
- 7.** Points to the **Connect** button in the top right.
- 8.** Points to the **undo** button in the bottom right.

The main workspace contains the following blocks:

- on start program**
- display image** (with a cat icon)
- loop** (with **4 times** count)
- roll** (0° at 100 max speed for 150cm)
- roll** (180° at 100 max speed for 150cm)
- play bell sound and wait**
- play applause sound and wait**
- display animation** (with a star icon and **loop** block)

The bottom toolbar includes the following categories and blocks:

- Movements**: roll (0° at 0 speed for 0s), roll (0° at 0 max speed for 0cm), drive on, speed 0, stop, heading 0°, spin 0° for 0s, raw motor left 0
- Lights**
- Display**
- Matrix**
- Sounds**
- Controls**
- Operators**
- Comparators**
- Sensors**
- Communications**



- 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



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