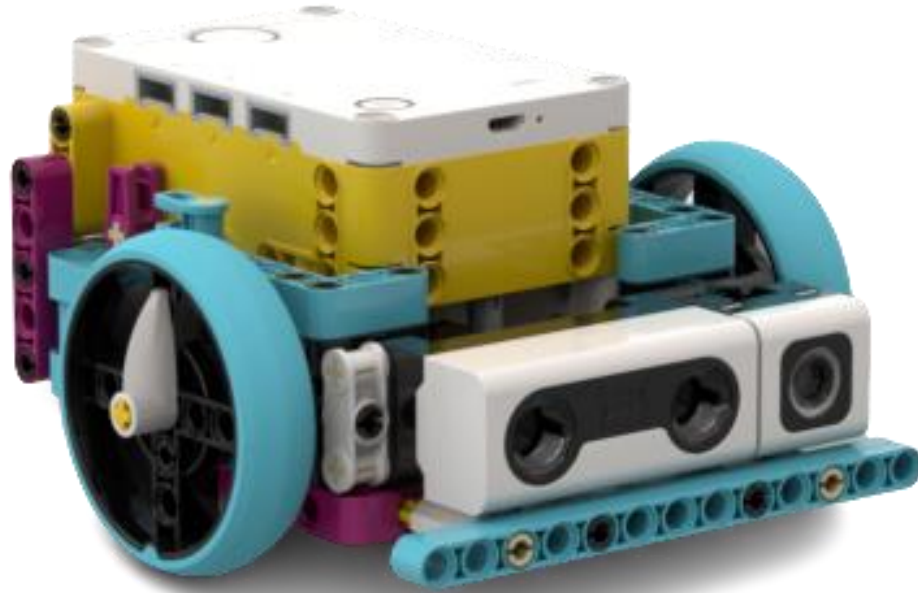


INTRO TO SPIKE



INTRO TO SPIKE

Learning Goals

- Build knowledge about coding and robotics.
- Code a Spike device.
- Have FUN learning!



INTRO TO SPIKE

Did you review the Getting Started document?

Do you have the Robocar with Spike attached?
Is Spike turned on?

Is the LEGO Spike app open and on screen?
Is Spike connected and ready to use?



INTRO TO SPIKE

Lesson Steps

- 1) Start an Spike coding app project. [Start Project](#)
- 2) Coding the Spike display. [Exploration 1](#)
- 3) Exploration 1 check-in. [Check-in 1](#)
- 4) Create your own display on the Spike. [Exploration 2](#)
- 5) Exploration 2 check-in. [Check-in 2](#)

INTRO TO SPIKE

LEGO Education SPIKE - 2.0.6

File Help

×

Home

Start

Units

Build

My Projects

?

Help

Settings

SPICE Prime

Get started with SPIKE™ Prime

Learn to use SPIKE Prime in 6 easy steps!

START

Recent projects

New Project

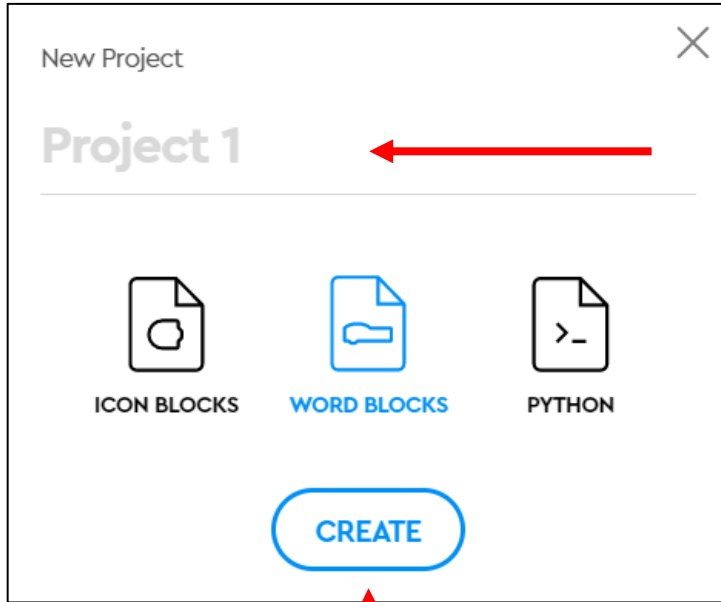
Click the New Project button.
(If you already have a new project open it is not necessary to complete this step again.)

Unit Plans

Building Instructions



INTRO TO SPIKE



Click WORD BLOCKS and then the CREATE button.

OR



Name your program.

- Click the three dots
OR click in the
New Project window.

- Name your project:
Light-_____ *(your names)*

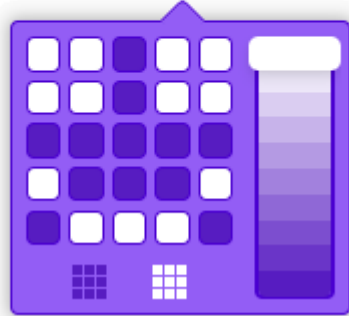
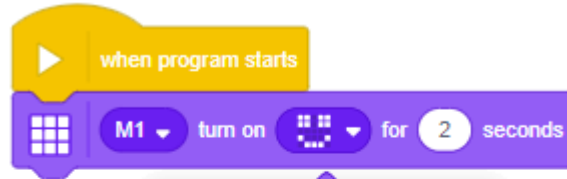


INTRO TO SPIKE

Intro to Spike - Exploration 1

Create a code sequence to make Spike display a face and play a sound.

Use the light matrix block to make the face.



INTRO TO SPIKE

Intro to Spike - Exploration 1

Use the play sound block to make the sound.

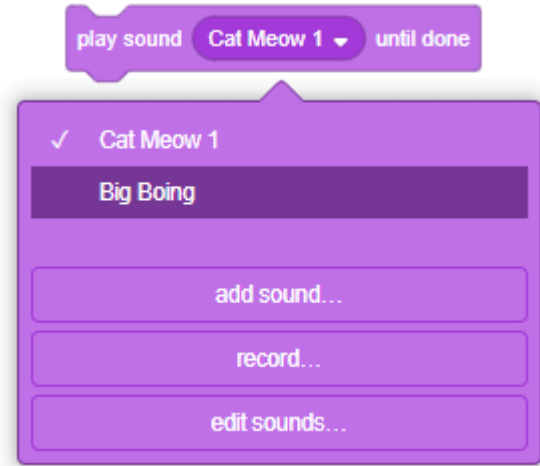
The image shows a screenshot of the Spike software interface. On the left, a purple 'play sound' block is shown with a dropdown menu set to 'Cat Meow 1' and the text 'until done'. Below this block, a larger purple panel displays a list of sounds: 'Cat Meow 1' (checked), 'add sound...', 'record...', and 'edit sounds...'. A red arrow points from the 'add sound...' button to the 'Sound' library window on the right. The 'Sound' library window has a search bar and a grid of sound icons. The icons are arranged in three rows and five columns. The first row contains 'Alert', 'Applause 1', 'Applause 2', 'Applause 3', and 'Bang 1'. The second row contains 'Bang 2', 'Big Boing', 'Bird', 'Bite', and 'Boat Horn 1'. The third row contains 'Bonk', 'Boom Cloud', 'Boop Bing Bop', 'Bowling Strike', and 'Bricks 2'. The 'Big Boing' icon is highlighted with a red border. A blue arrow points to the right at the bottom right of the screen.

Choose the "Big Boing" sound.

INTRO TO SPIKE

Intro to Spike - Exploration 1

Use the play sound block to make the sound.



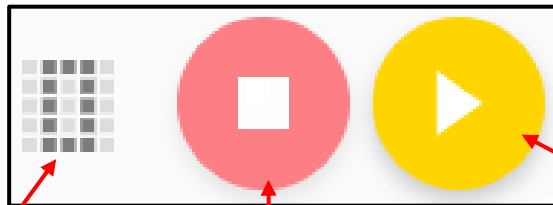
Your code sequence should look like this.



INTRO TO SPIKE

Intro to Spike - Exploration 1

Notice the program control buttons down in the corner of the coding screen.



Run program.
[Automatic download included as part of the function of this button.]

Program memory slot.

Stop program.



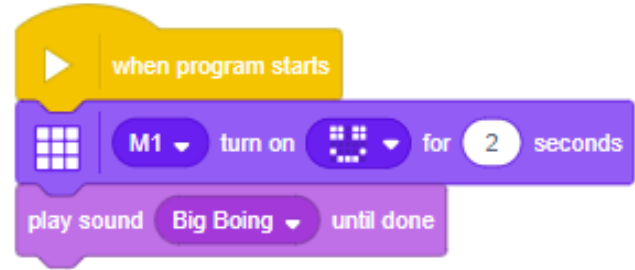
INTRO TO SPIKE

Intro to Spike - Exploration 1

Click the run program icon in the corner of the Spike app.



Observe what happens on the display screen of the Spike device.



INTRO TO SPIKE

Once you have used the Spike app to run (and download) your program you do not have to use the app to run it again.

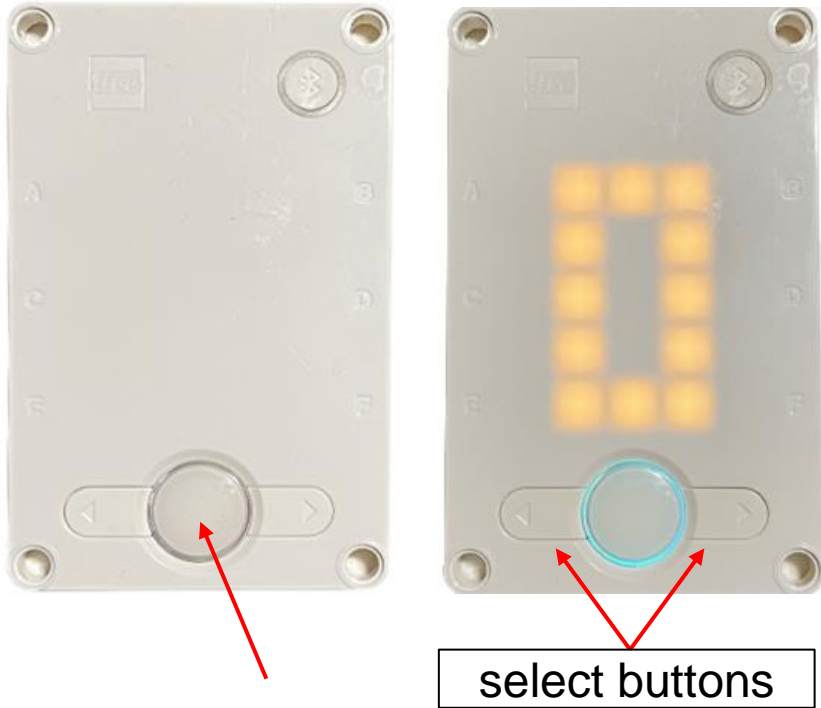


A downloaded program can be run directly from the Spike device.

Spike Prime has 20 program memory slots from memory slot 0 to memory slot 19.



INTRO TO SPIKE



Choose the program to run from Spike using the select buttons and press the main button to run your program as many times as you like.

Your program should be stored in memory slot 0 (zero). Use the select buttons to select memory slot 0 (zero).

Press the main button one more time to run your program.



INTRO TO SPIKE

Intro to Spike - Exploration 1

Think about it and discuss as a group.



- 1) Are you able to connect to Spike?
- 2) Are you able to use the code blocks to program Spike?
- 3) Are you able to download programs to Spike?
- 4) Are you able to select and run programs directly from Spike?

Check in with Mr. Desmond.

Be prepared to show your coding and demonstrate how it works.



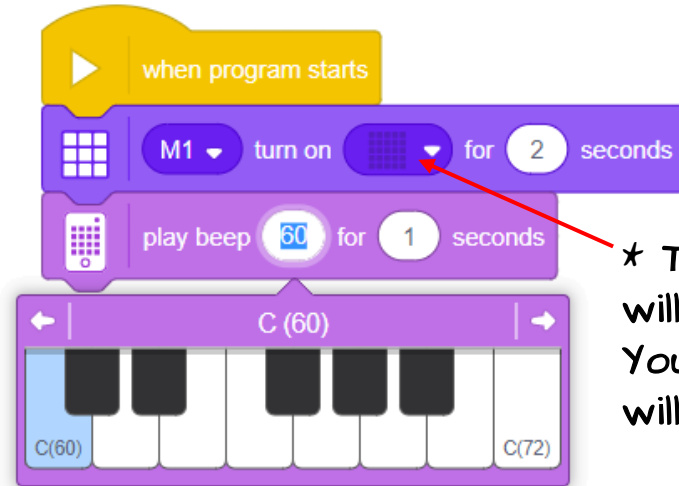
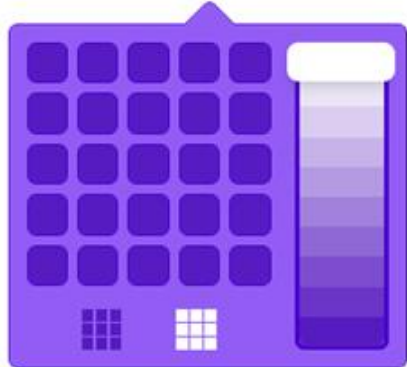
INTRO TO SPIKE

Intro to Spike - Exploration 2

Clear the light matrix and then create a code sequence to make Spike display a shape of your own design and play a sound using the play beep block.



Clear the light matrix.

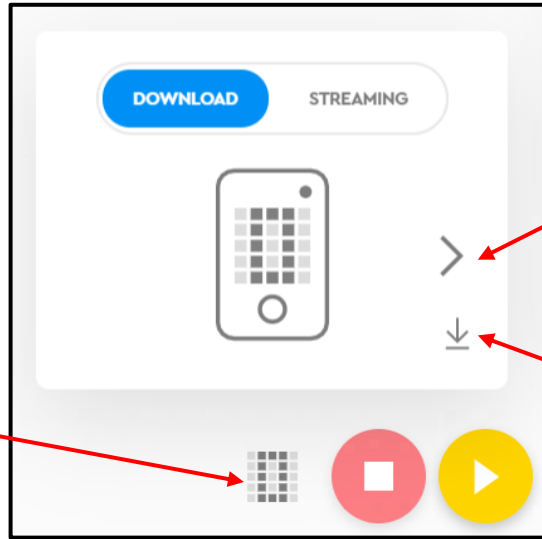


* The light matrix will not be blank. Your shape design will appear here.



INTRO TO SPIKE

Click the program memory slot button.



This is the change program memory slot button.

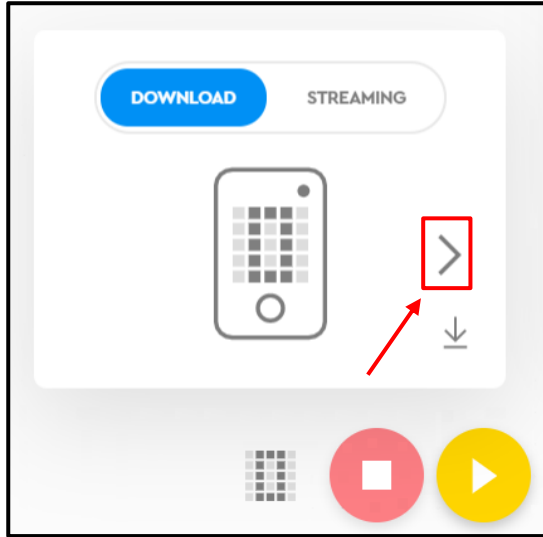
This is the download program button.
[Will not run the program - download only.]

Notice the window that pops up displaying the **DOWNLOAD** controls.

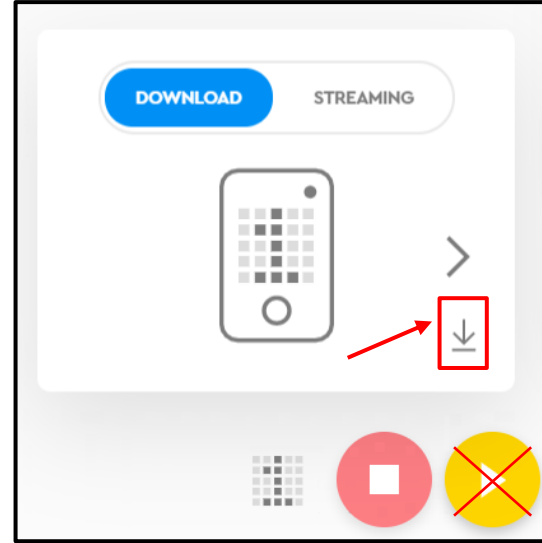
Go to the next page.



INTRO TO SPIKE



Change the program memory slot from zero to one.



Notice the **DOWNLOAD** window now displays memory slot 1. Download the program to Spike.

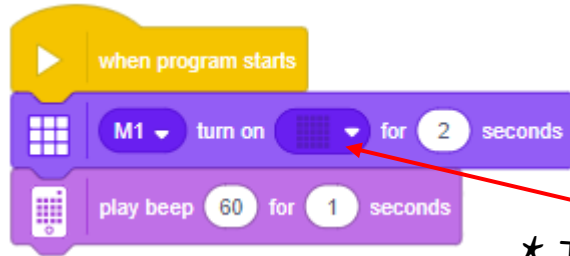


INTRO TO SPIKE

Intro to Spike - Exploration 2

Select memory slot 1 using the select buttons and the main button on top of the Spike Prime device.

Run your program directly from Spike, not from the app.



* The light matrix will not be blank. Your shape design will appear here.



INTRO TO SPIKE

Intro to Spike - Exploration 2

Think about it and discuss as a group.

- 1) Are you able to independently use the code blocks to program Spike?
- 2) Are you able to select and run programs from Spike?

Check in with Mr. Desmond.

Be prepared to show your coding and demonstrate how it works.

