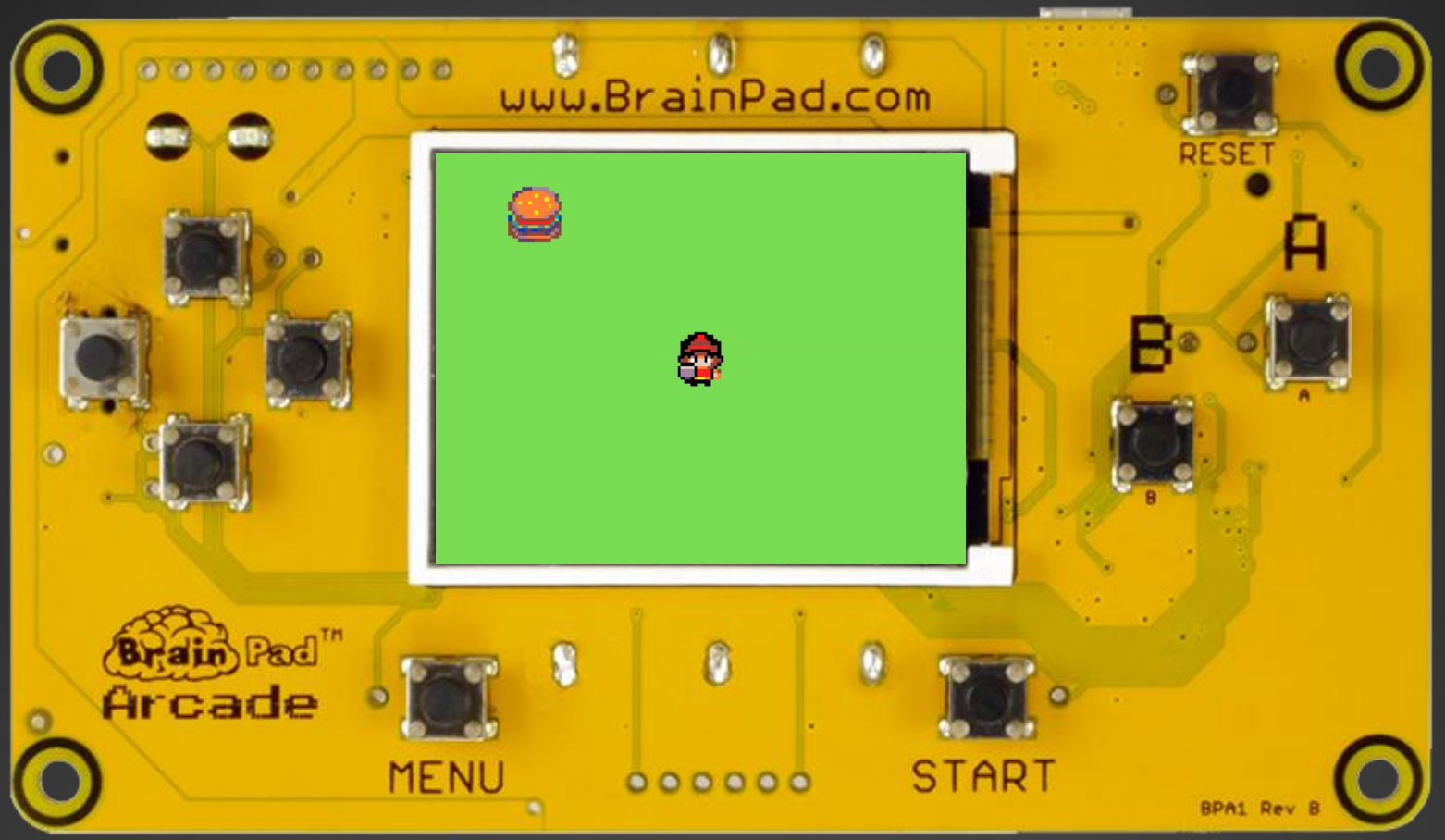
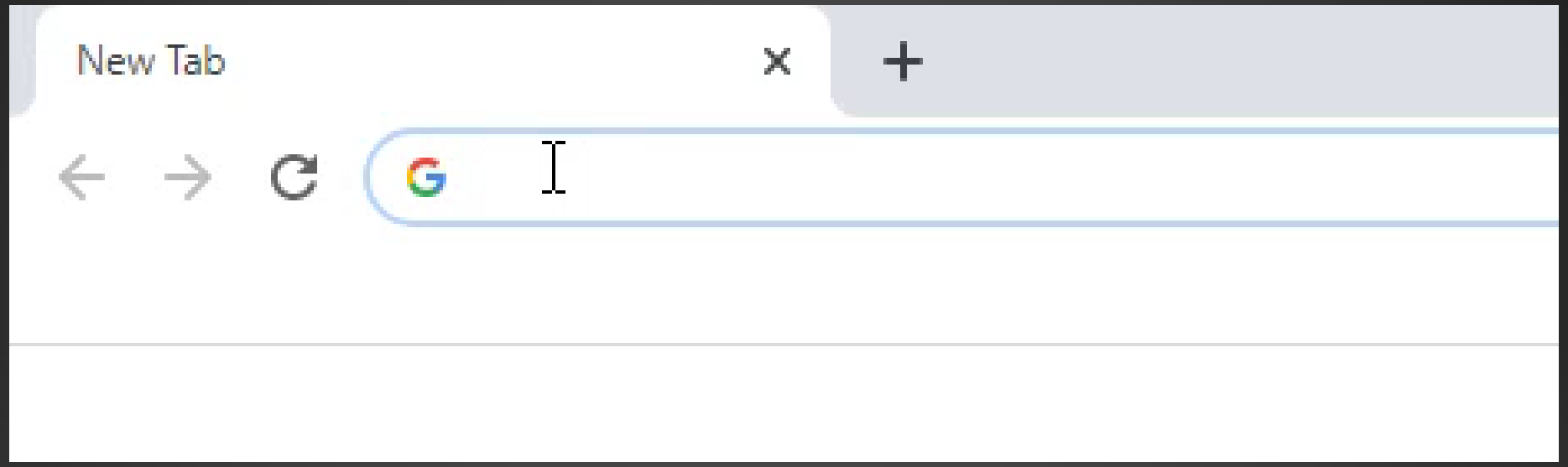
2-D ADVENTURE – EPISODE 01

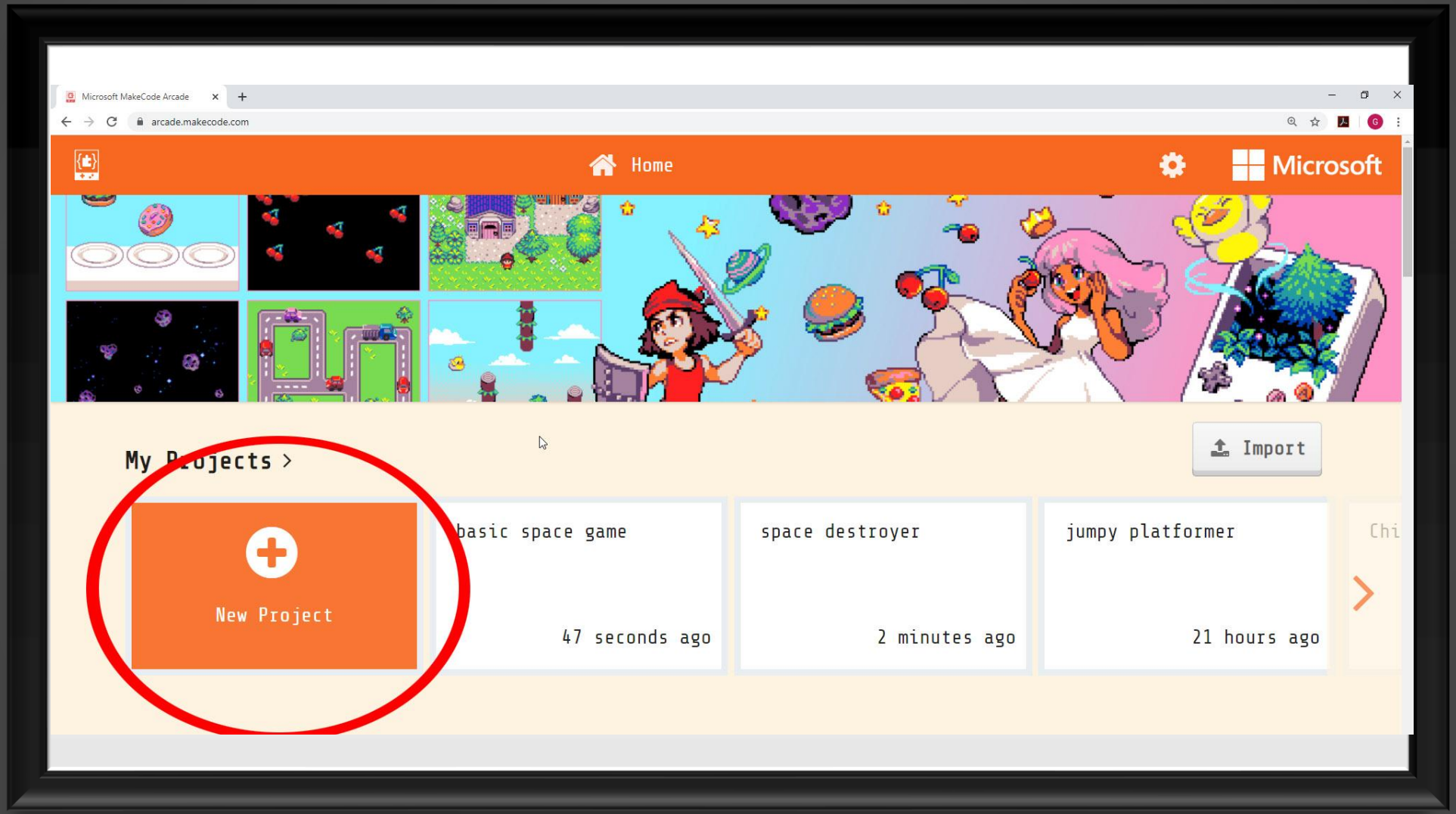


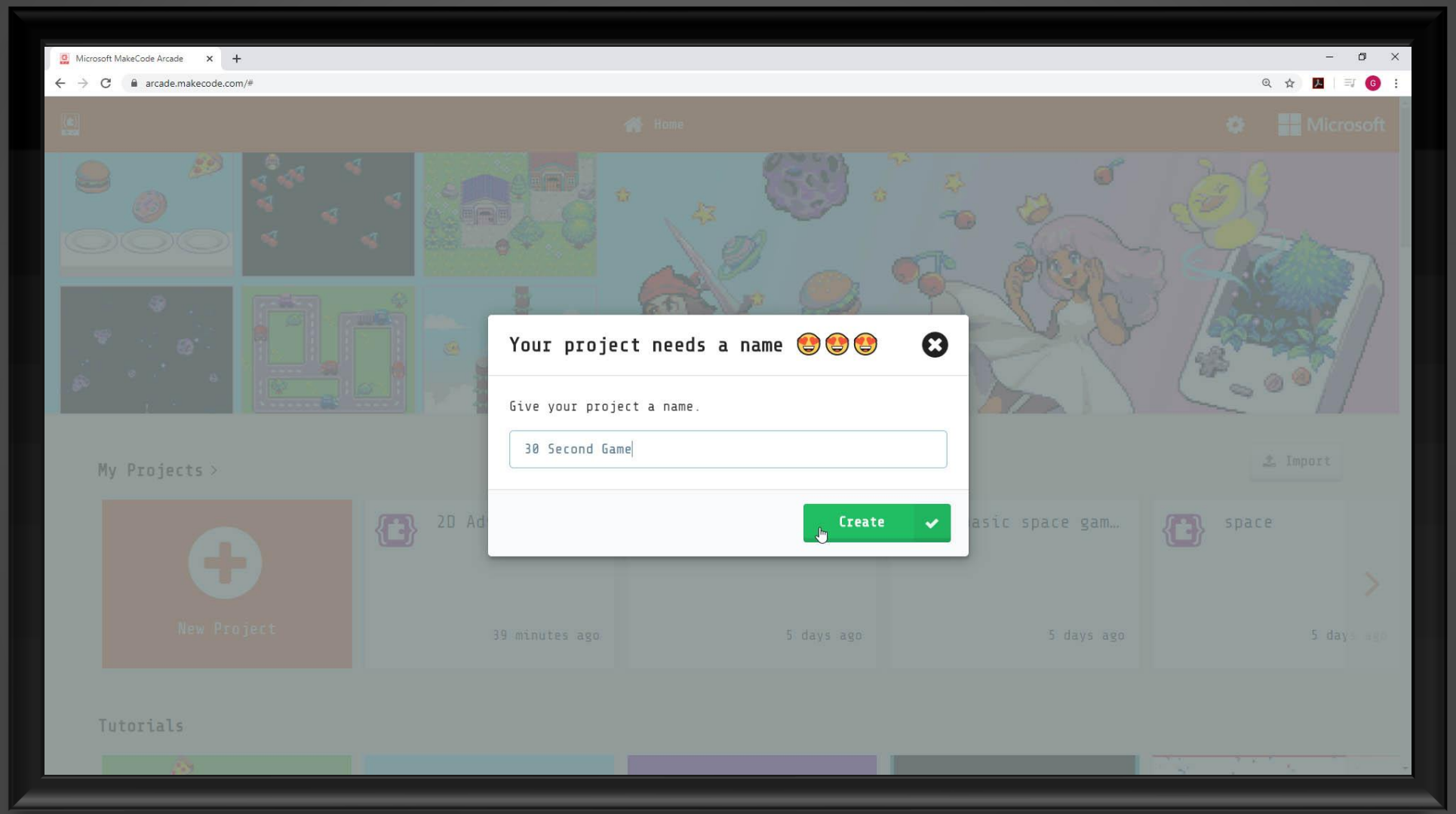
Let's create a 2-D Adventure game.

Open a web browser and navigate to…



arcade.makecode.com


Microsoft MakeCode Arcade
arcade.makecode.com
Home
Microsoft
My Projects >
Import
New Project
basic space game
47 seconds ago
space destroyer
2 minutes ago
jumpy platformer
21 hours ago


Microsoft MakeCode Arcade
arcade.makecode.com/#
Home
Microsoft
Your project needs a name 😍😍😍
Give your project a name.
30 Second Game
Create
My Projects
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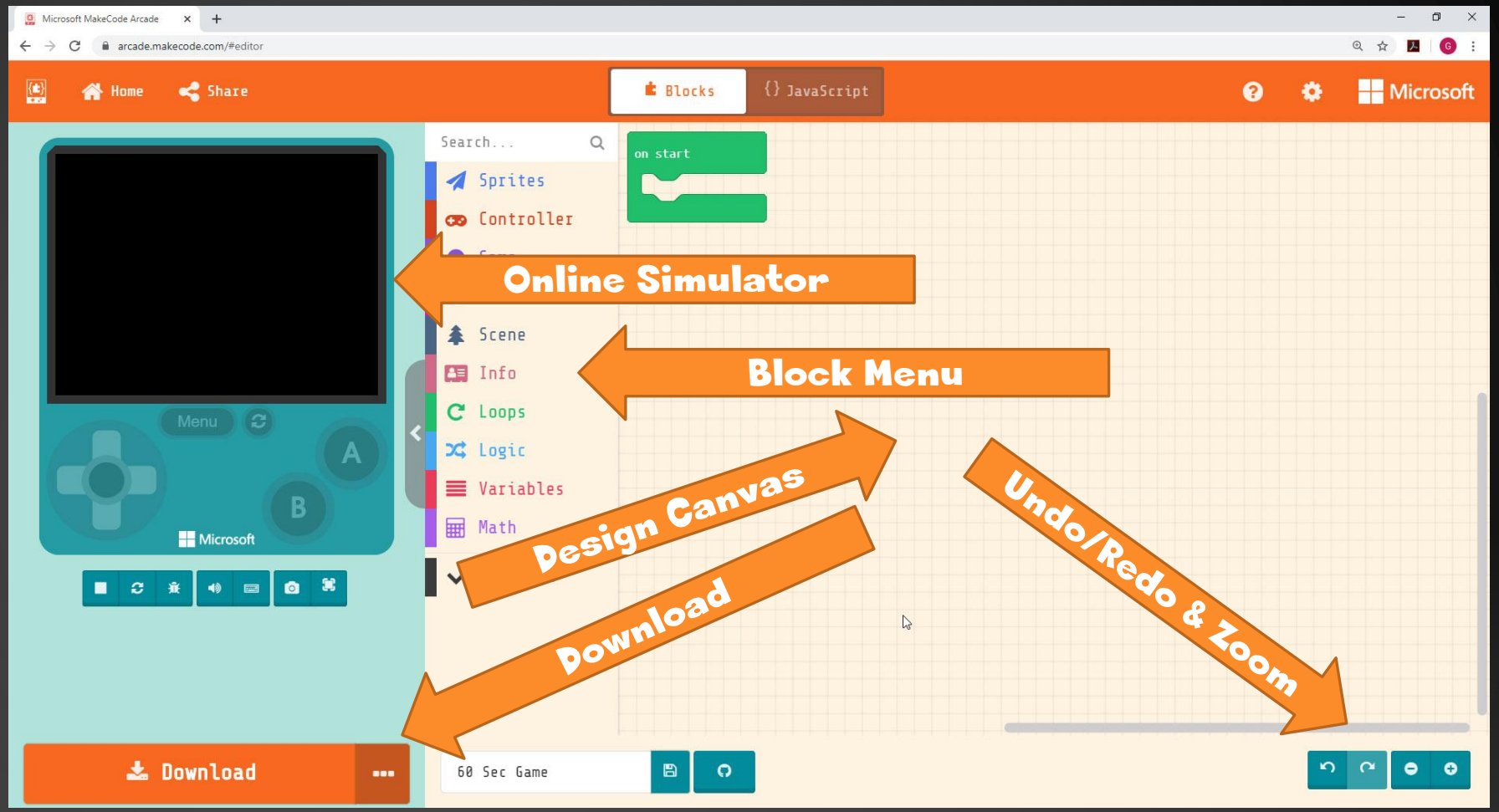
New Project
2D Ad
asic space gam...
space
39 minutes ago
5 days ago
5 days ago
5 day
Tutorials

DESIGN SURFACE

This is where the game you create will come to life!

- Online Simulator
- Block Menu
- Design Canvas
- Download (for later)
- Undo/Redo & Zoom

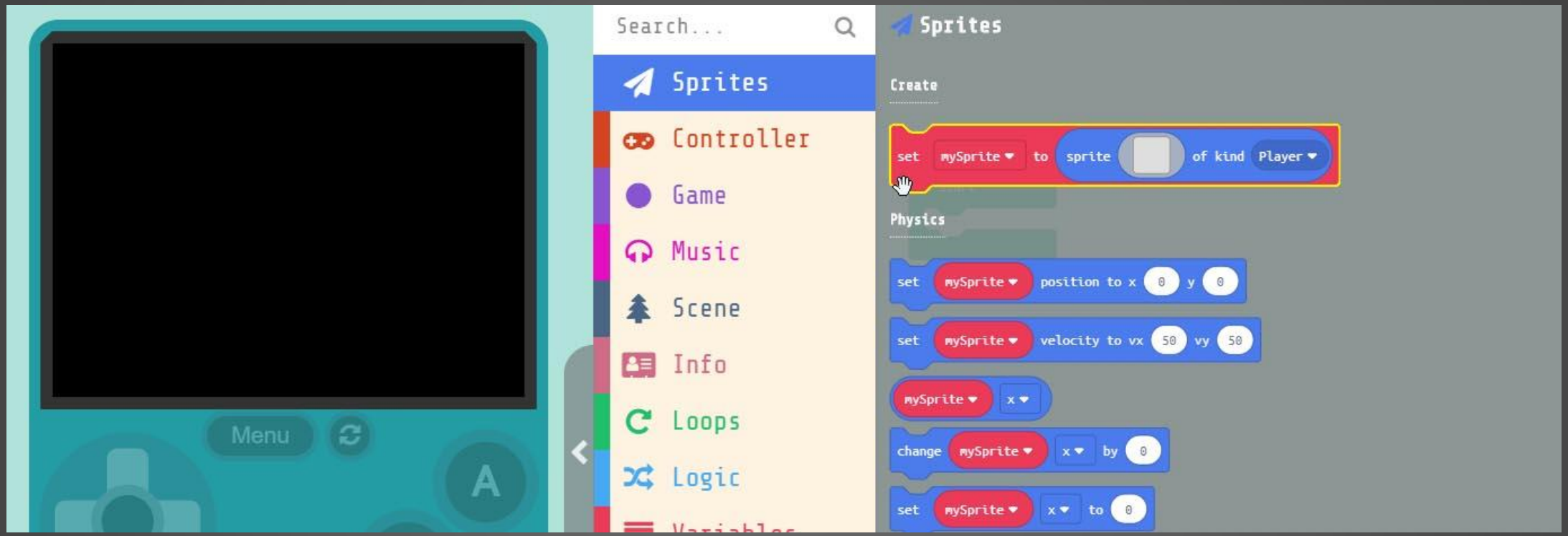


Computer Term:

SPRITE

A sprite is a two-dimensional image that is integrated into a larger scene, most often in a 2D video game.

EXAMPLE:



Grab the  block

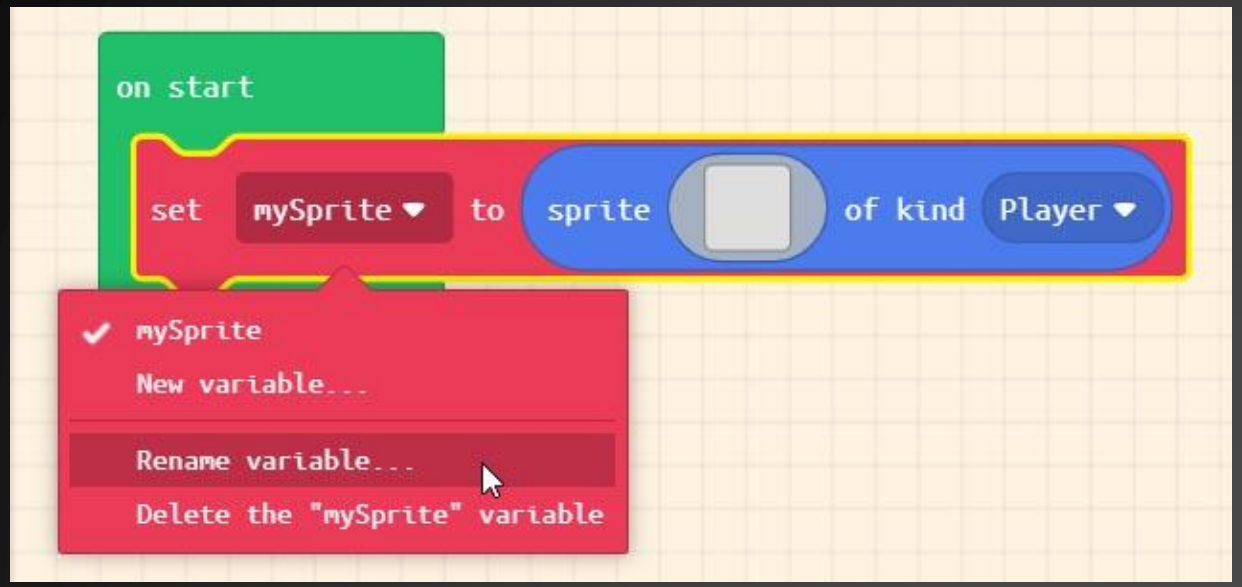
and drag it into the  block

Computer Term:

VARIABLE

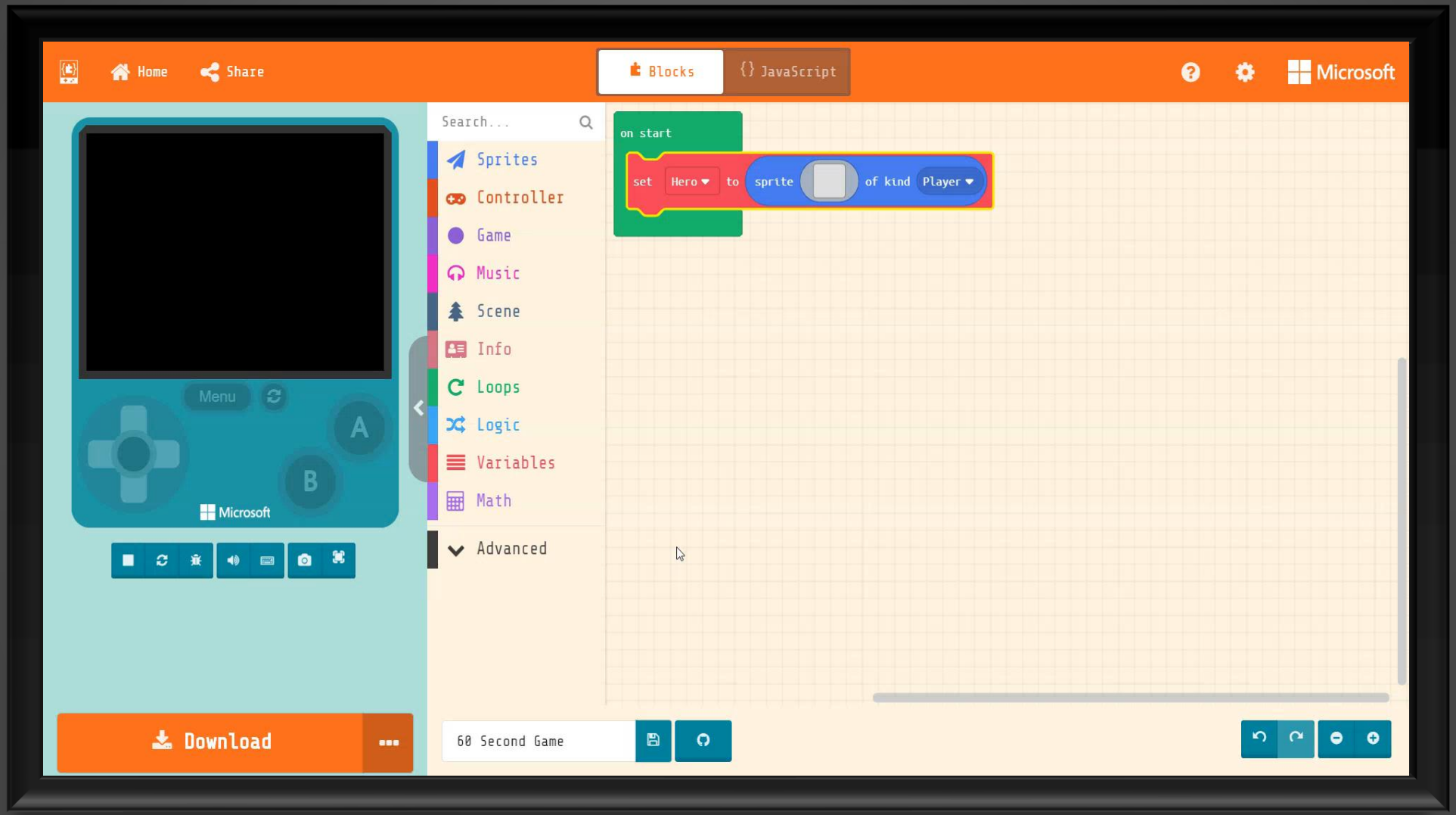
A variable is a letter or word, such as “x” or “score” that represents a changing value. Variable can be named anything but should be meaningful. To make code easier to read.

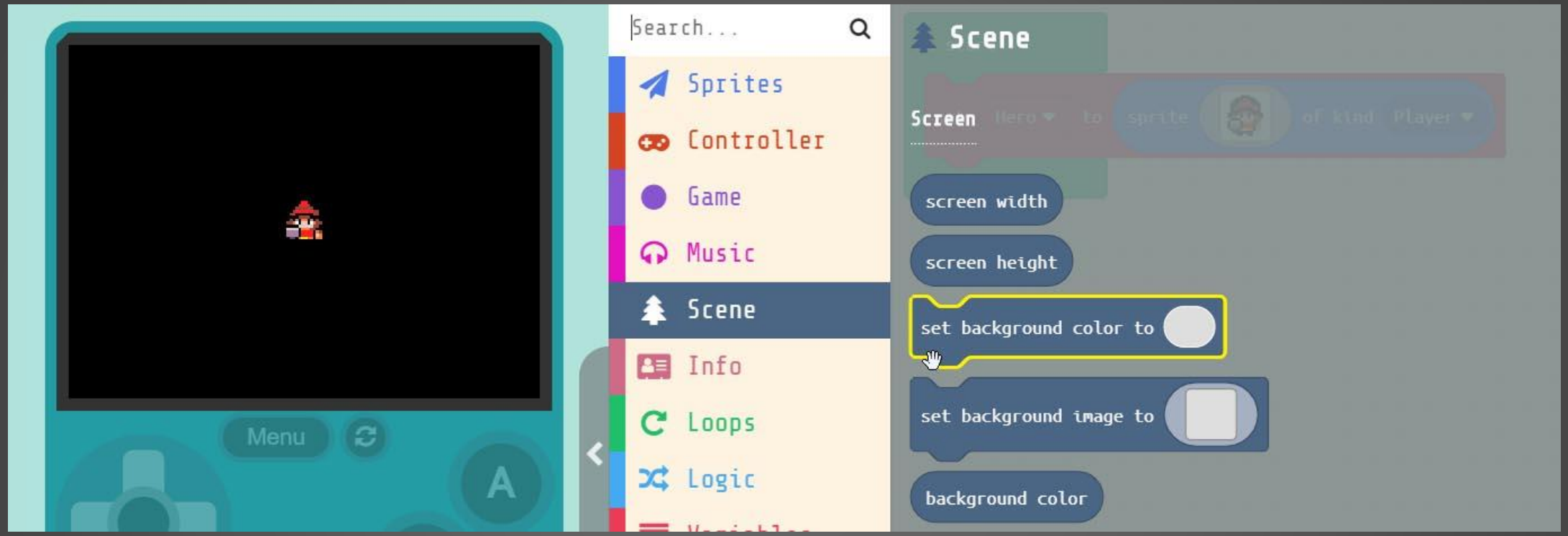
EXAMPLE: score=score + 1

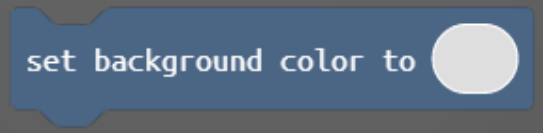


Naming our first ‘variable’

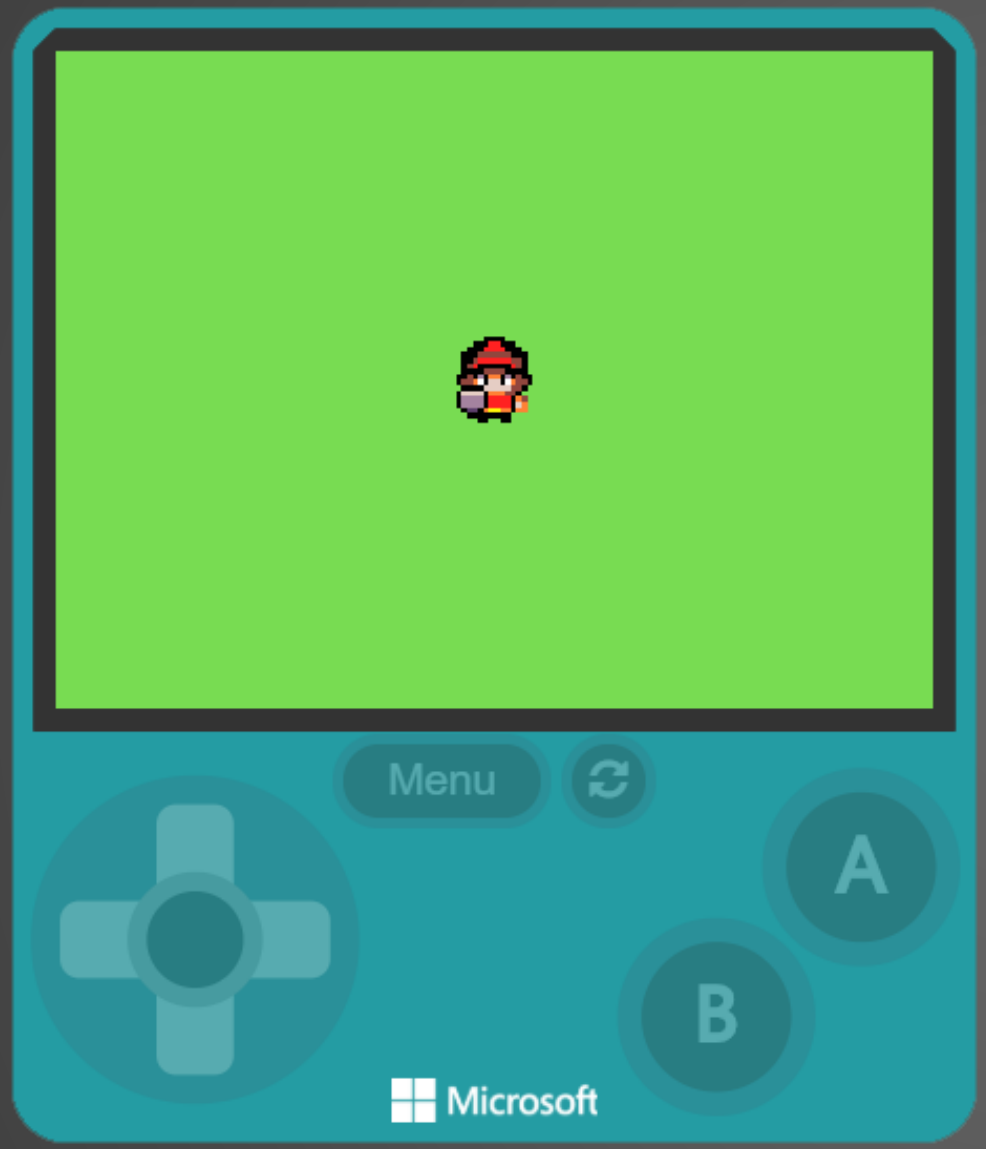
Rename ‘mySprite’ to ‘Hero’


Home
Share
Blocks
JavaScript
Microsoft
Search...
Sprites
Controller
Game
Music
Scene
Info
Loops
Logic
Variables
Math
Advanced
on start
set Hero to sprite of kind Player
Menu
A
B
Microsoft
Download
60 Second Game



Grab the  Block

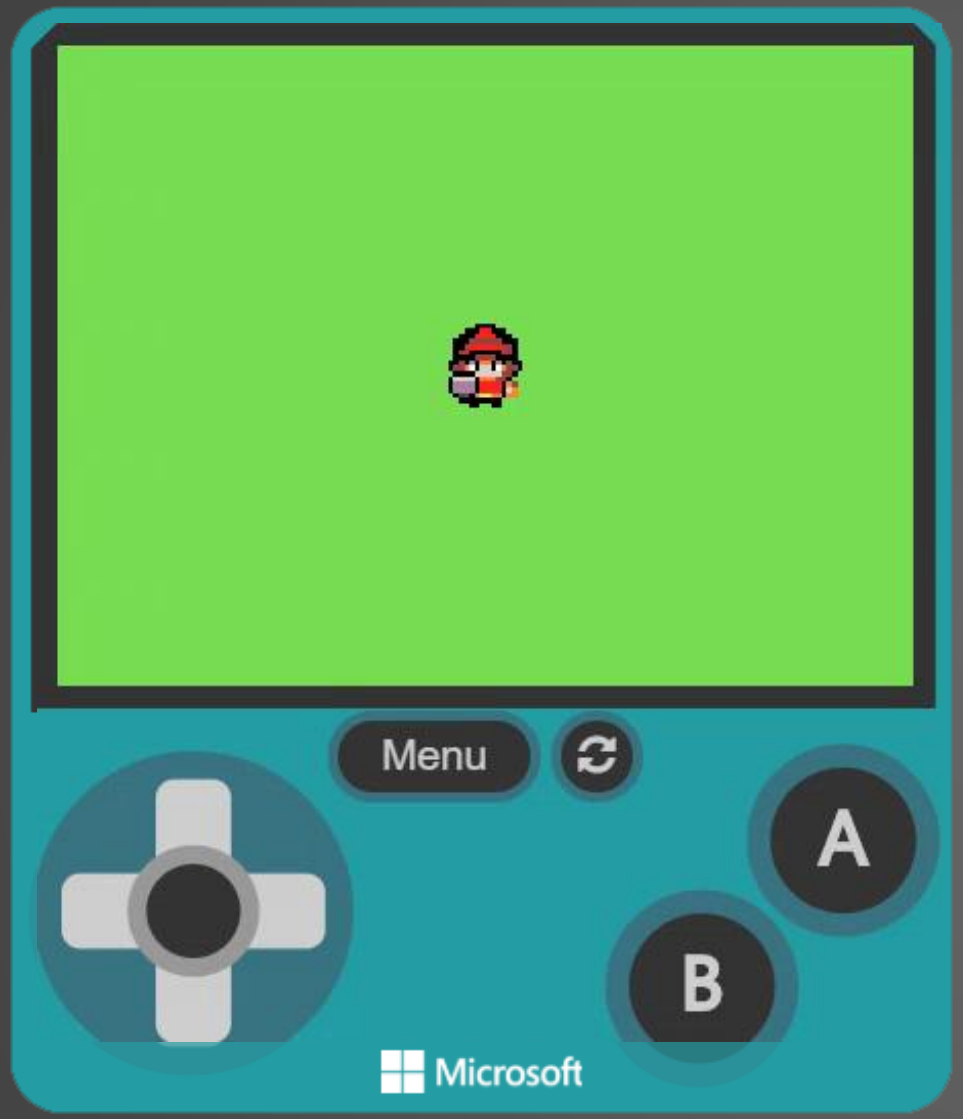
and drag it into the  block just below our ‘Hero’

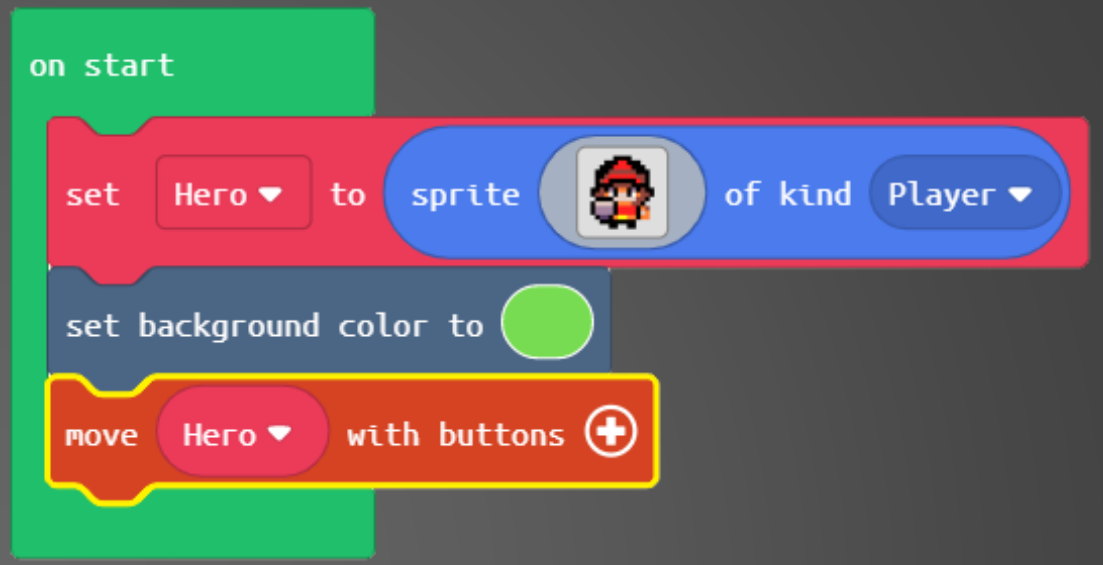


Click inside the GREY circle and select the color GREEN

Grab the  block

Drag it into the  block just below the other blocks

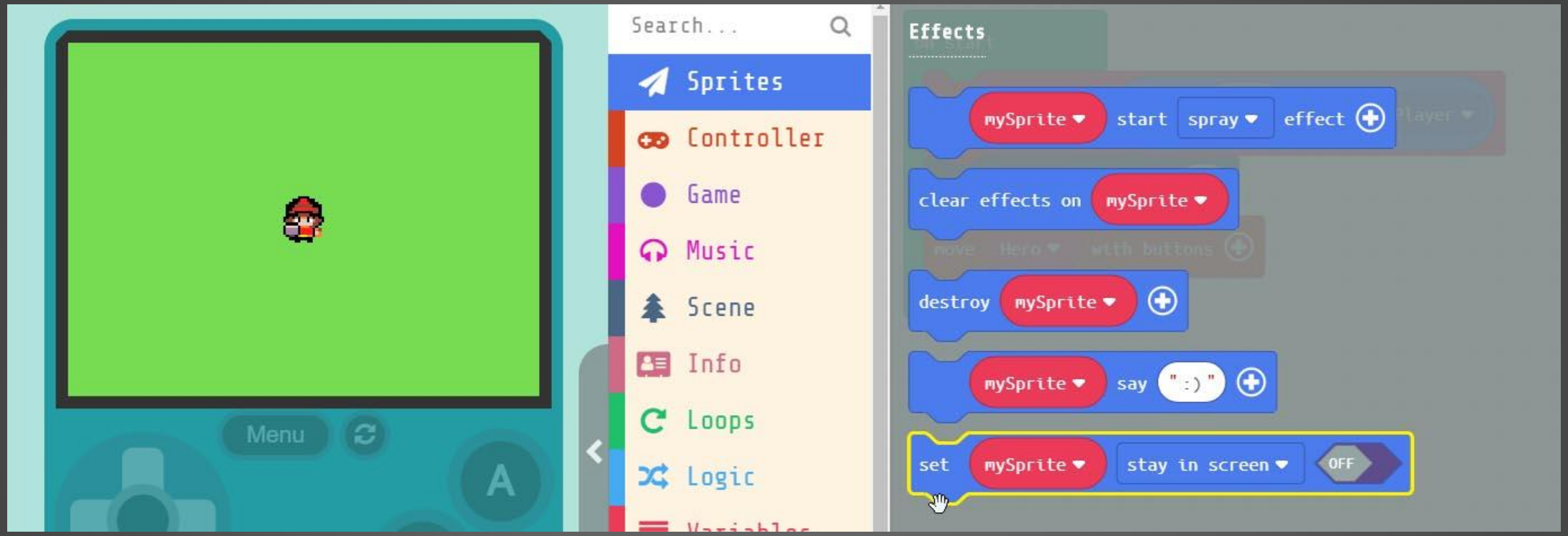


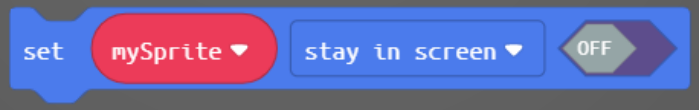


Change the name to ‘Hero’

Now we can move our Sprite around the screen

You’ll notice the ‘Hero’ leaves the screen

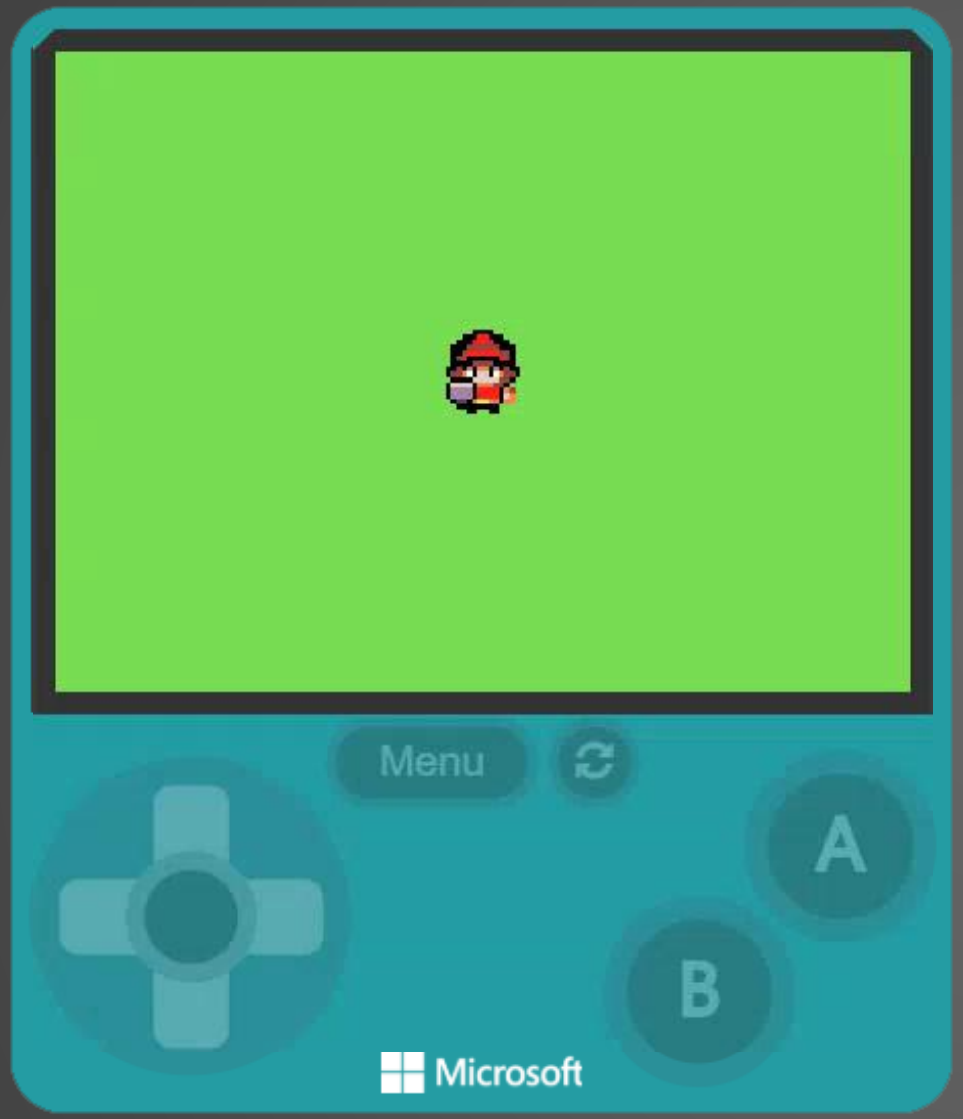


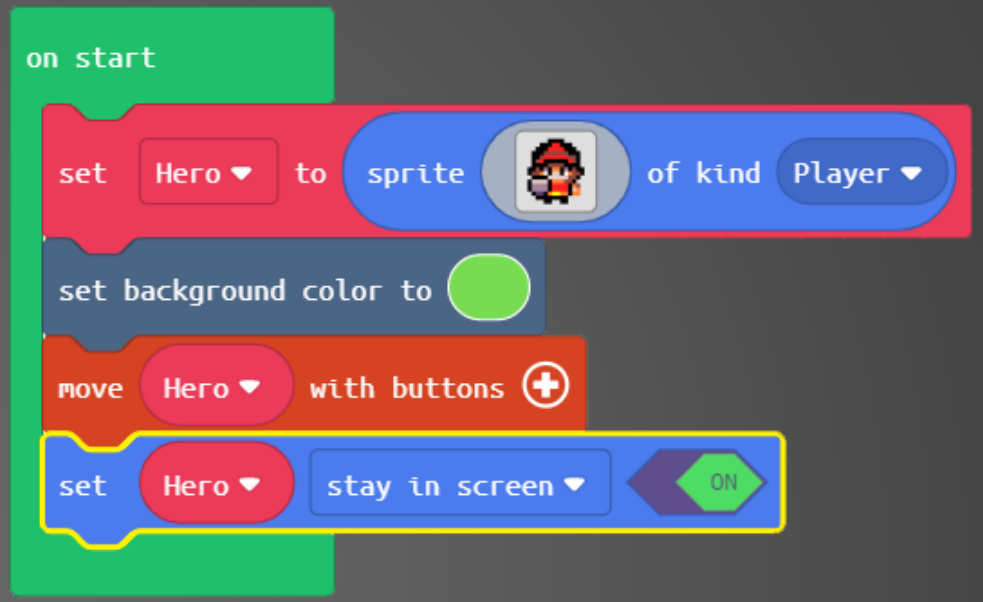
Grab the 

Block

drag it into the 

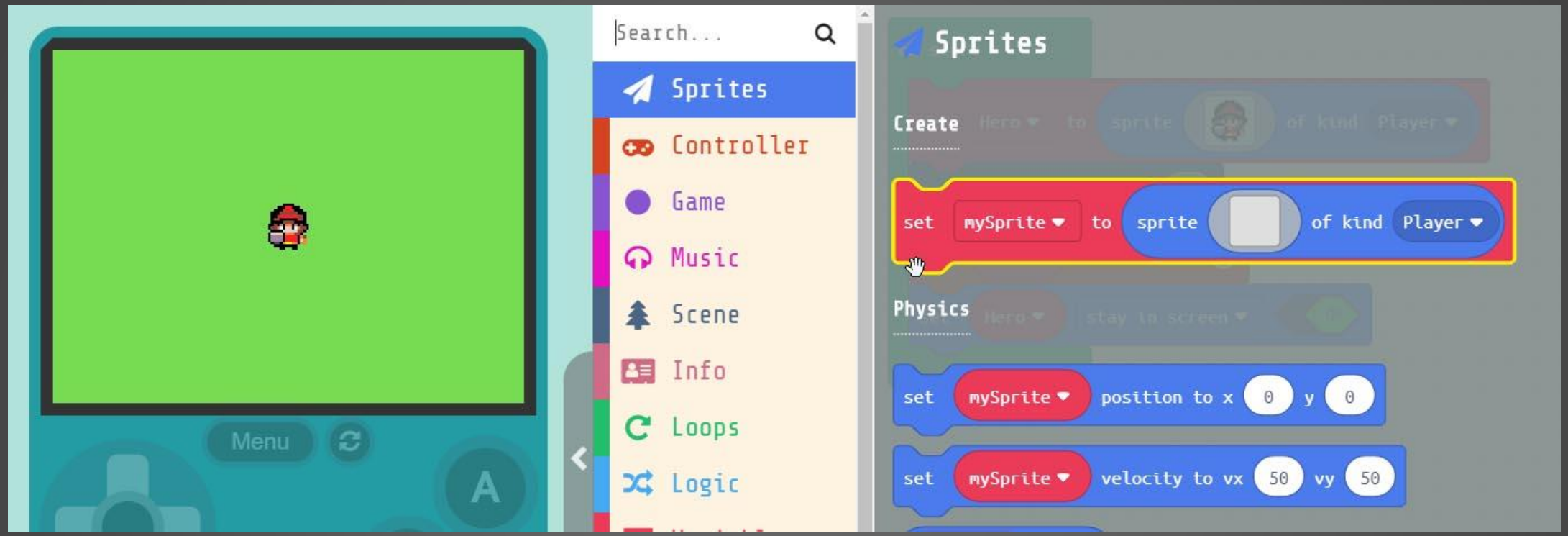
block just below the other blocks





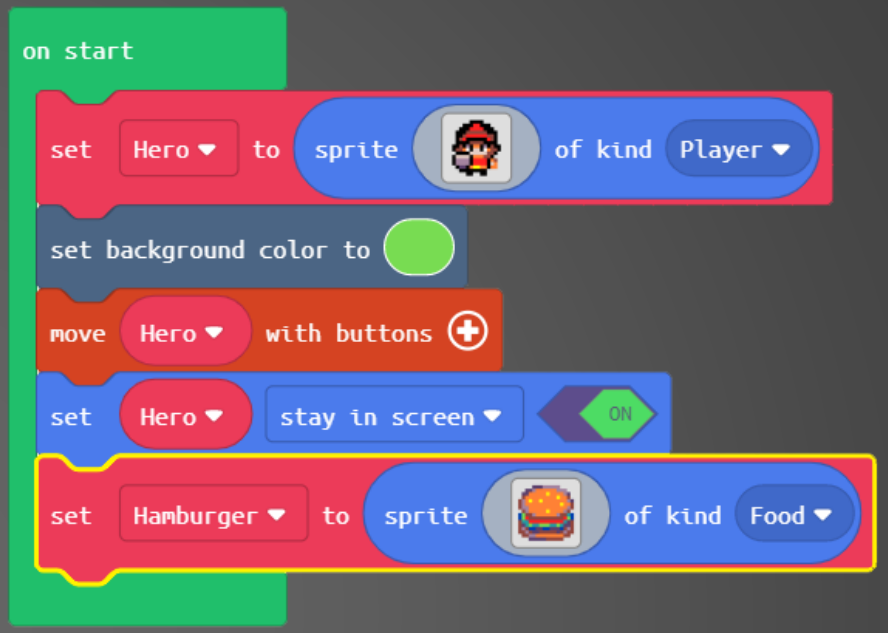
Change the name to ‘Hero’ and set the block to ‘ON’

Now our ‘Hero’ stays on screen



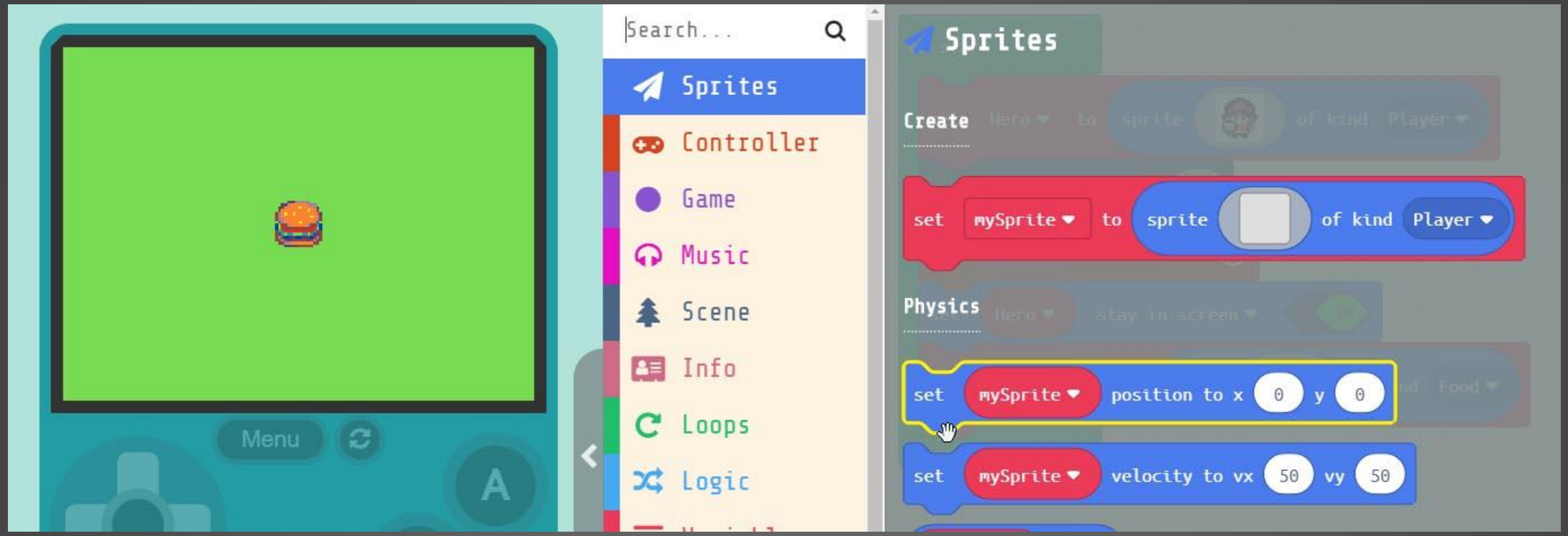
Grab the  Block

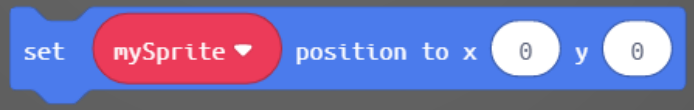
drag it into the  block just below the other blocks



Change the name to ‘Hamburger’ change the ‘kind’ to ‘Food’

By default our Hamburger Sprite appears in the center of the screen

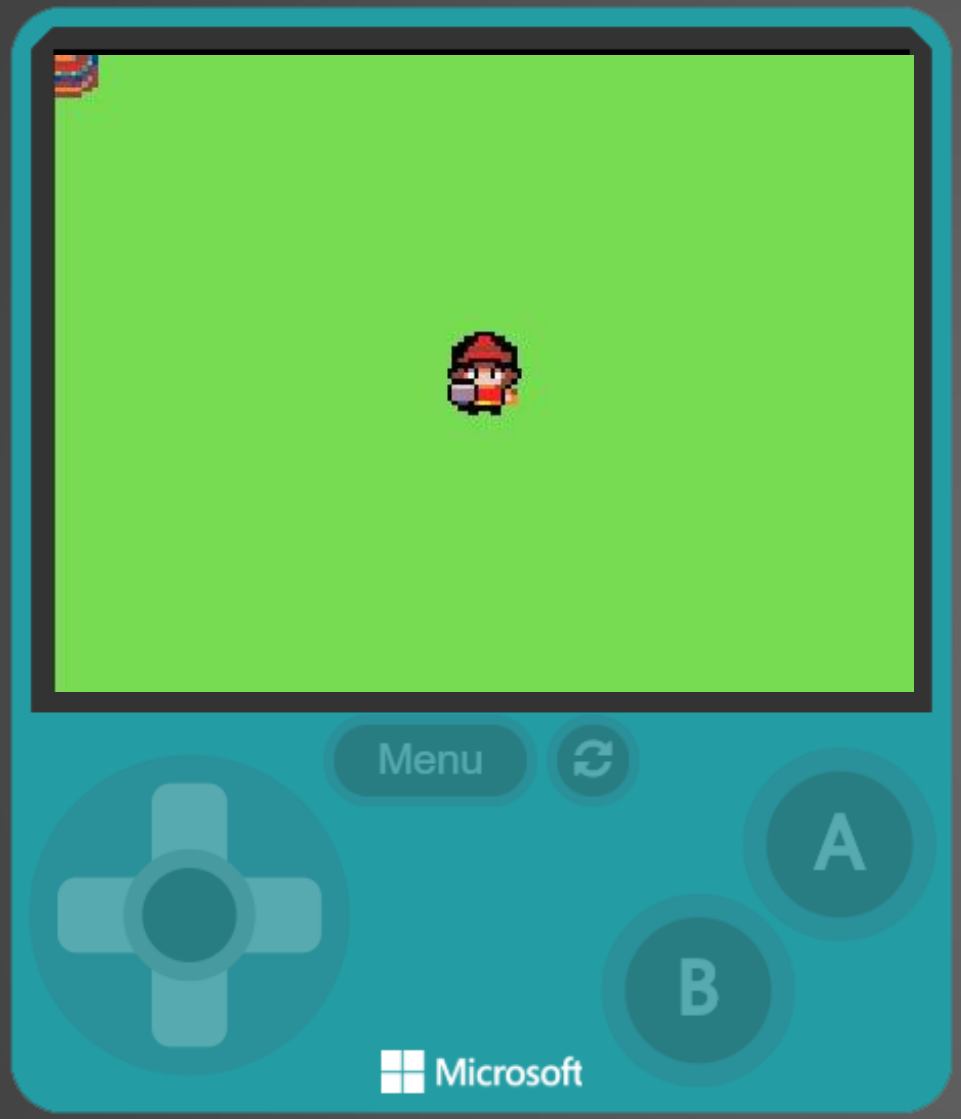


Grab the 

block

drag it into the 

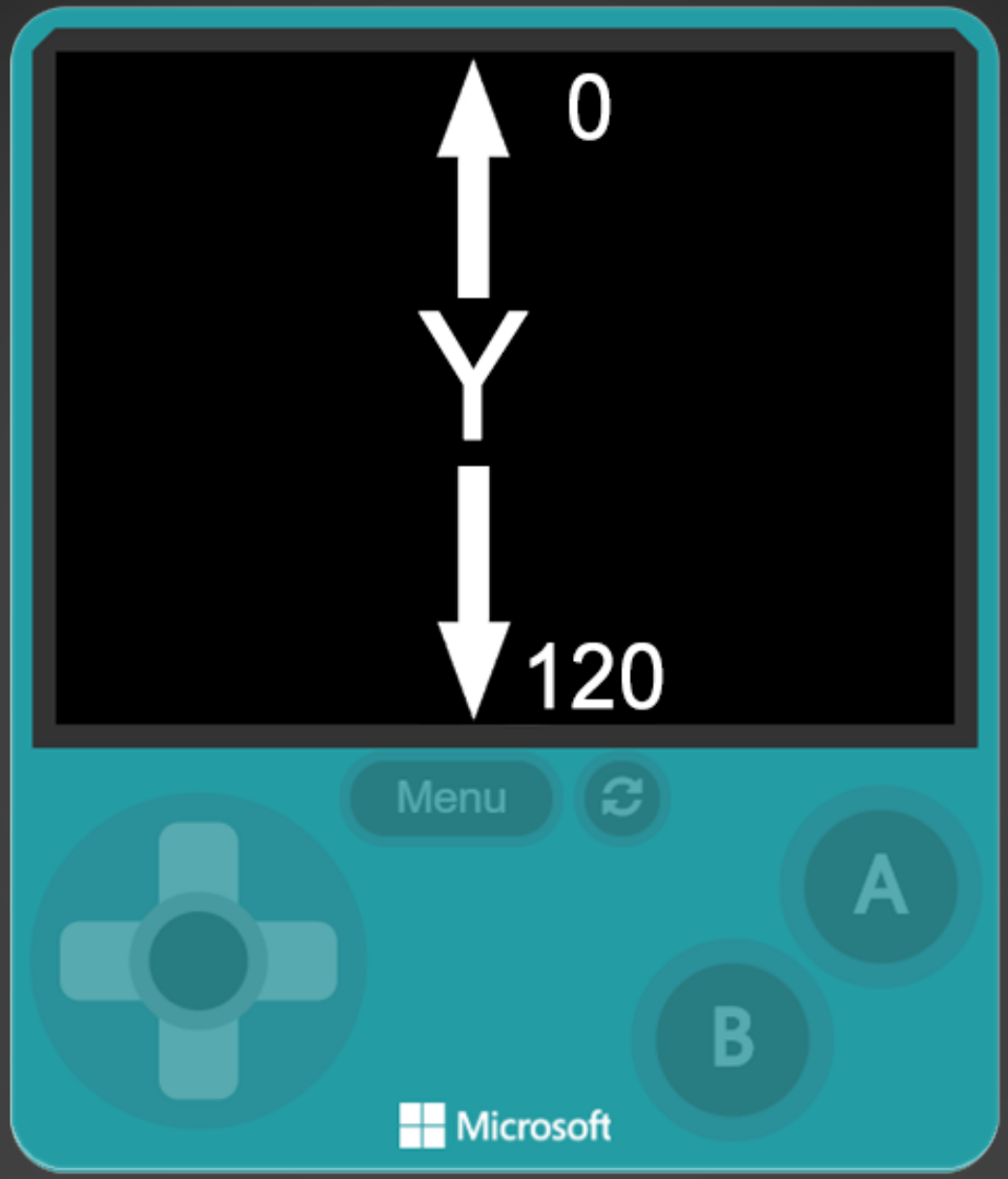
block just below the other blocks



Change the name to ‘Hamburger’ change the ‘kind’ to ‘Food’

By default our Hamburger Sprite now appears in the top corner

The x & y parameters represents pixels on the screen

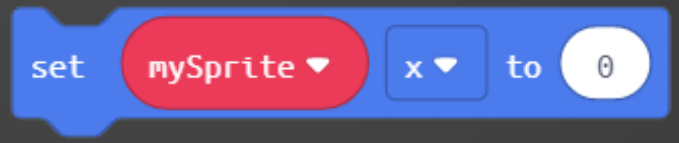


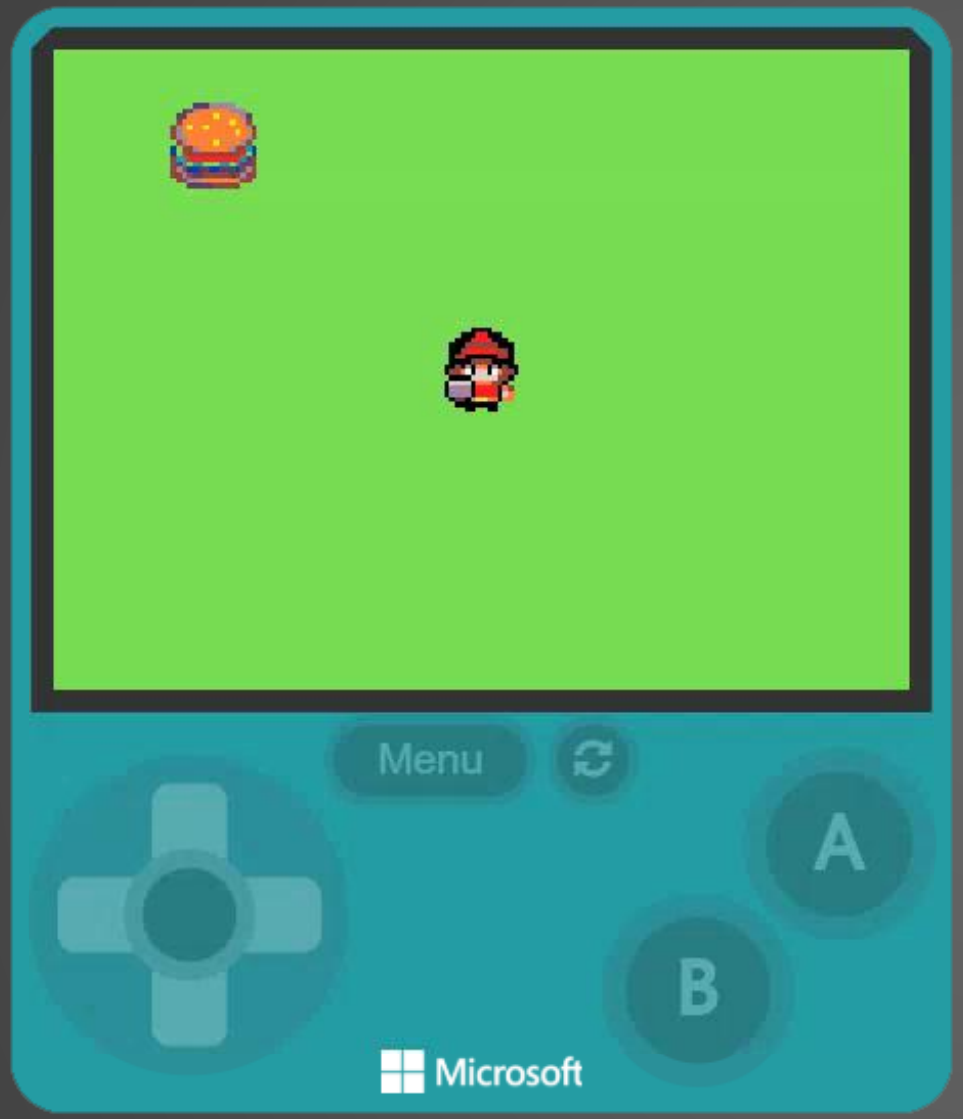
Computer Term:

PARAMETER

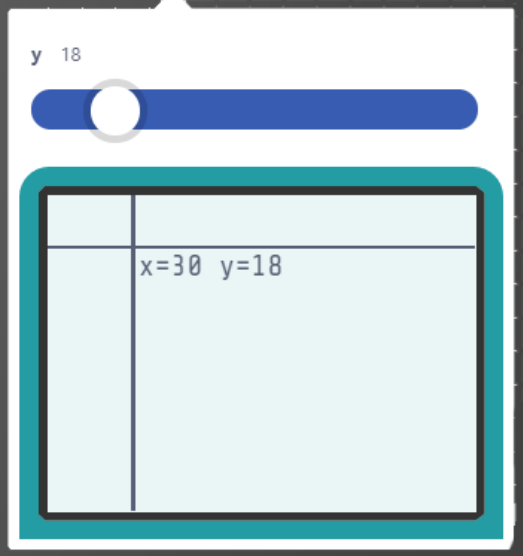
A parameter is a value that we add inside a block. This number is passed into the block. In the example block below ‘0’ would be the parameter. Parameters can also be referred to as 'ARGUMENTS'

EXAMPLE:





Click on either the x or y parameter and set the position of the ‘Hamburger’

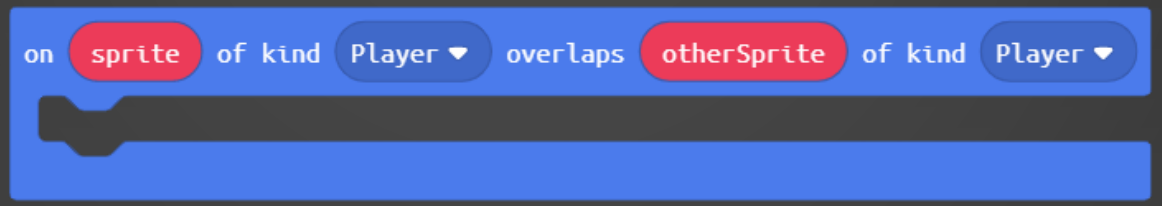


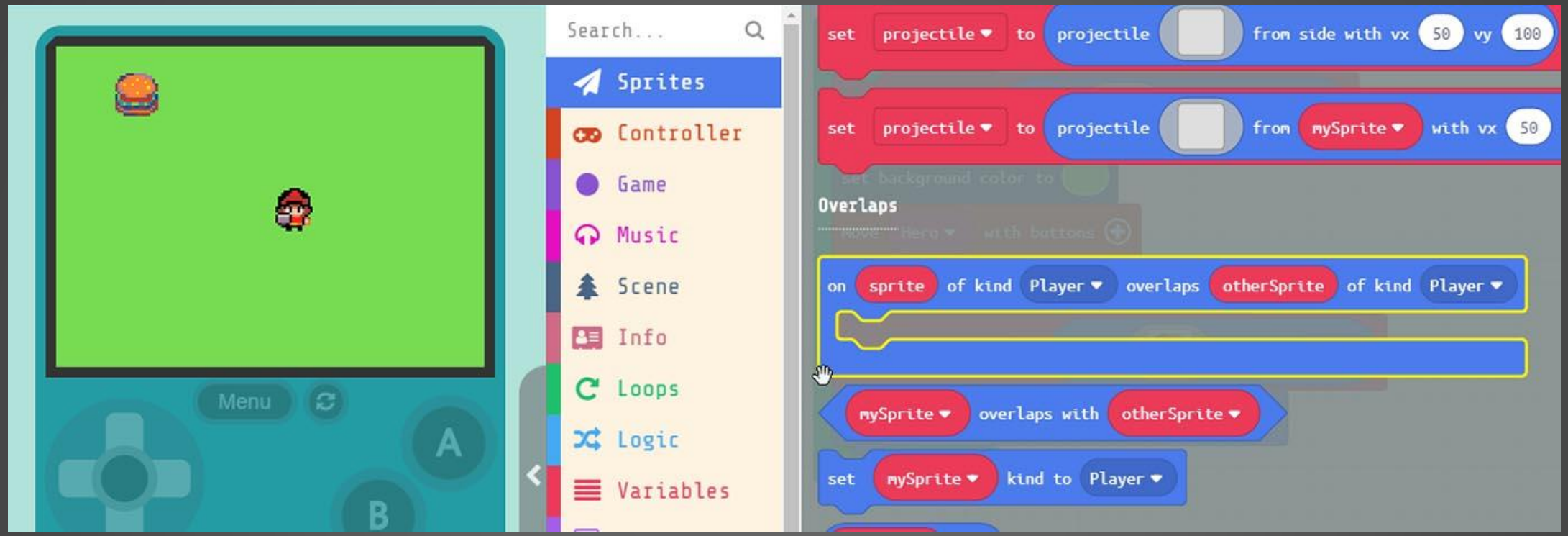
Computer Term:

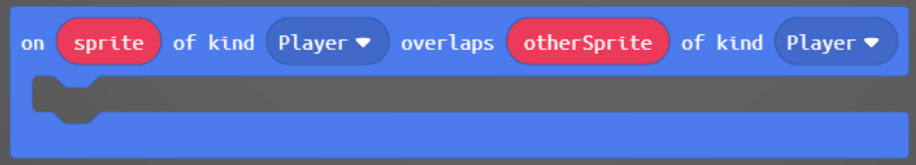
EVENT

An event is an action or occurrence detected by a program. Events can be a user action like clicking a button or when Sprites overlap.

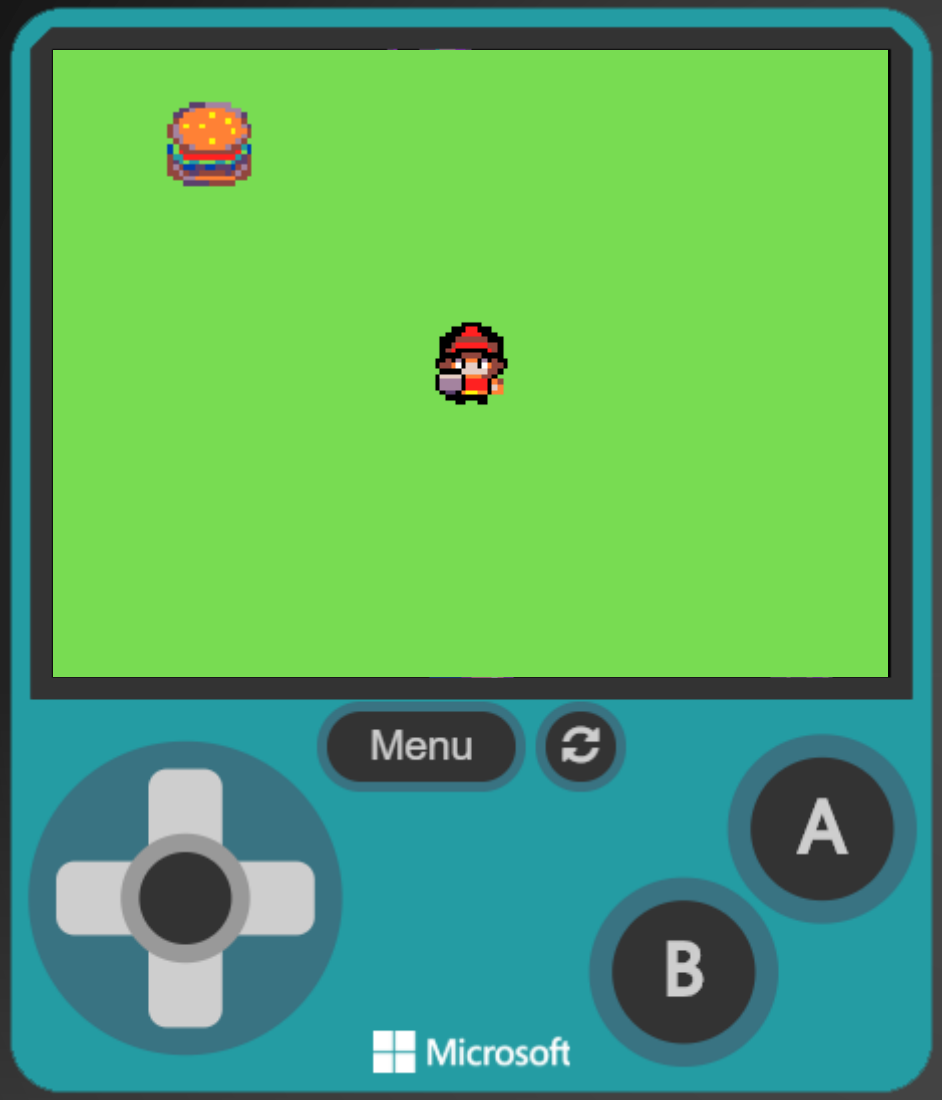
EXAMPLES:

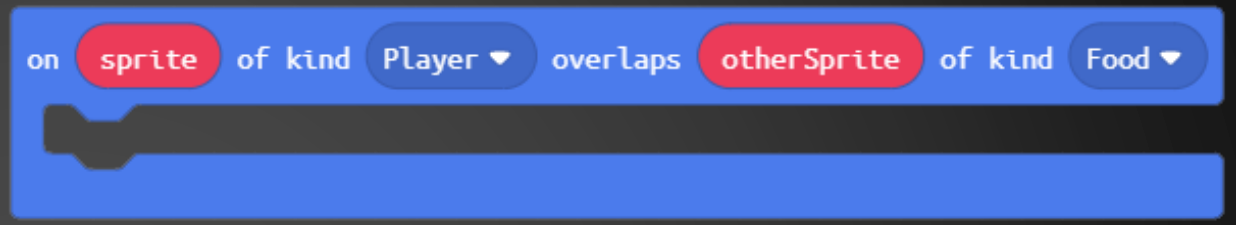




Grab the  Event block

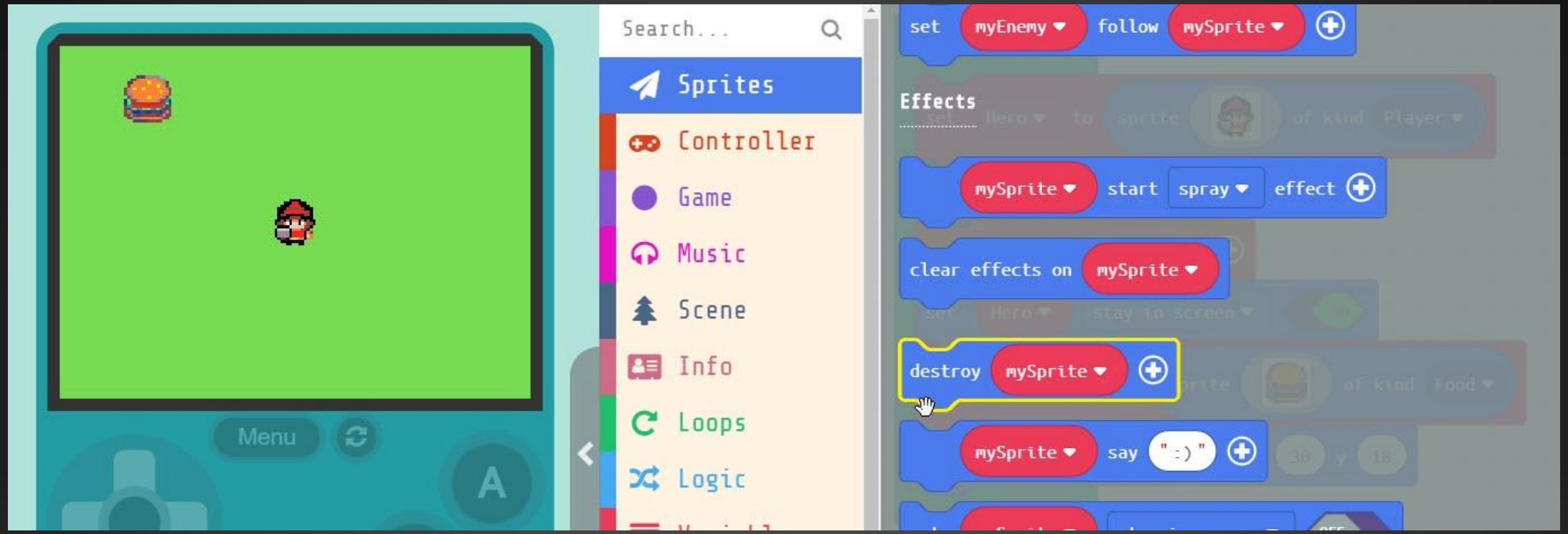
drag it into workspace.

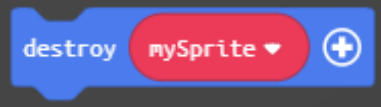


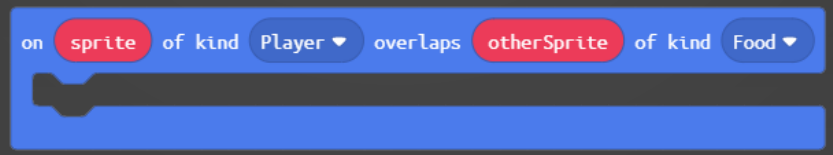


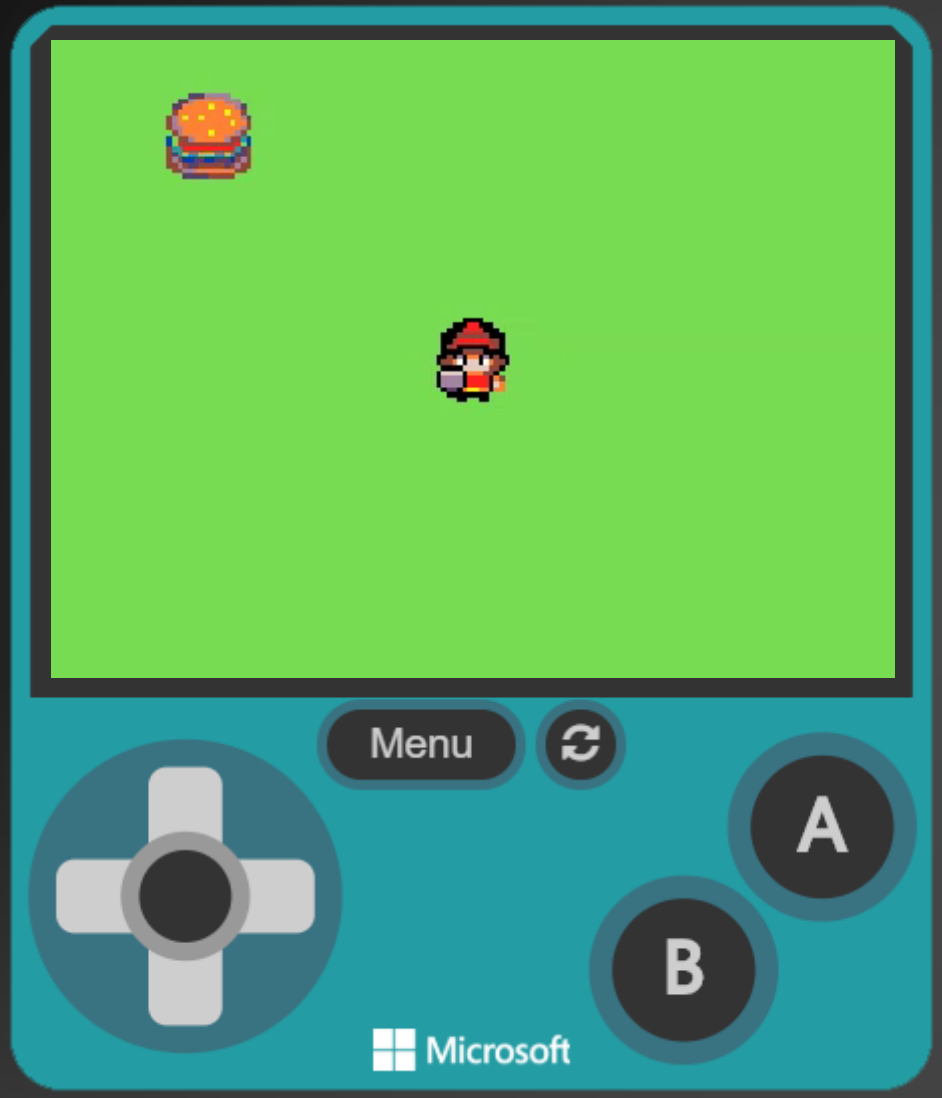
Now let's change the parameters inside our 'overlap' block.

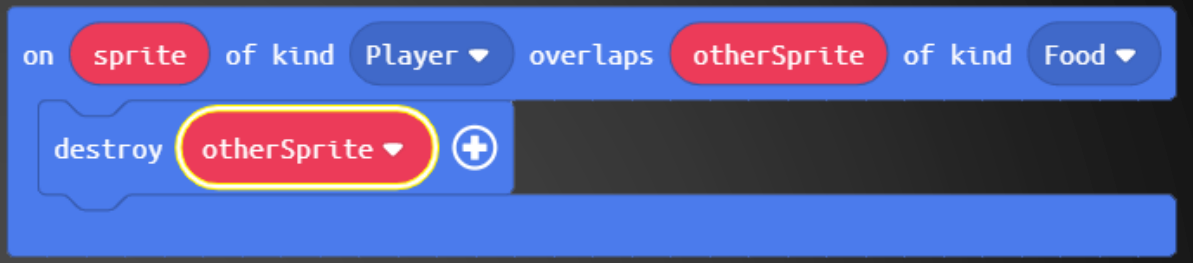
We can leave the first kind to 'Player' but change the last kind to 'Food'



Grab the  block.

Put inside our  Event block.

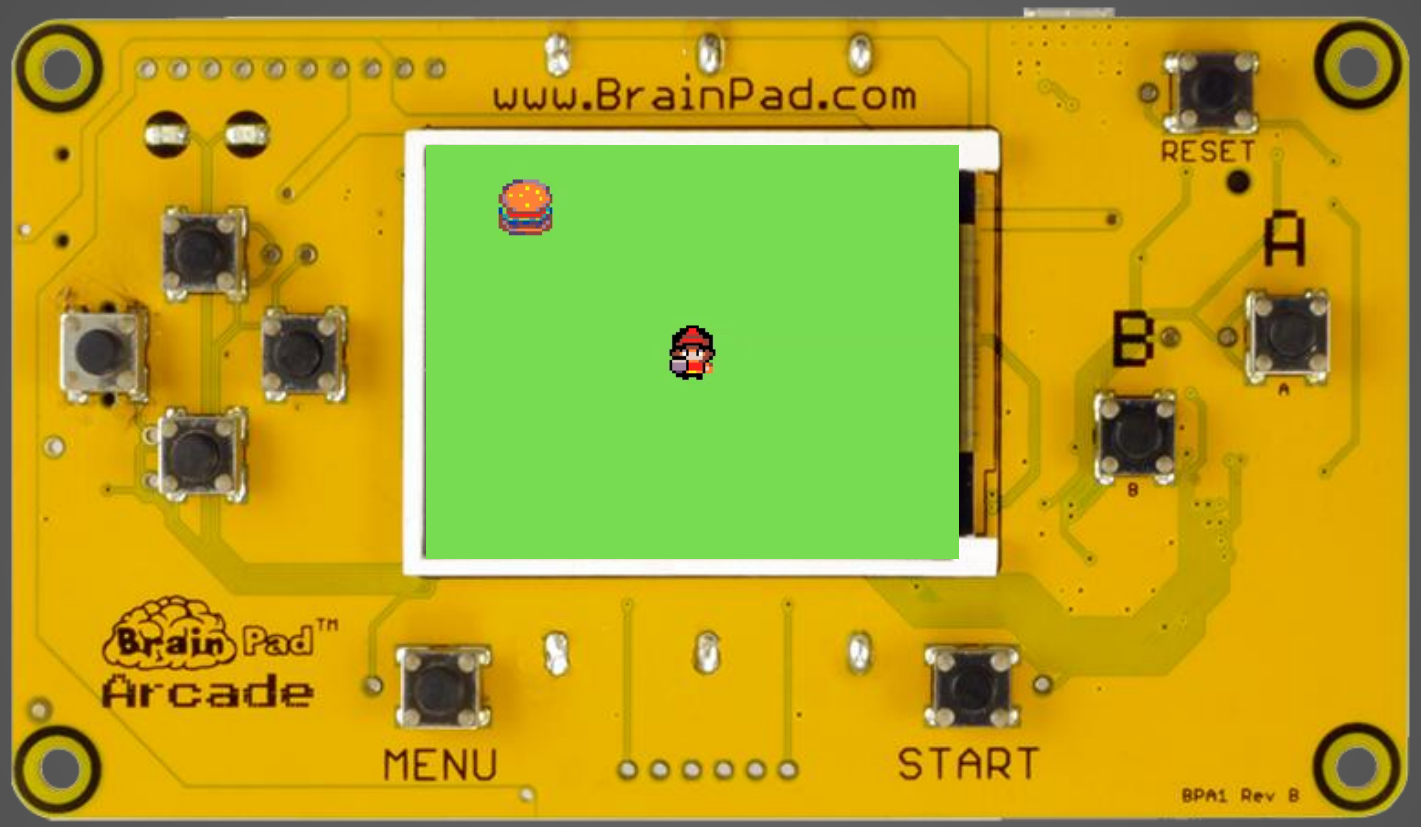




We need to create a 'NEW' variable called 'otherSprite'

This ensures that every time our 'Hero' overlaps the 'otherSprite' that is of kind 'Food' we eat it.

Hardware Break



Now let's load what we have on to the BrainPad.

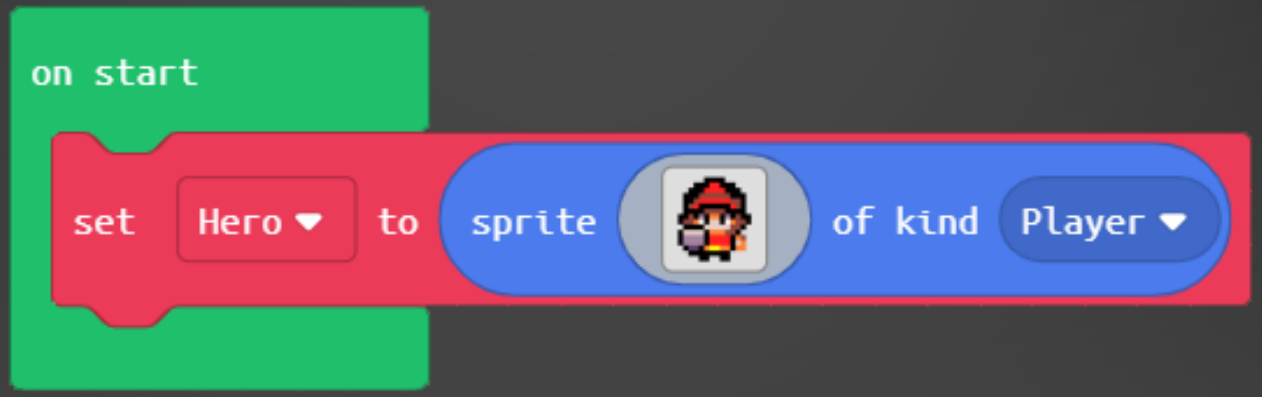
EXTRA CREDIT

Code to Blocks:

JavaScript:

```
let Hero = sprites.create(img` ···
`, SpriteKind.Player)
```

Block:



Code to Blocks:

JavaScript:

```
controller.moveSprite(Hero)
```

Block:

Code to Blocks:

JavaScript:

```
sprites.onOverlap(SpriteKind.Player, SpriteKind.Food, function (sprite, otherSprite) {
    otherSprite.destroy()
})
```

Block: