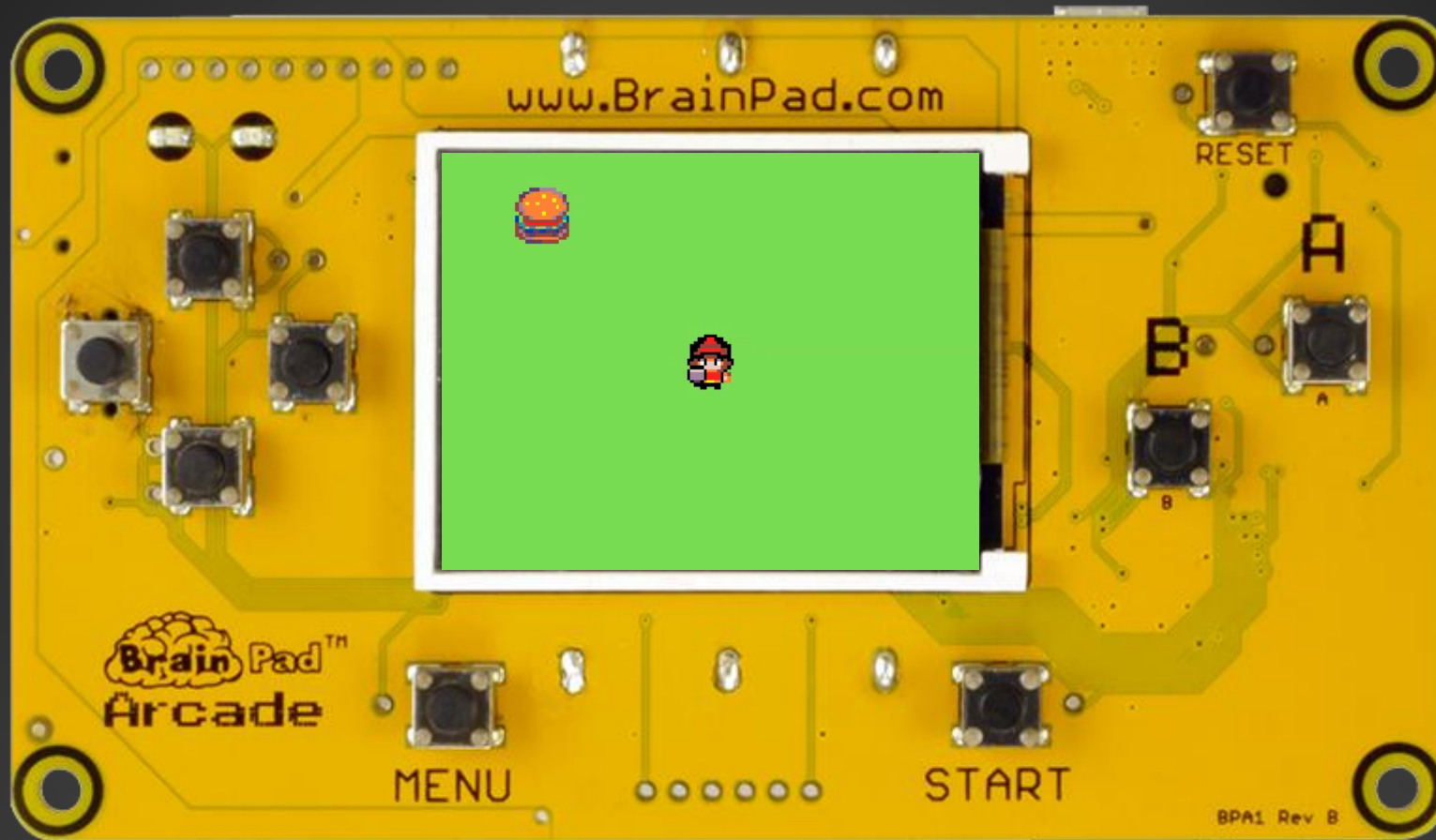


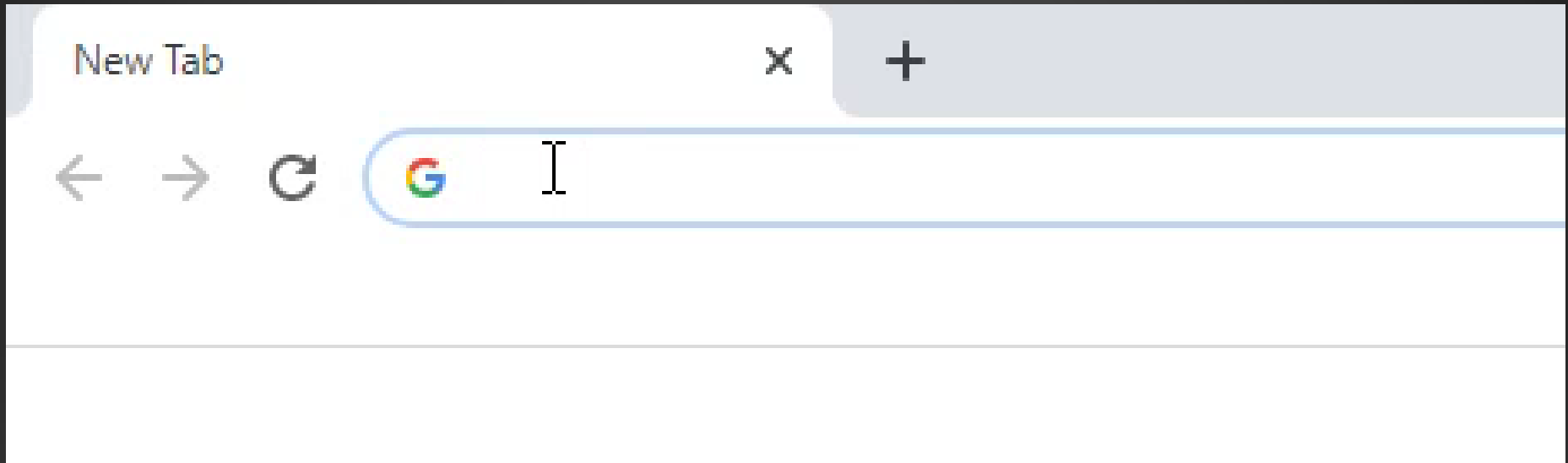


## 2-D ADVENTURE – EPISODE 01



Let's create a 2-D Adventure game.

# Open a web browser and navigate to...




[arcade.makecode.com](https://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

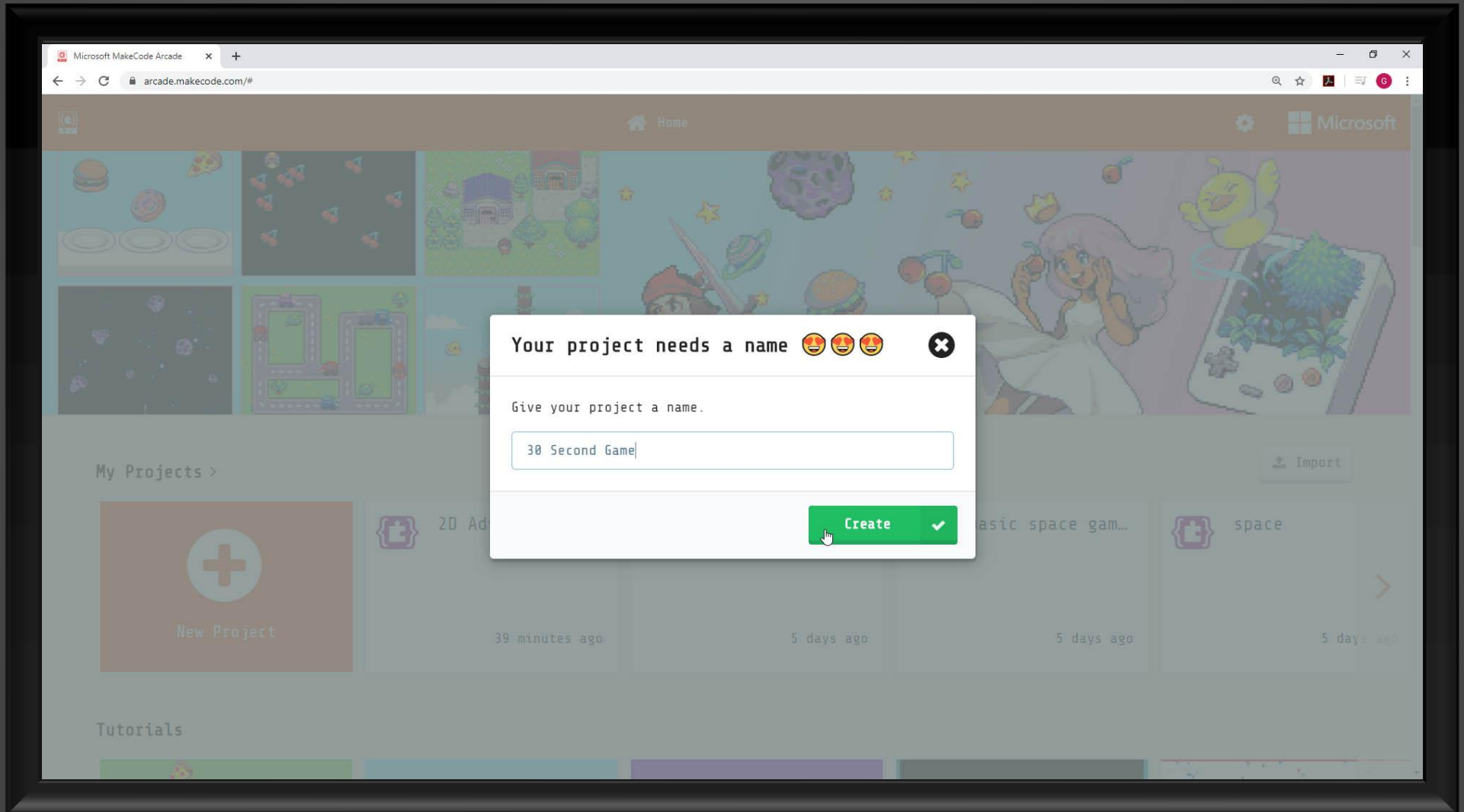
jumpy platformer

21 hours ago

Chi

>

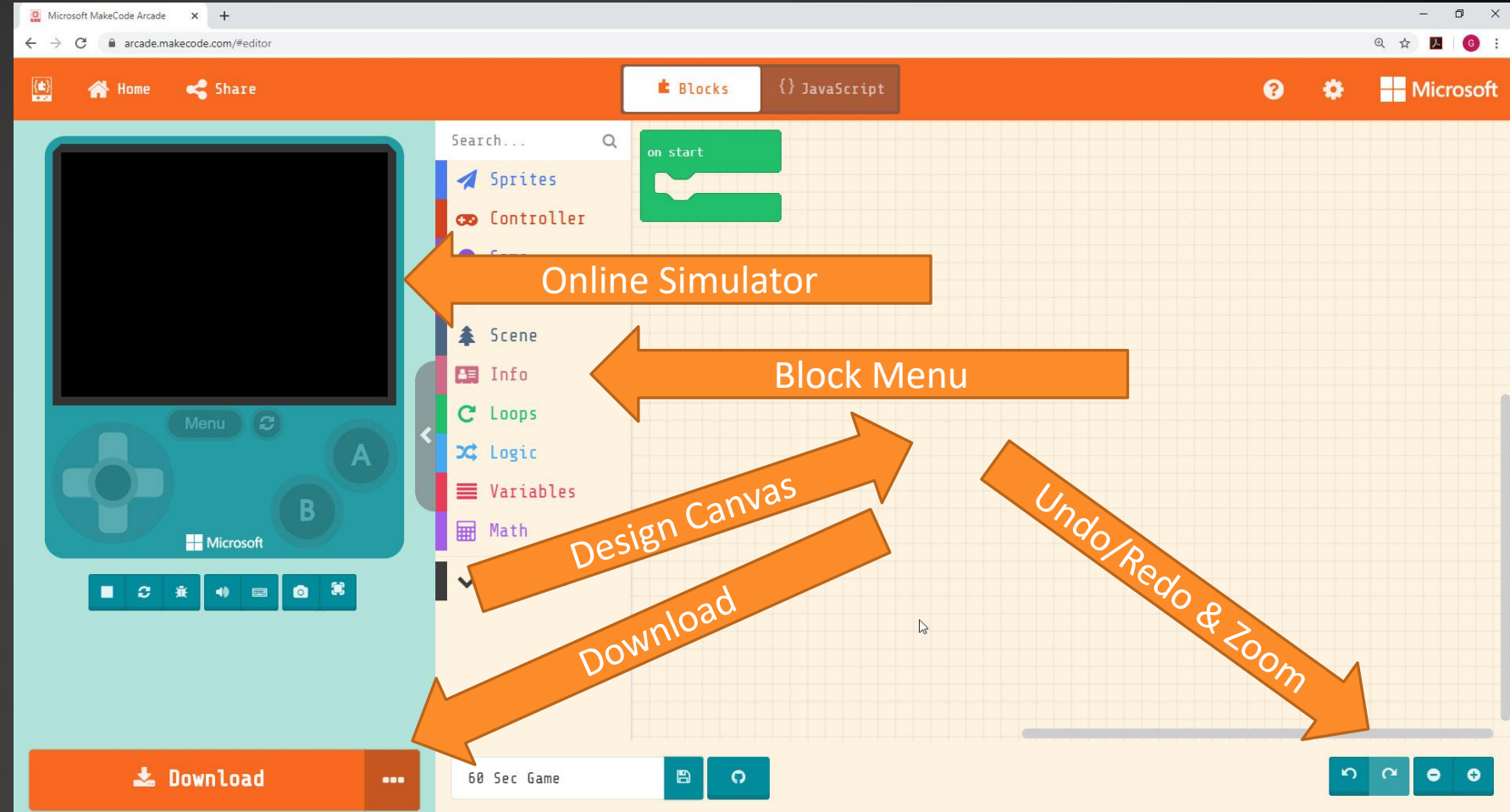




# DESIGN SURFACE

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

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





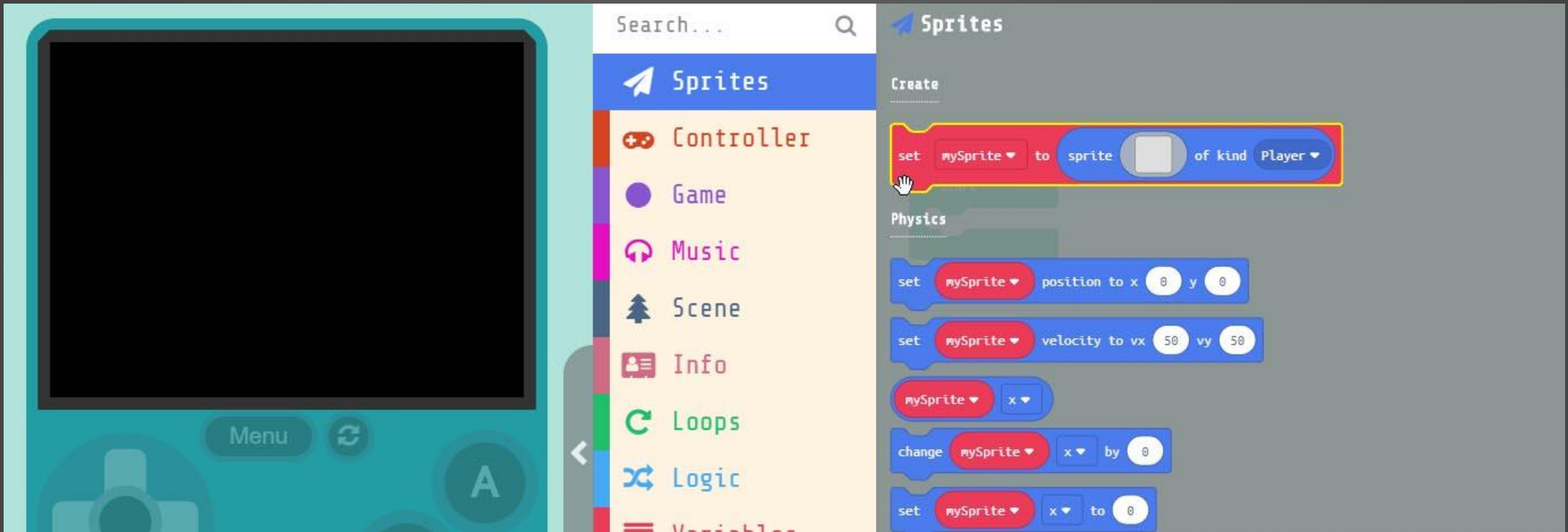
# Computer Term:

## SPRITE

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

EXAMPLE:



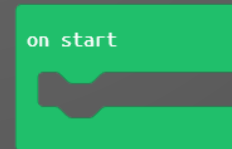


Grab the



block

and drag it into the



block



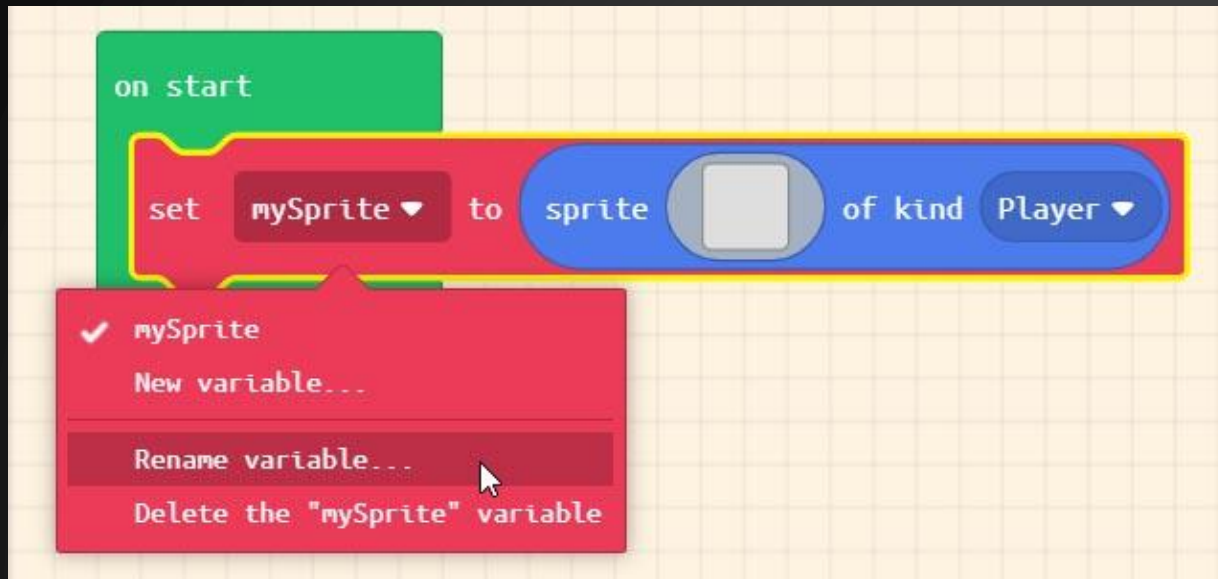


# Computer Term:

## 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.

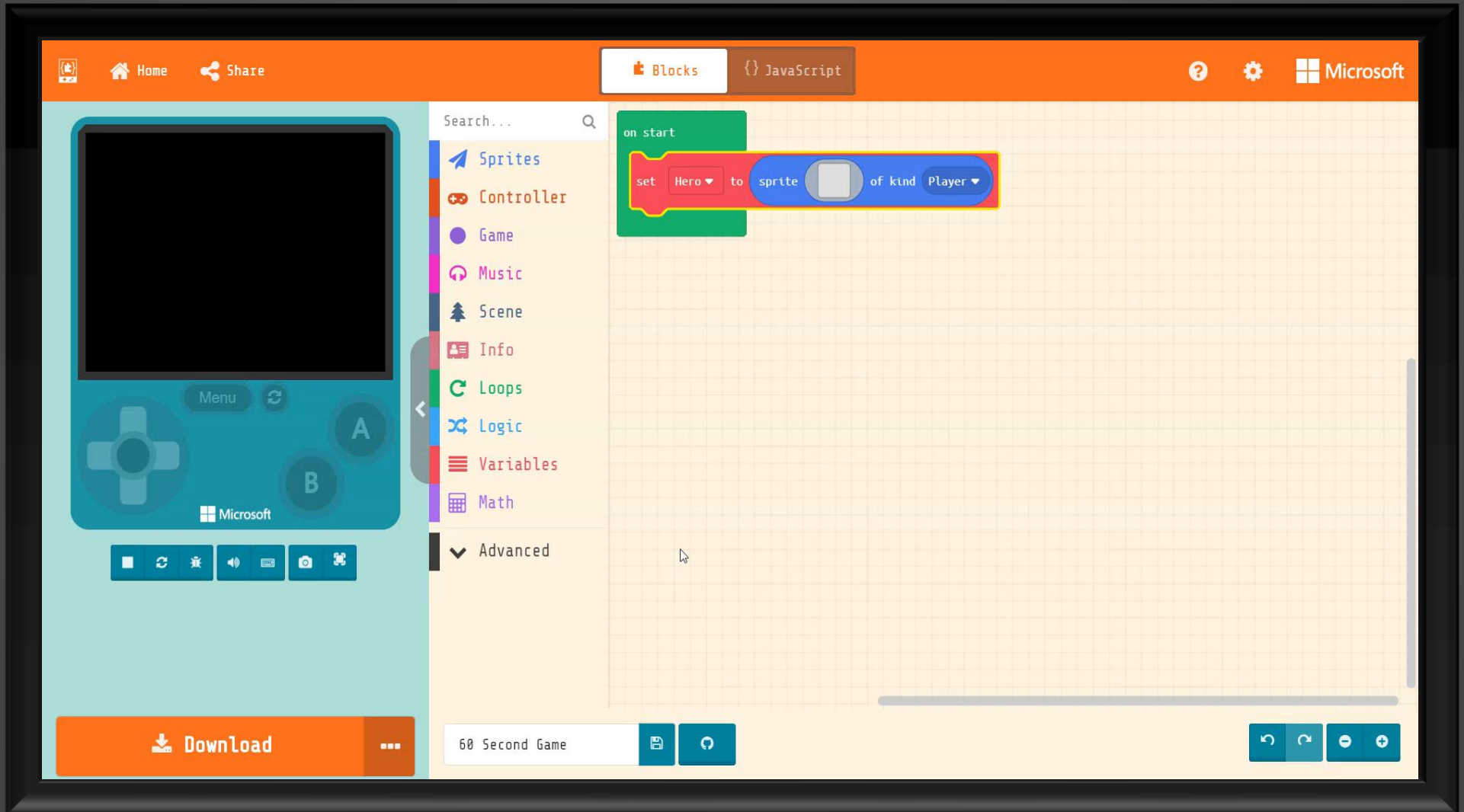
EXAMPLE: `score=score + 1`

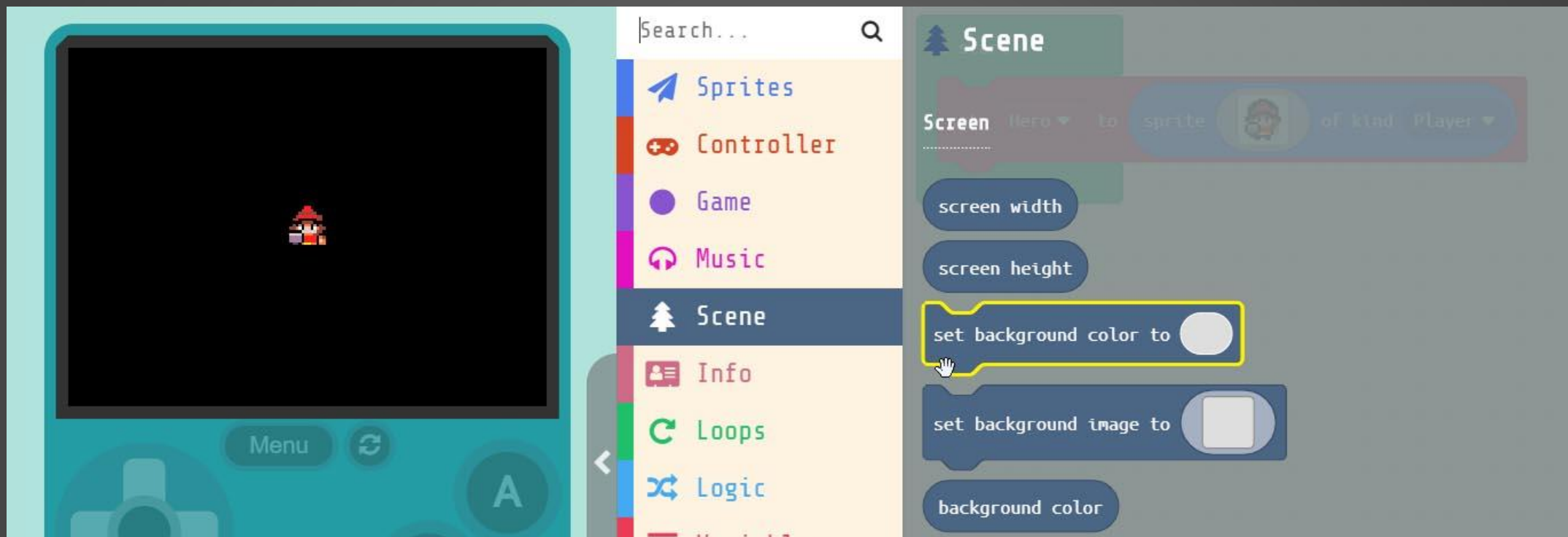


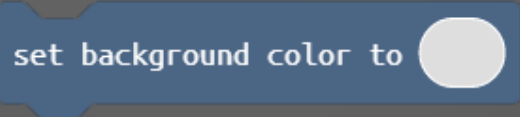

Naming our first 'variable'

Rename 'mySprite'  
to 'Hero'





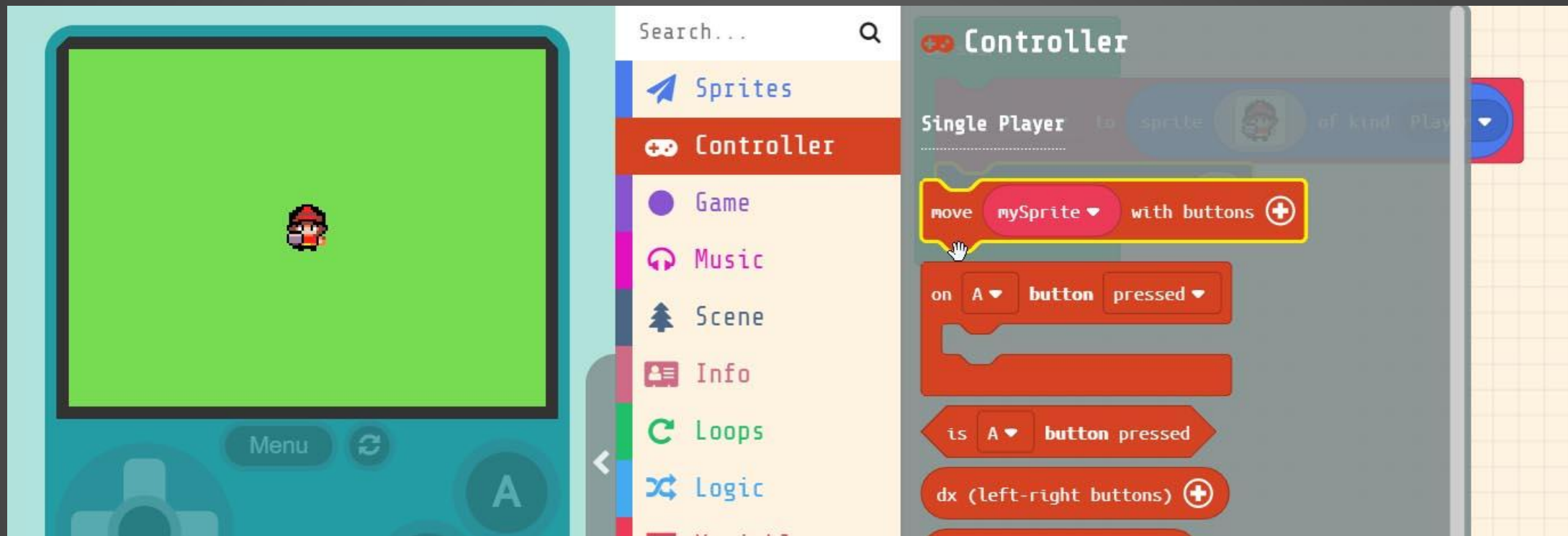


Grab the  Block  
and drag it into the  block just below our 'Hero'



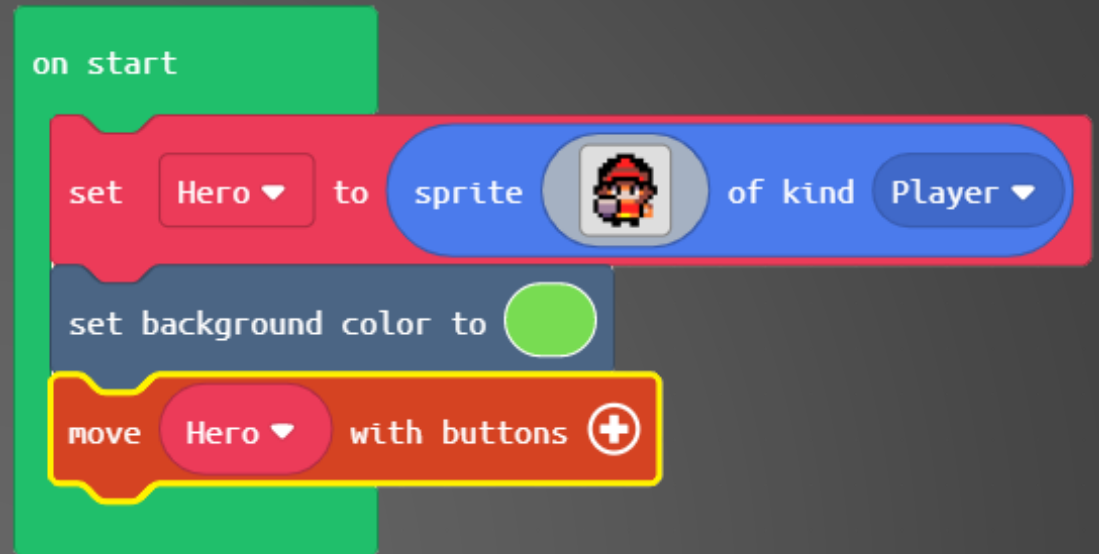
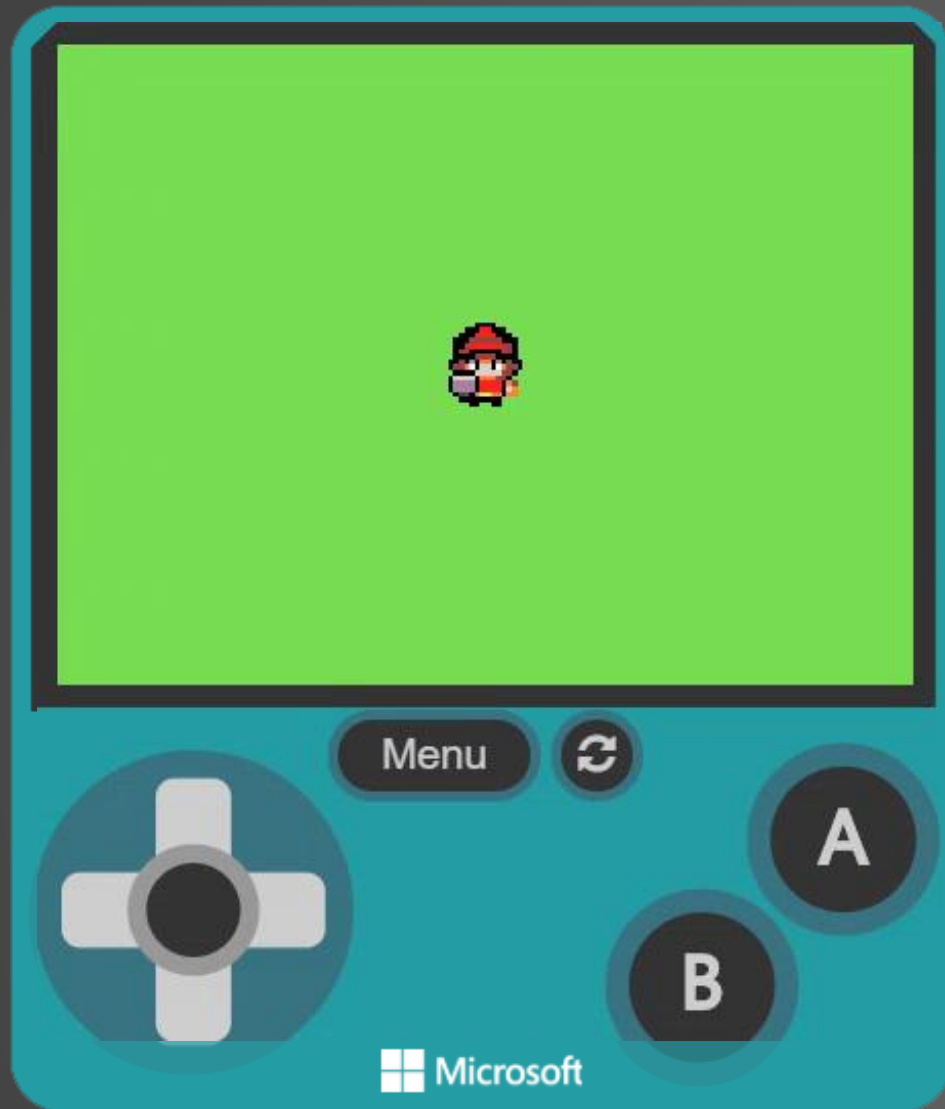


Click inside the GREY circle  
and select the color GREEN



Grab the  block

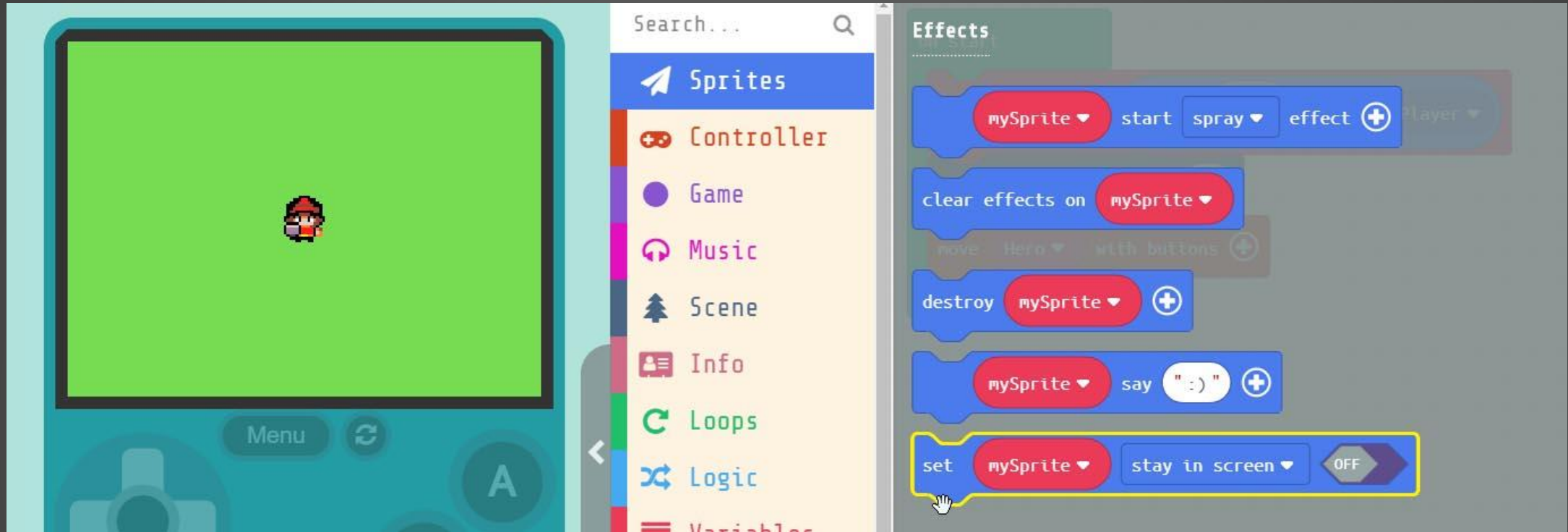
Drag it into the  block just below the other blocks

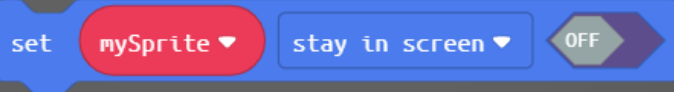



Change the name to 'Hero'

Now we can move our Sprite  
around the screen

You'll notice the 'Hero' leaves  
the screen

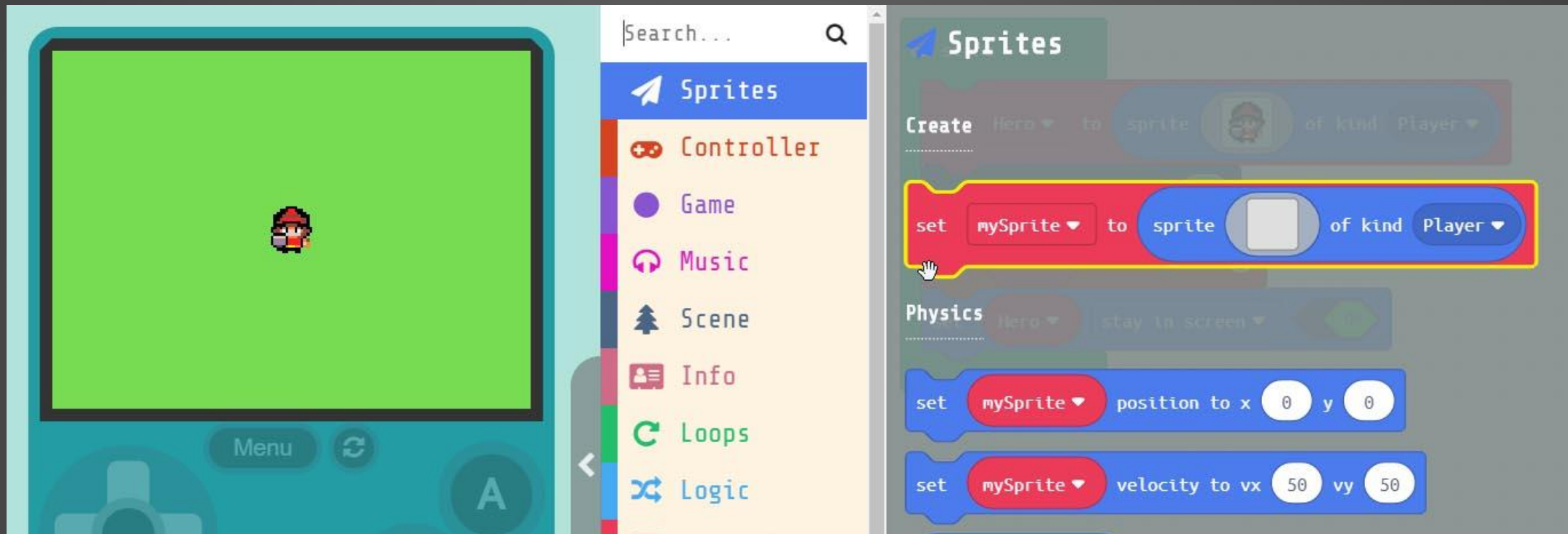


Grab the  Block  
drag it into the  block just below the other blocks





Change the name to 'Hero'  
and set the block to 'ON'  
Now our 'Hero' stays on screen



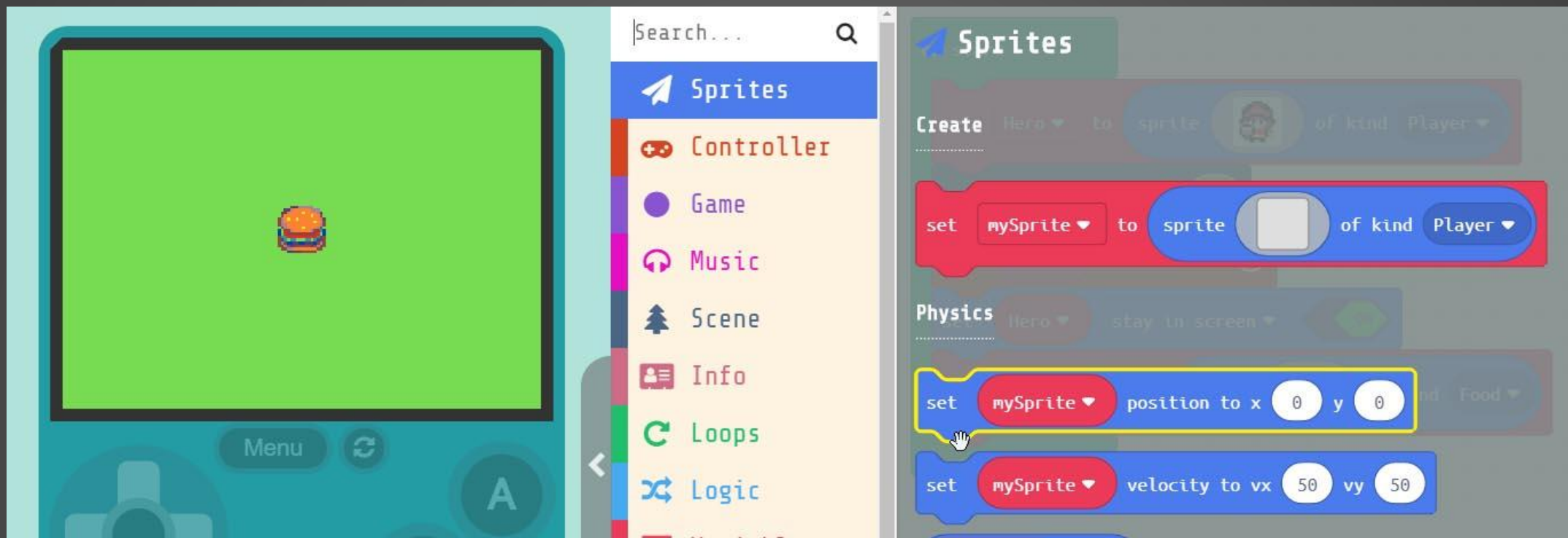
Grab the  Block

drag it into the  block just below the other blocks



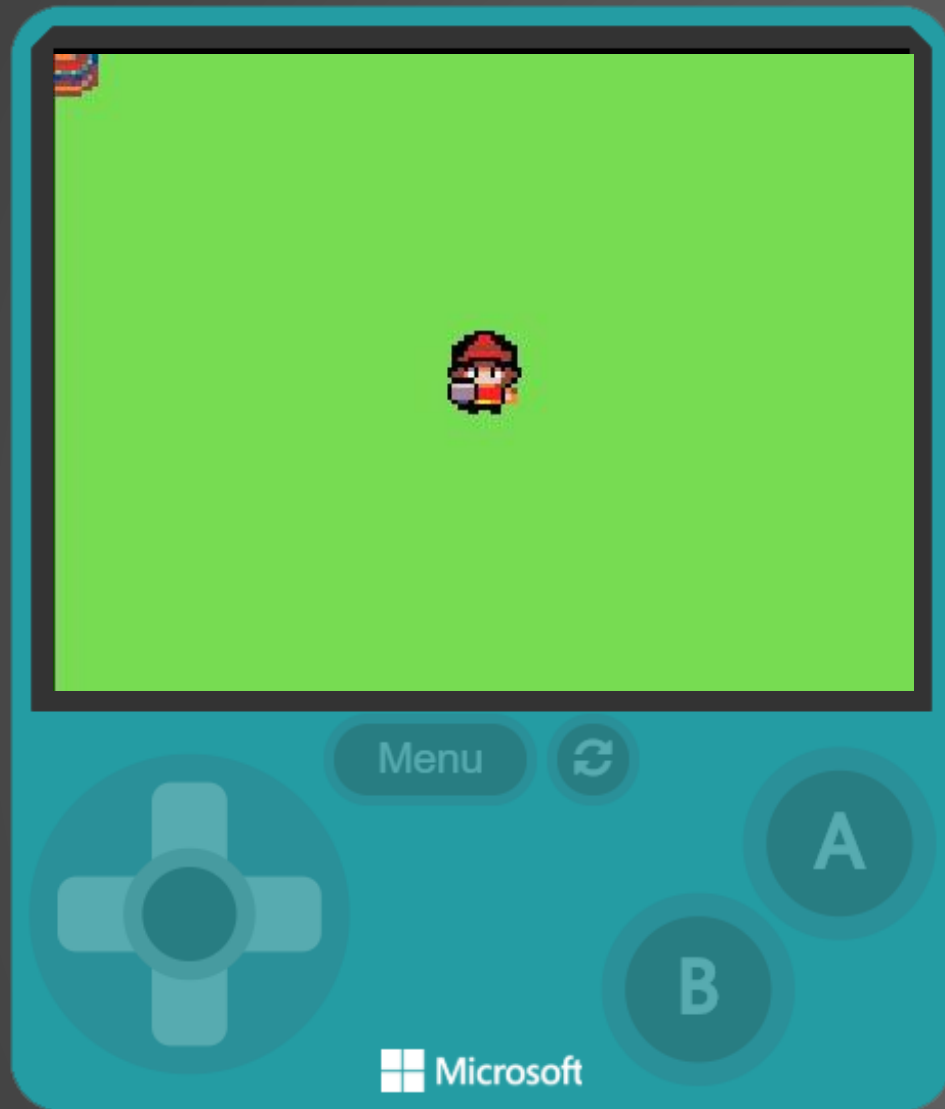
Change the name to 'Hamburger'  
change the 'kind' to 'Food'

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

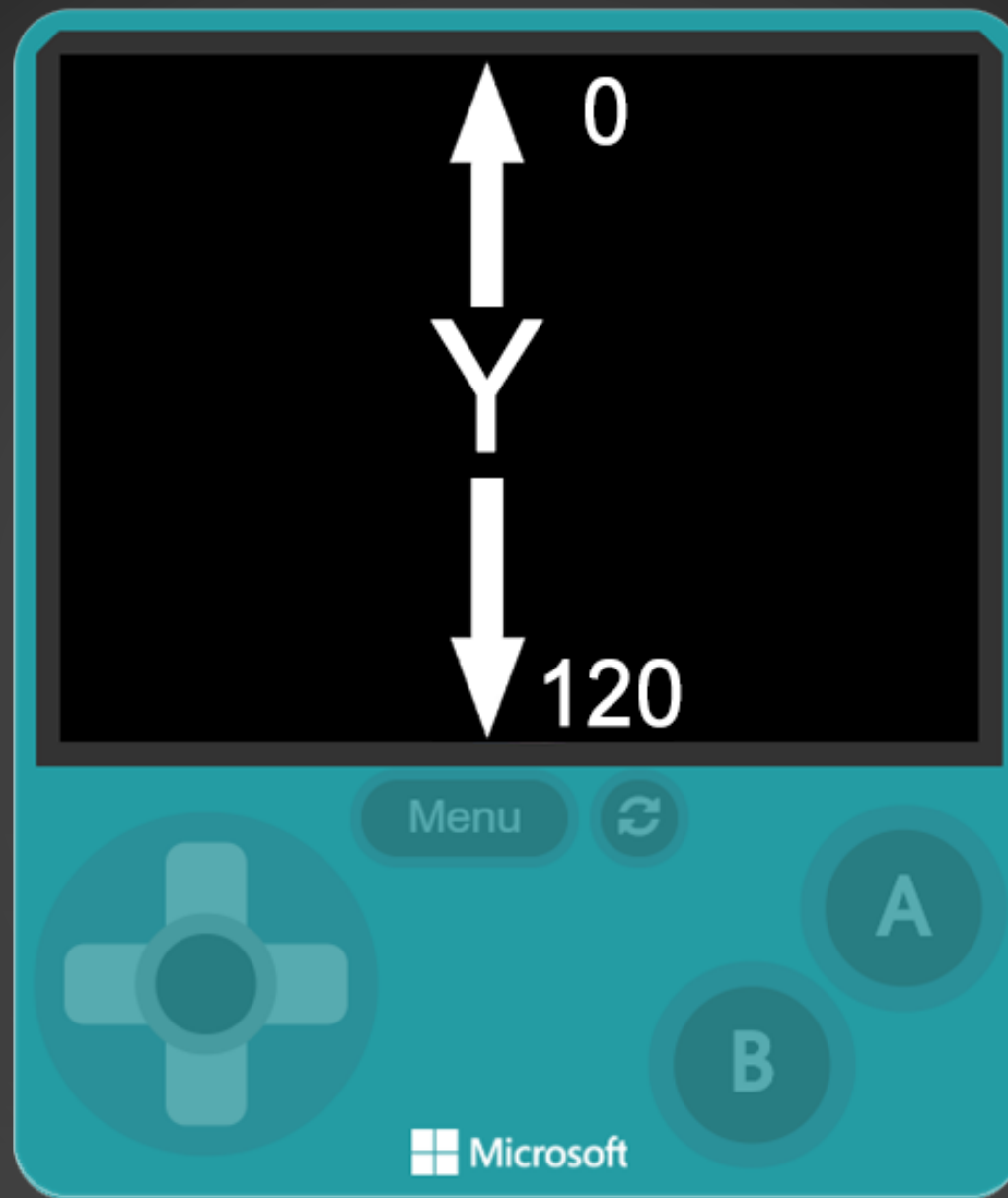




Change the name to 'Hamburger'  
change the 'kind' to 'Food'

By default our Hamburger Sprite  
now appears in the top corner

The x & y  
parameters  
represents  
pixels on  
the screen





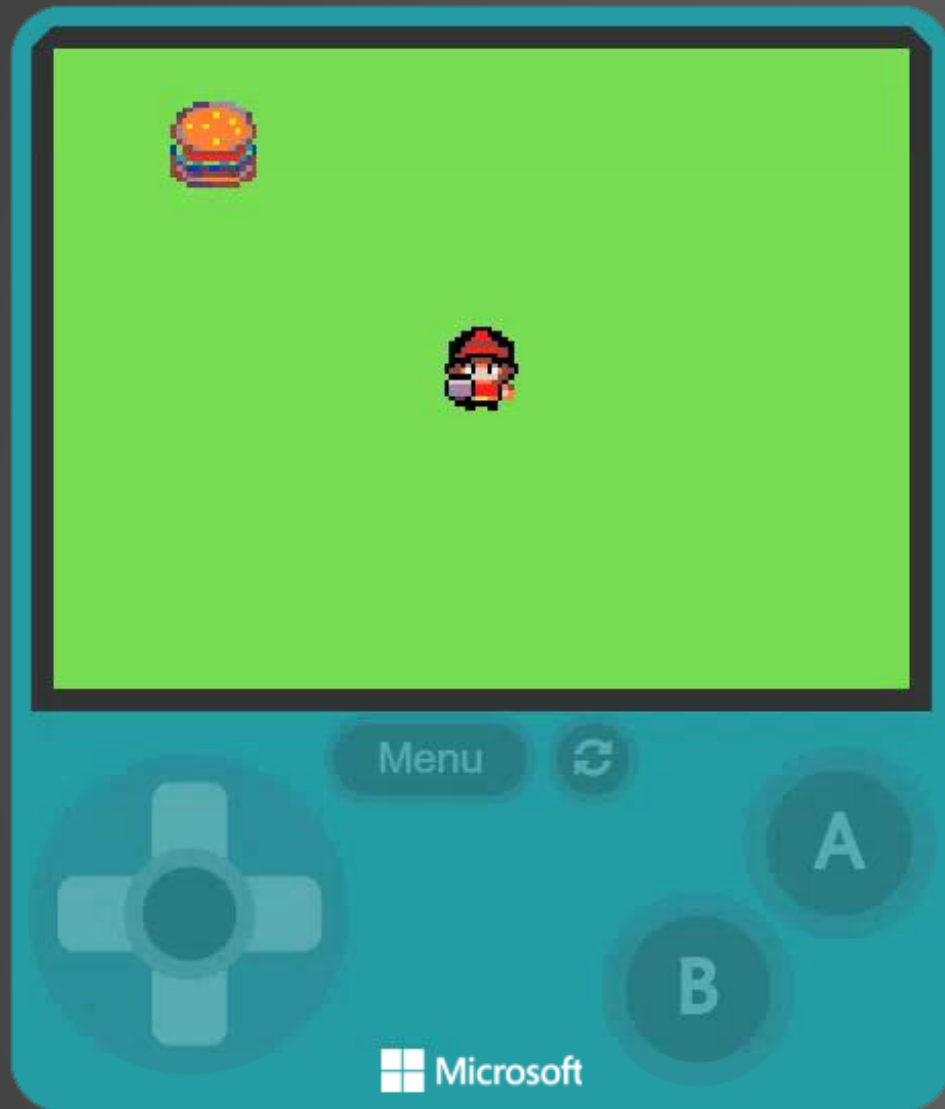
# Computer Term:

## PARAMETER

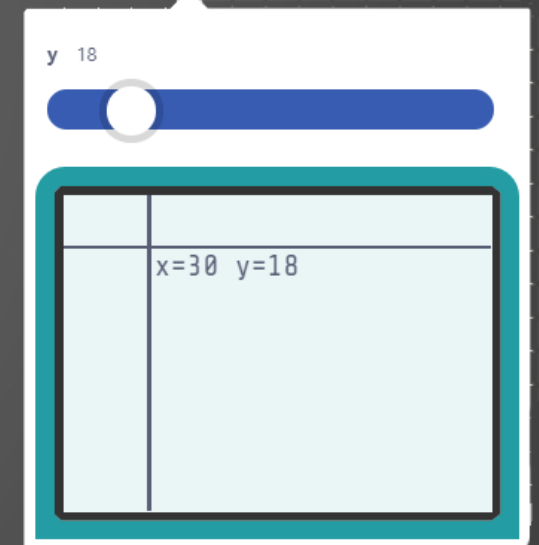
A parameter is a value that we add inside a block. This number is passed into the block. In the example block below '0' would be the parameter. Parameters can also be referred to as 'ARGUMENTS'

EXAMPLE:





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





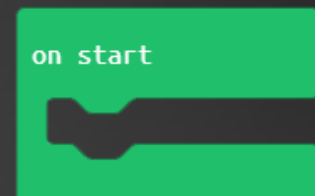
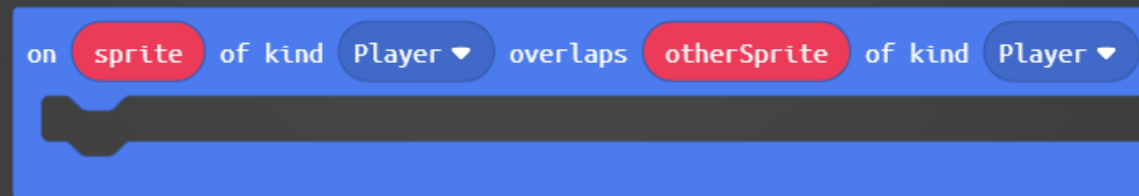


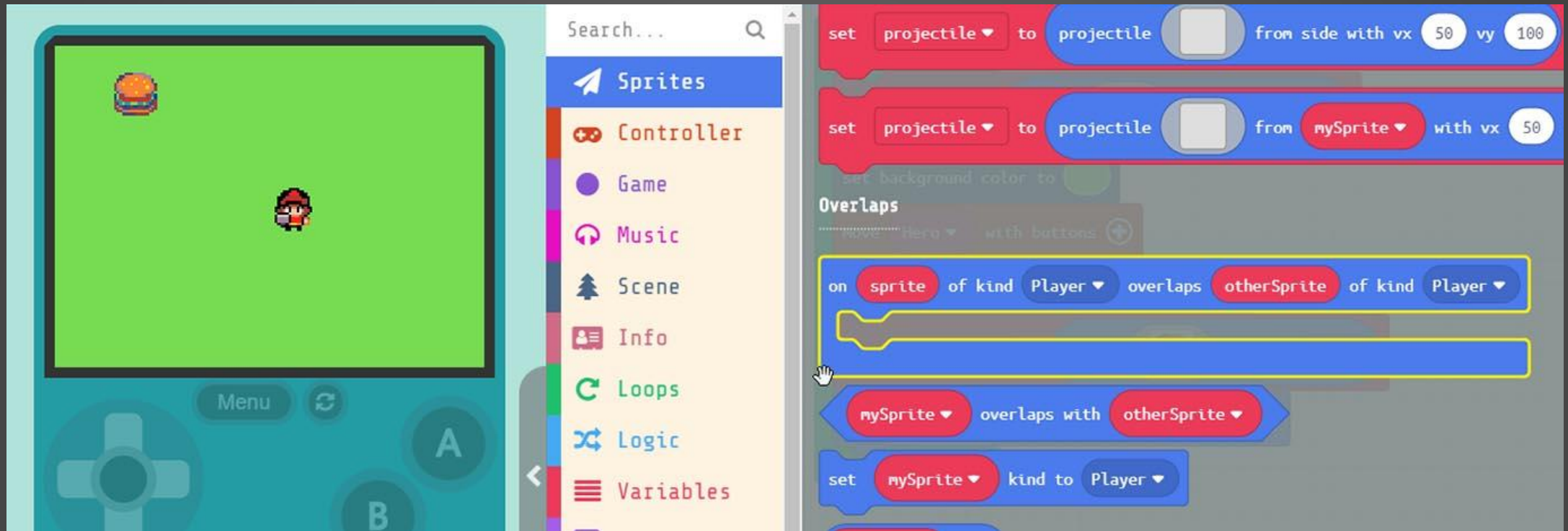
# Computer Term:

## EVENT

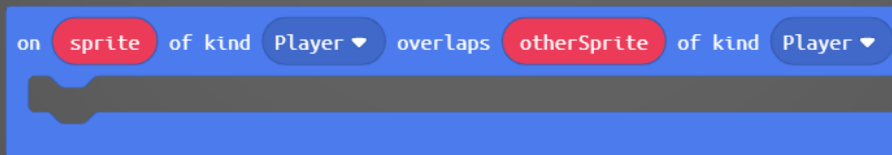
An event is an action or occurrence detected by a program. Events can be a user action like clicking a button or when Sprites overlap.

### EXAMPLES:



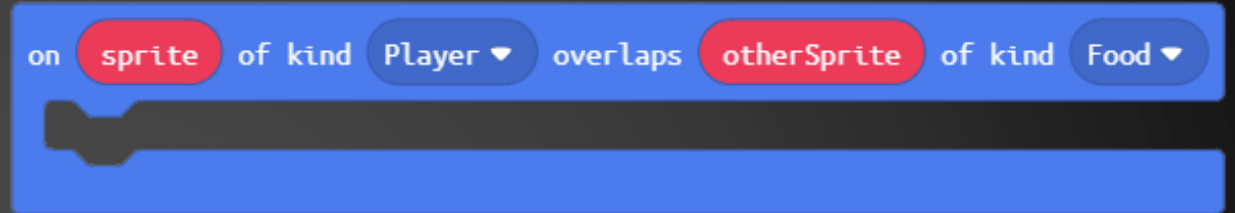
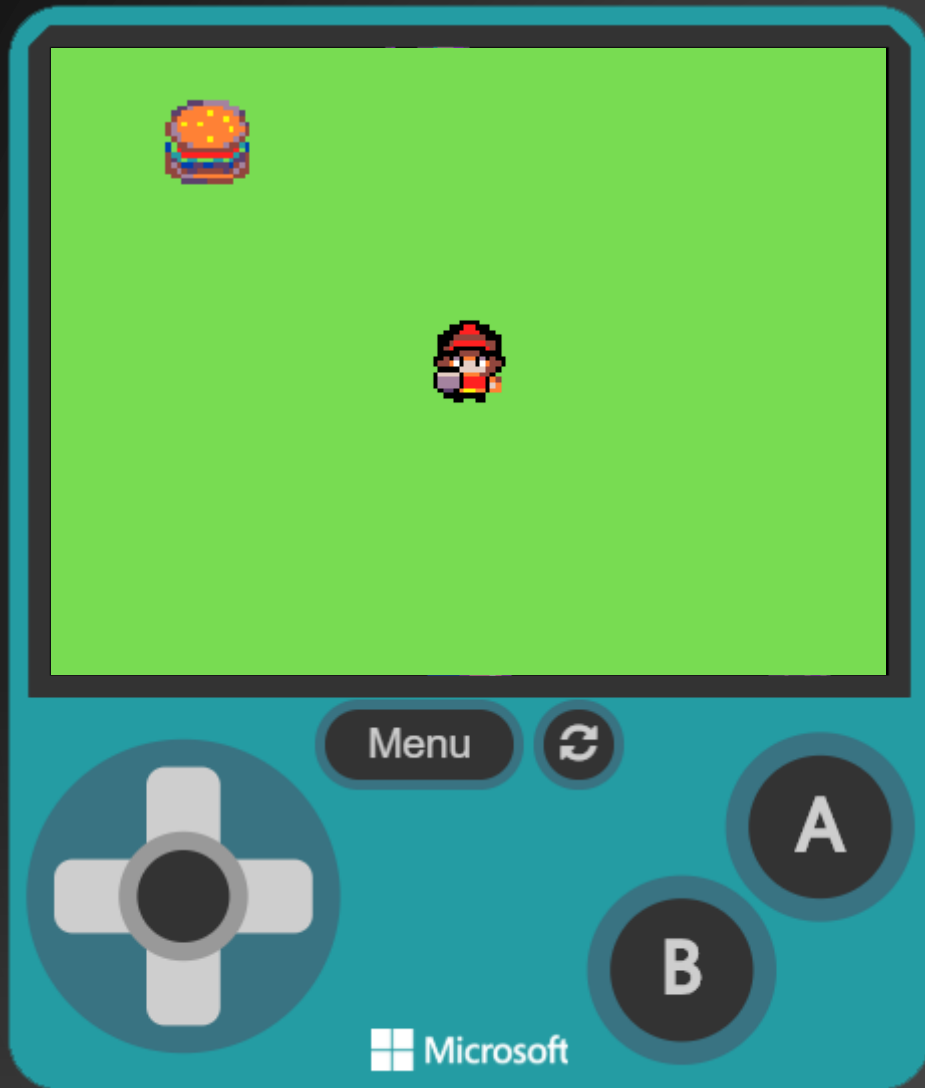


Grab the



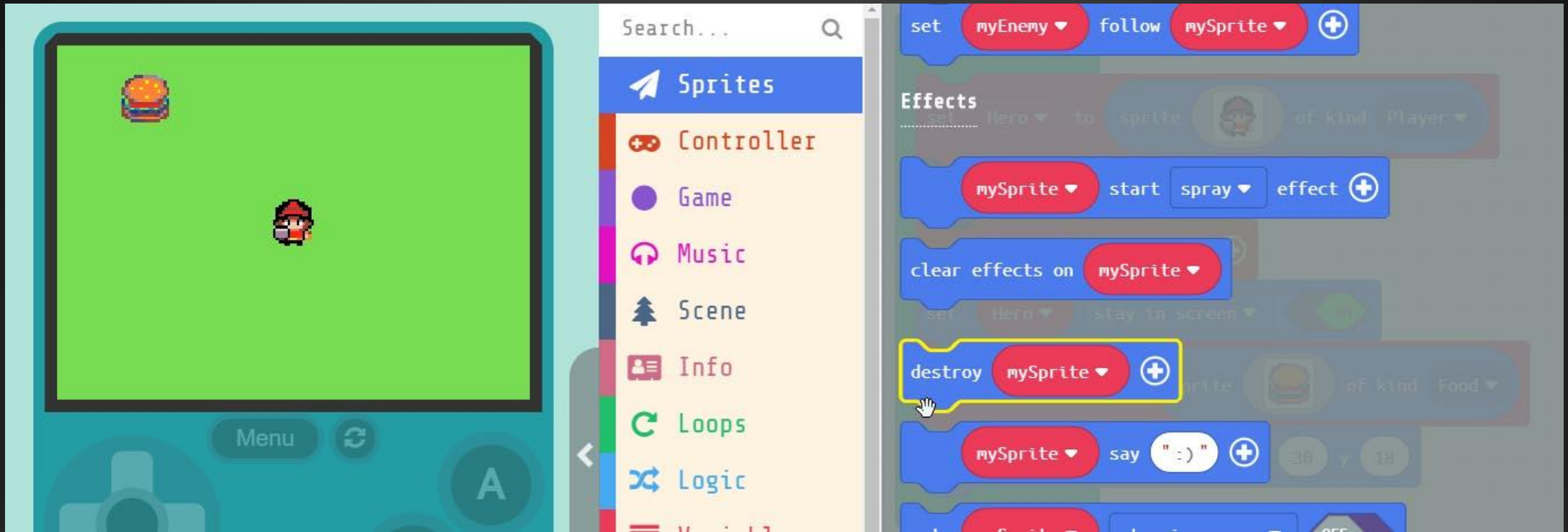
Event block

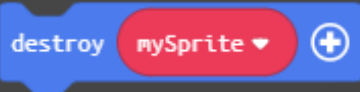
drag it into workspace.



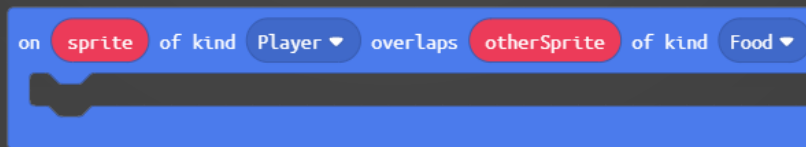
Now let's change the parameters inside our 'overlap' block.

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



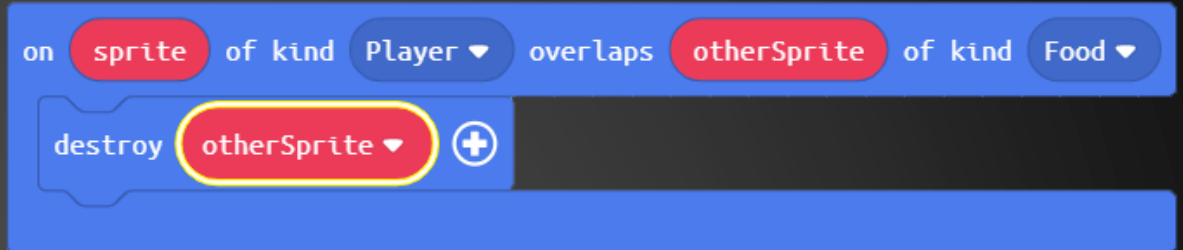
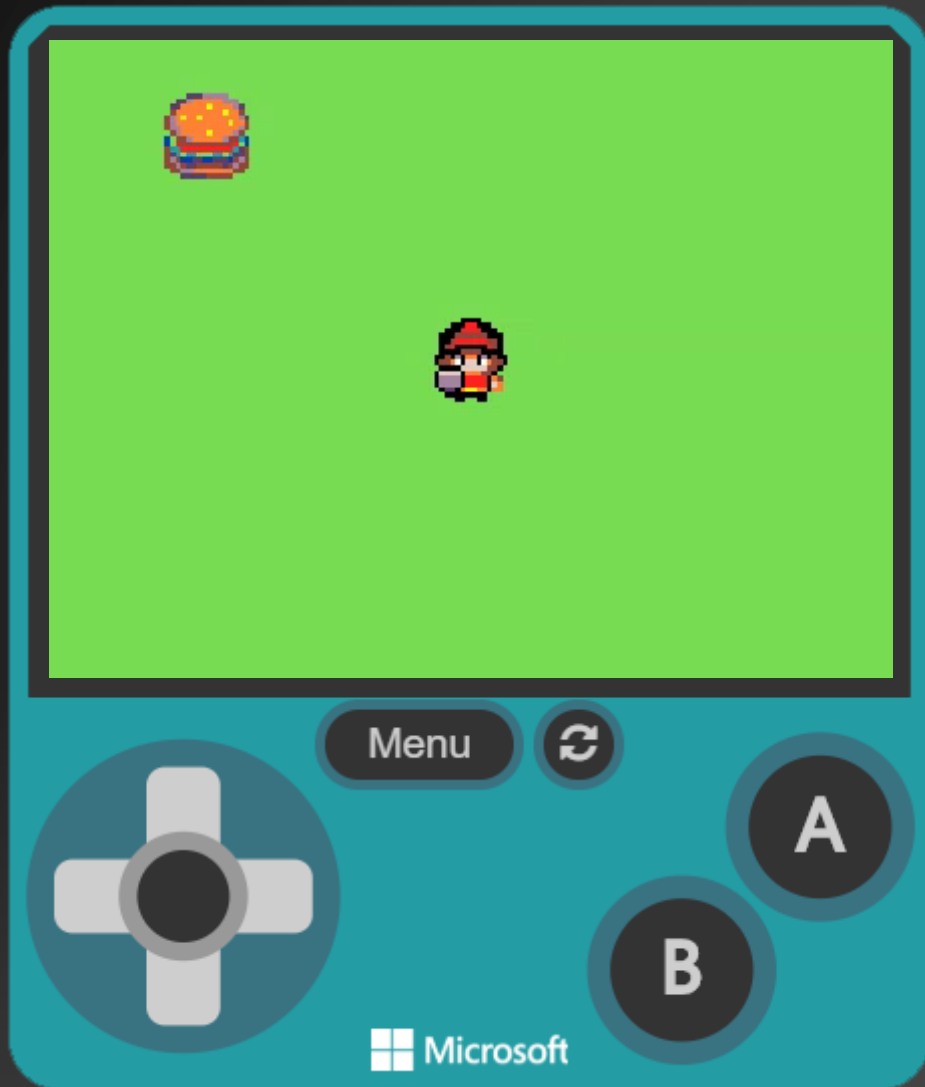
Grab the  block.

Put inside our



Event block.

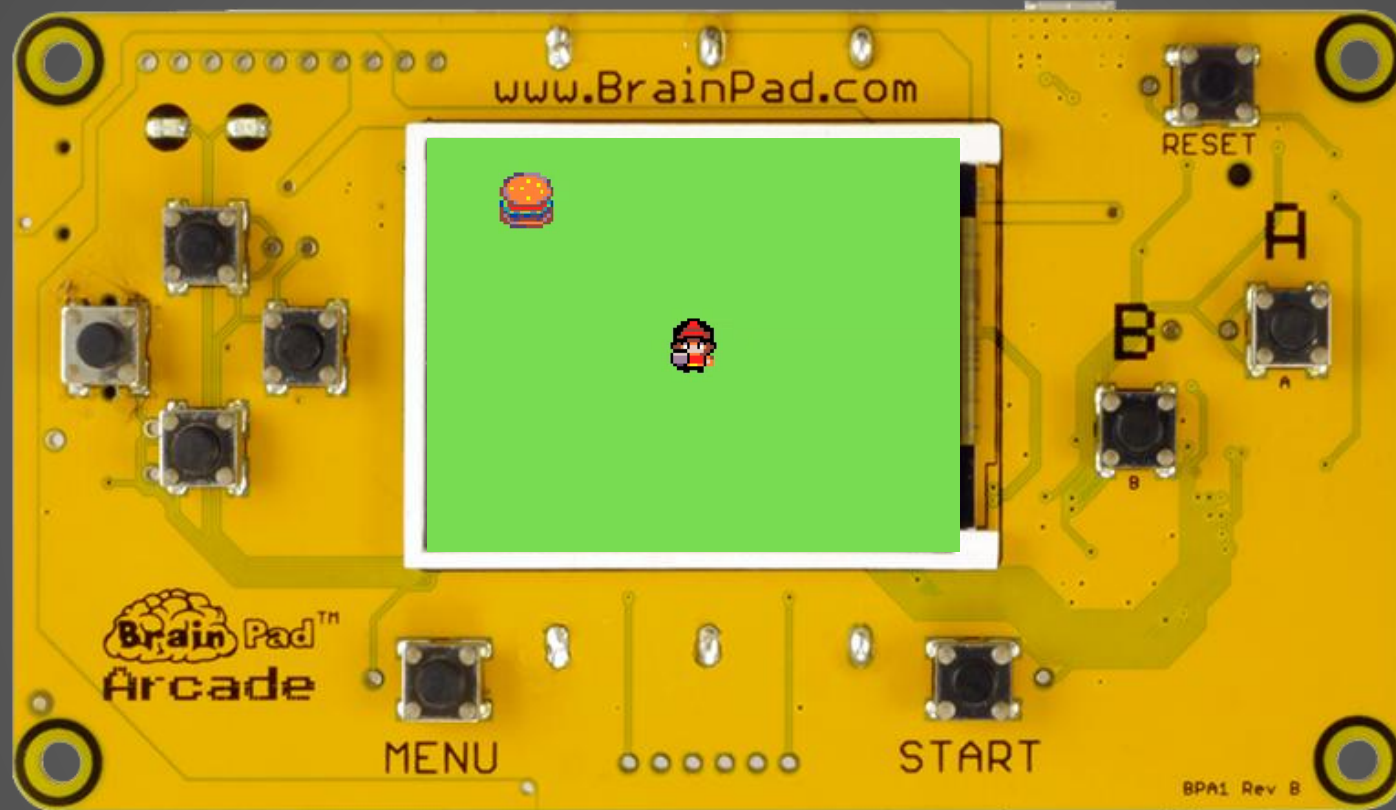




We need to create a 'NEW' variable called 'otherSprite'

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:

