

Catch – Blocks – Microsoft Arcade

The following instructions will take you through the steps of creating a game where you control a sprite trying to catch as many falling fruits as possible whilst avoiding the pizza.

Each time a fruit is caught the score is increased.

Each time a fruit is dropped a life is lost.

Each time a pizza is caught a life is lost.

A new life is awarded for every 10 fruits caught.

The game ends when either the players lives are all lost.



Controls

To control the player, use the left and right keys on the console. Alternatively, it may be easier to use the keyboard mappings for the keys as follows

Left

(← or A)

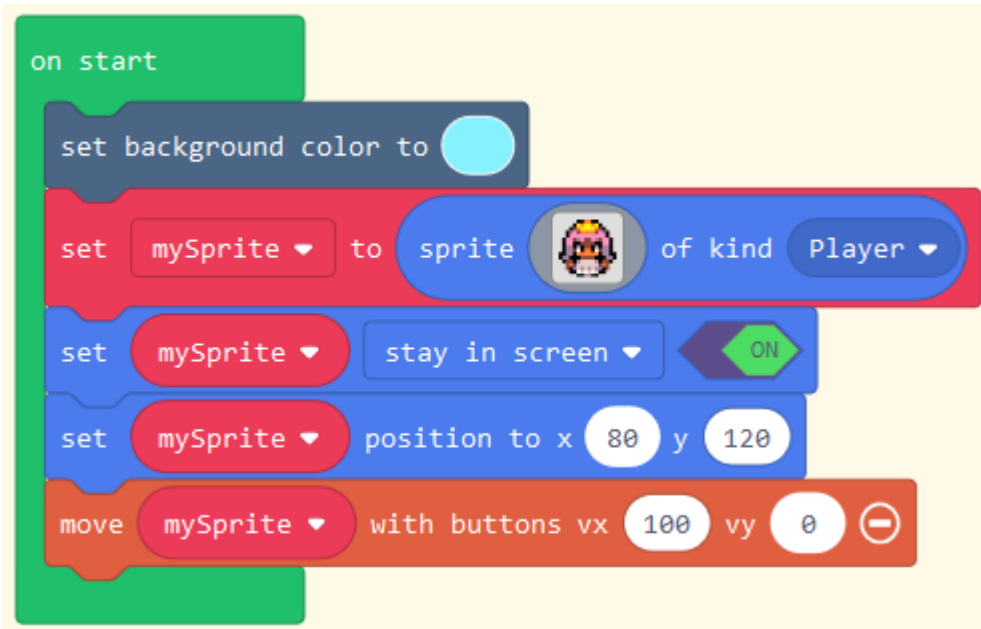
Right

(→ or D)

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Step 1 – Create the player sprite and move

The first step is to create a sprite and get it to move along the bottom of the screen. For the sprite, you can either draw the sprite yourself or choose a character from the gallery. Pick any sprite you like the look of.



Experiment

Run you game and move the sprite across the bottom of the screen.

Do the up and down keys make the sprite go up and down the screen? What block controls this behaviour?

Step 2 – Moving left and right

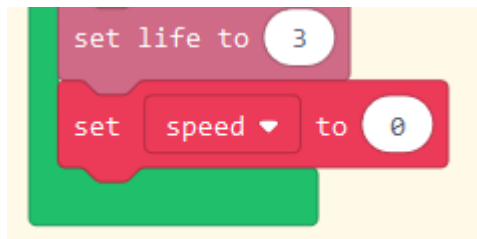
Add the following code to your game to change the look of the sprite when it is moving left or right. Try out your new code to see what it looks like.



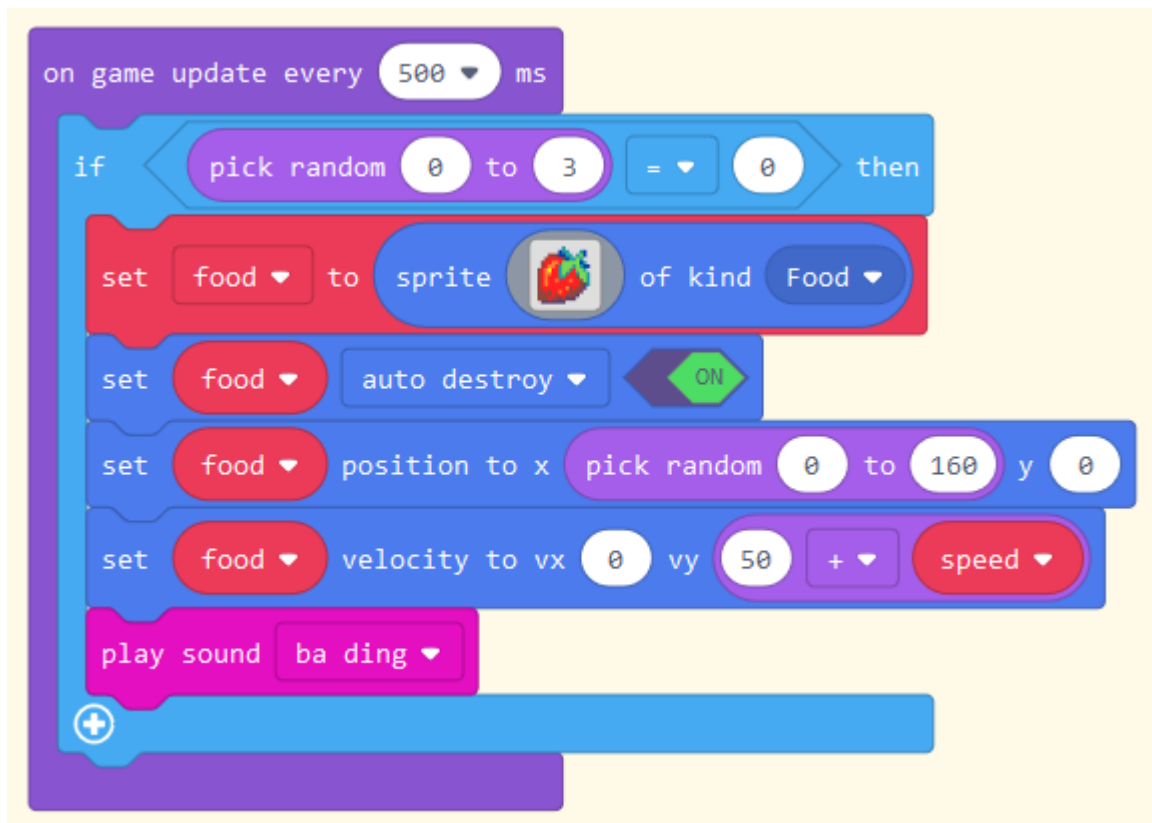
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Step 3 – Adding the falling food

In this step we are going to write the code to make the food that the sprite is going to catch fall from the top of the screen. We are also going to make this food fall faster and faster the longer the game goes on. The first step is to create a new variable called speed and set it's value to zero in the “on start” section of code.



The following code will make the food fall from the top of the screen. Choose whichever fruit or food you feel your character would like to eat. Try out your new program.



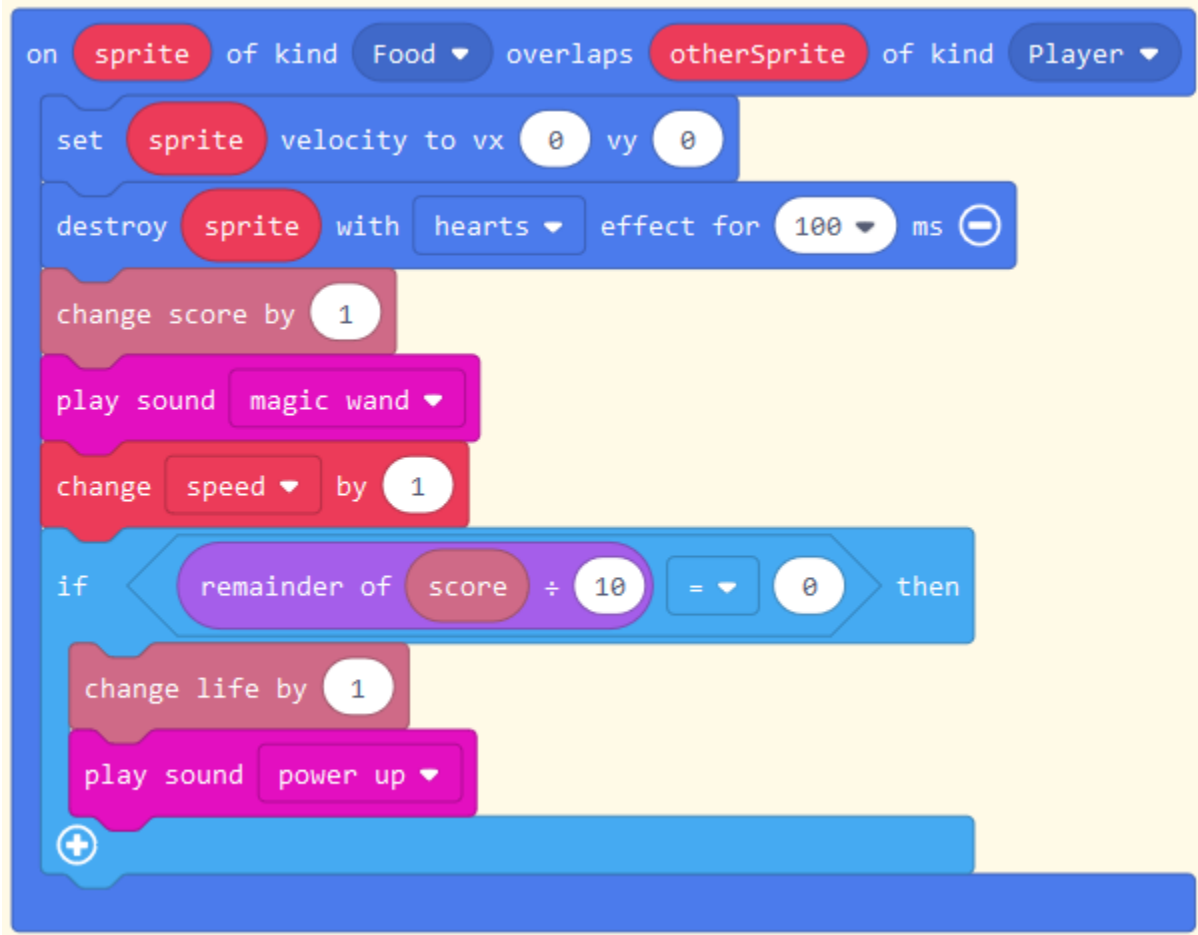
Experiment

Try different values for the velocity (vy) and see how it affects how hard the game is. Try adding in a random element between 40 and 60 to see how this affects gameplay.

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Step 4 – Catching the food

Now comes the time to catch the food. Add this new piece of code to your program. In this block there is also some code which awards the player a new life for every 10 fruits that are caught. Additionally, each time a fruit is caught, the speed of the game is increased.



Experiment

Try the different effects that are available when the fruit is caught and pick one you like.

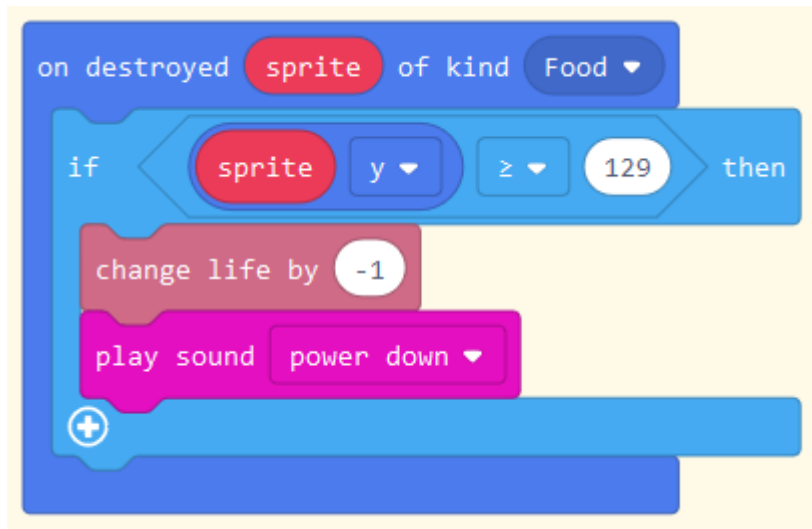
Try changing the length of time that the effects last for.

Try adjusting the amount that speed is changed by and see how it affects playability.

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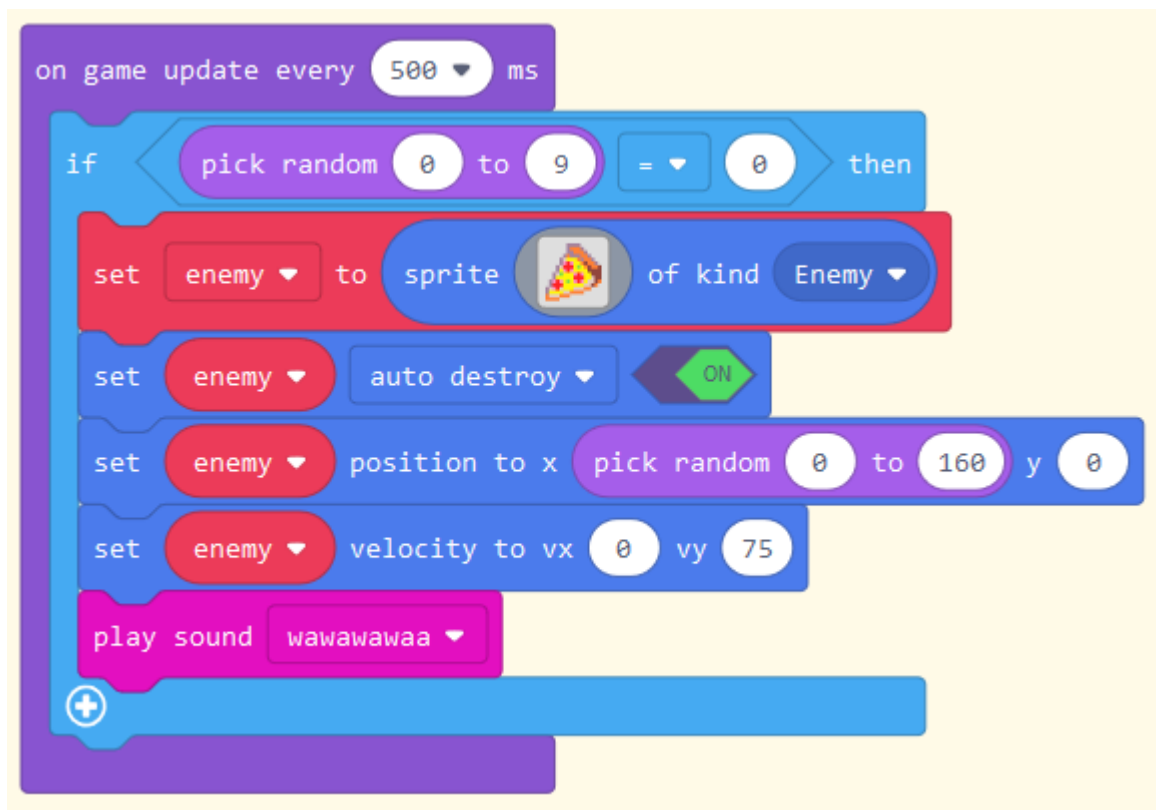
Step 5 – Dropping the food

At the moment if the sprite does not catch the food then it just drops off of the screen. Add the code below to lose a life if the food falls too far.



Step 6 – Adding the falling Pizza

To make the game more challenging it is now time to add the falling pizza. The code for this is very similar to the falling fruit but this time the speed is fixed (though certainly experiment with adding a variable element to the speed to add interest to the game).



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Step 7 – Catching the falling Pizza

Unlike the fruit where the aim is to catch it, the pizza should not be caught. Doing so causes a life to be lost. The code for this is given below.



Experiment

Try the different effects that are available when the pizza is caught and pick one you like. Try changing the length of time that the effects last for.

Extending the game

There are many ways that this game can be extended. Just a few ideas are given below.

- Add in another type of food to fall from the top of the screen that occurs much less often than the fruit or pizza. Make this special food worth 10 points.
- As the player's score reaches 30, double the amount of pizza that can fall from the top to make the game harder.