Games Design Worksheet

P7-S3

Learning Outcomes

Learn about software development while making your own game using the MakeCode Arcade. Create; sprites, code and music to bring your game to life

Introduction

In this activity, you'll learn about computers. How the components inside the computer works together to power the age of information and how these components make video games possible.

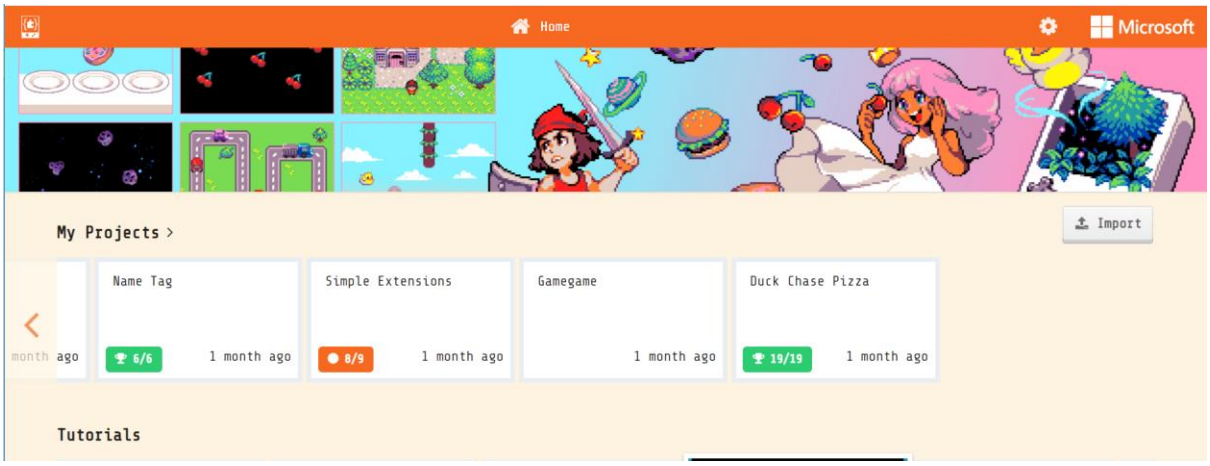
We've created a video guide to help you through this activity – you can view it here (1).

First let's have a look at this Ted Ed Video (2) - the video shows us how the components in our computer work together.

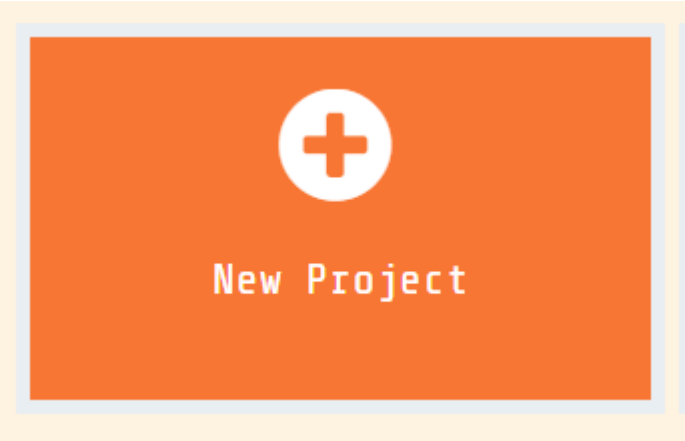
These components are called **Hardware.** A videogame, however, is not hardware. A videogame is something called **software** which is made up of code, art and sound. Usually they are made by teams of people like programmers, artists, writers and many more.

Activity

Today we'll be using Make Code (3) to get a taste of what making a videogame is like!

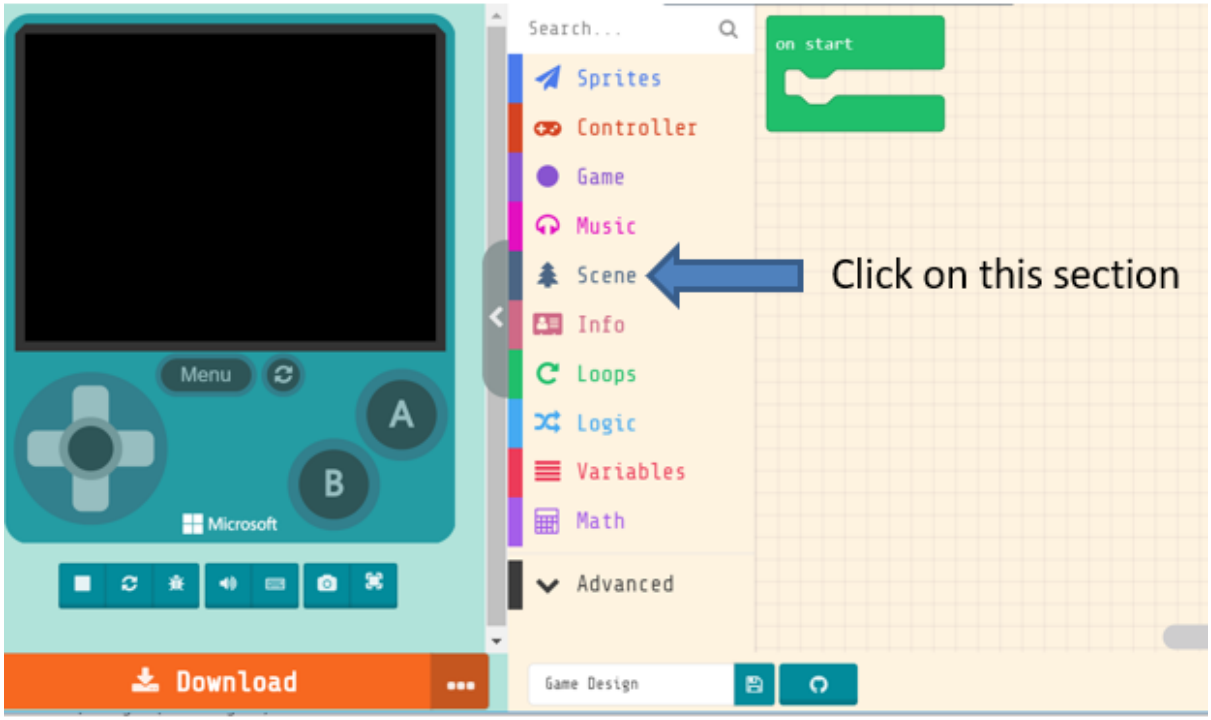


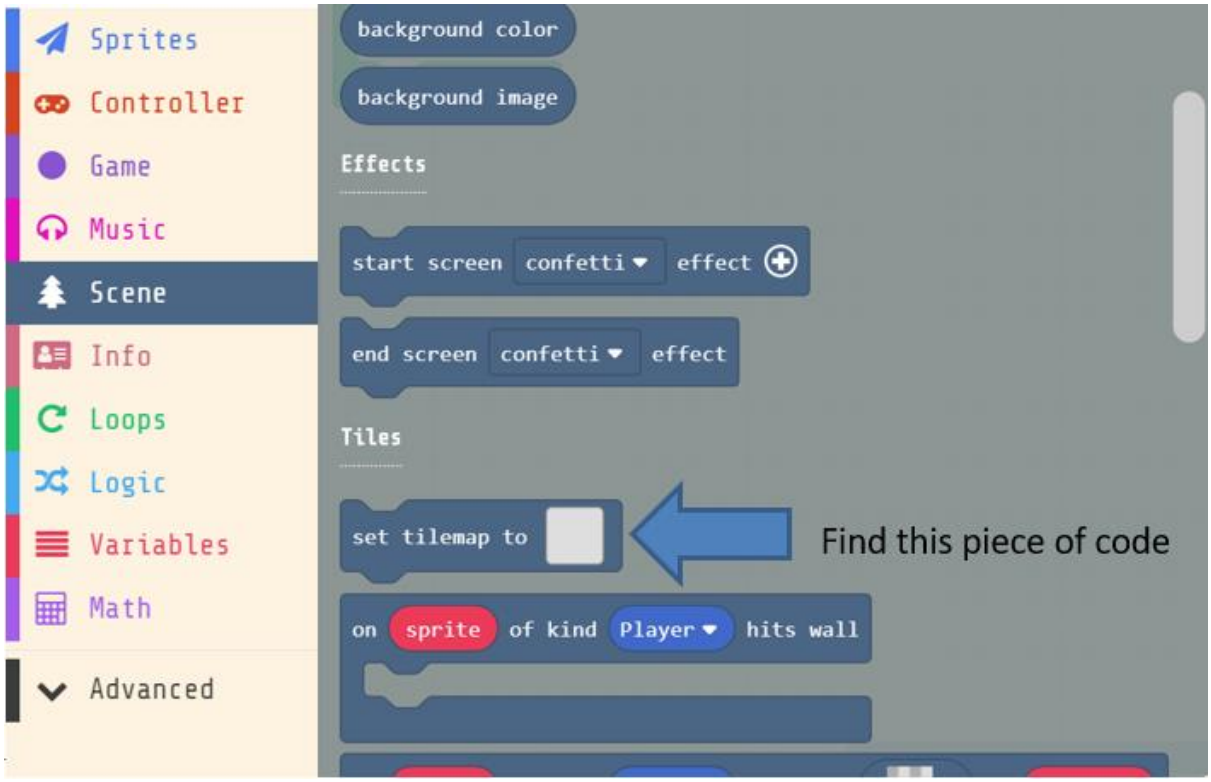
Click this button to start a new project

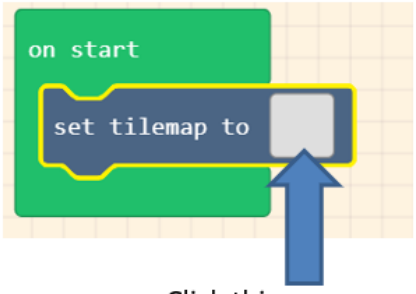


Give it a name

Lets make a maze game!



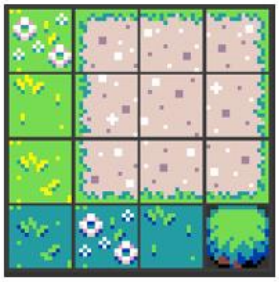




Drag code into the on start section

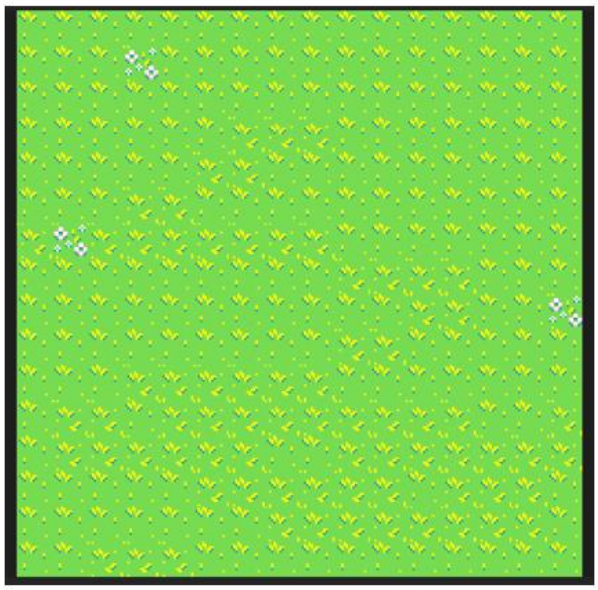
Click this grey square

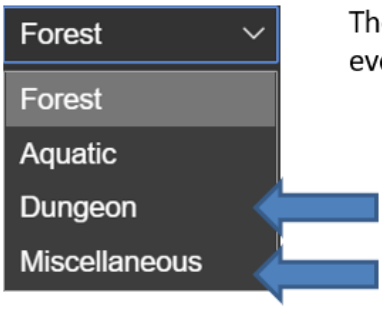
You should see this



Use these tiles to decorate

This is what mine looks like





There are plenty of other patterns and you can even make your own

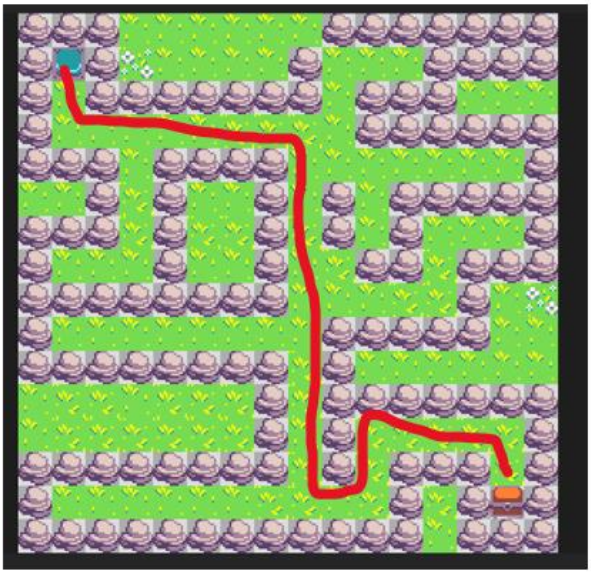
I'm going to use these two as well as the forest set of tiles

Choose a start and end point, I'm using a green button to mark the beginning of my maze and a chest as the end point

Choose some tiles to use as walls, I'm using these rocks

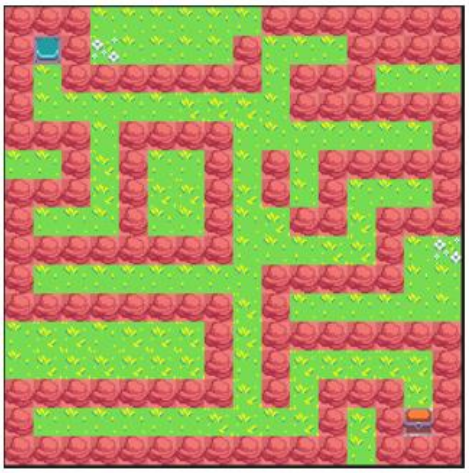
Make sure there is a path between the start and end point

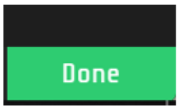
Layout a maze, the messier the better



Click on this button, it should turn red

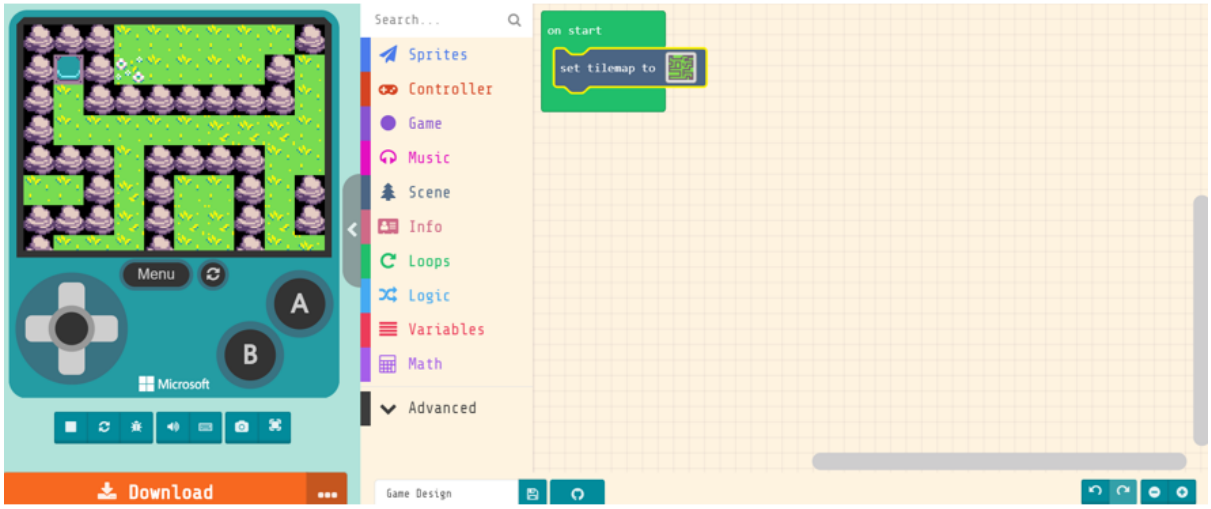
Go over all of your walls so that they turn red, like mine, this will be how we tell our character where the walls are



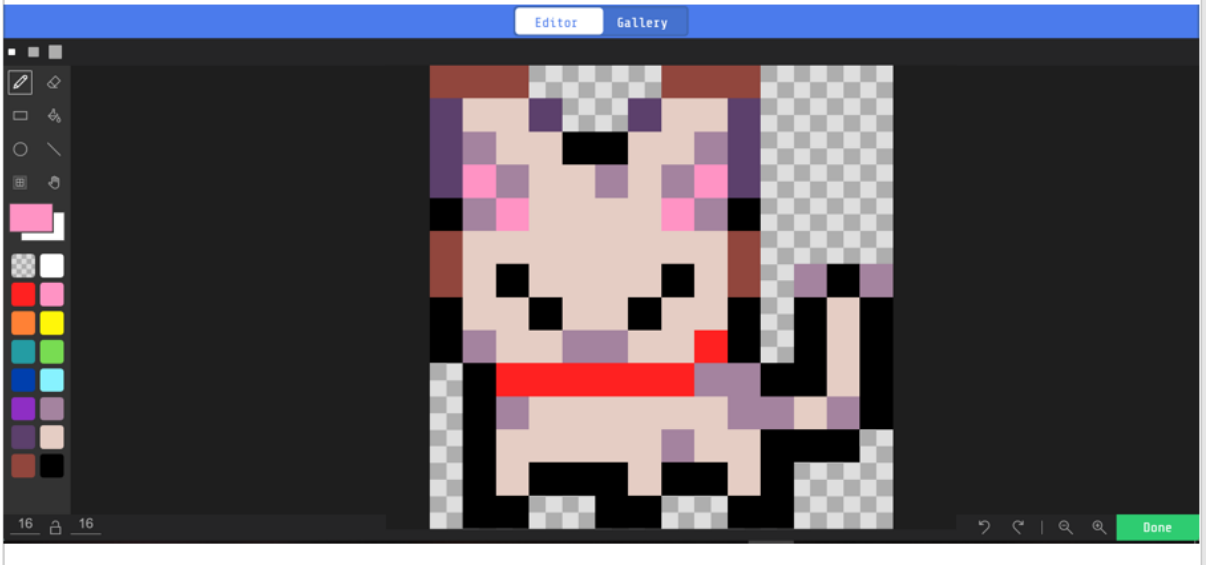


Click done

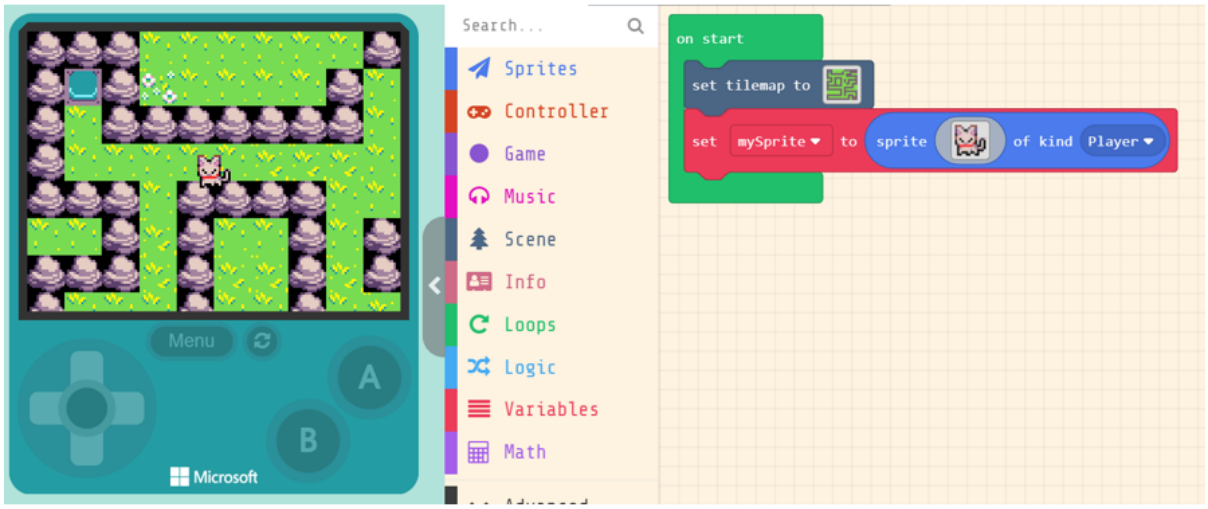
Now your screen should look like this



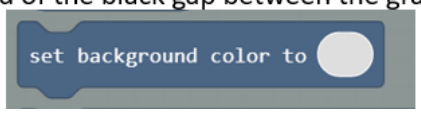
You can draw your own character to explore your maze!



Your character will appear in the game but they might be inside a wall, like this



Pro Tip: If you want to get rid of the black gap between the grass and rocks, use this tile



Click on scene

Find this block of code

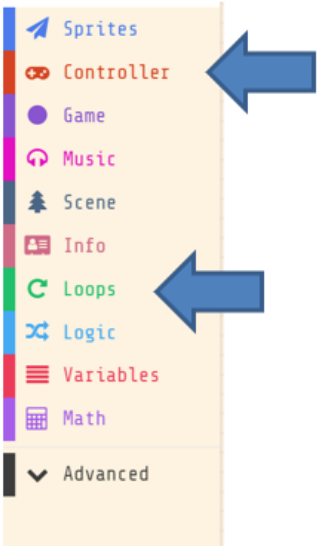
Click on this and select your start position

This will place your character at the beginning of the game

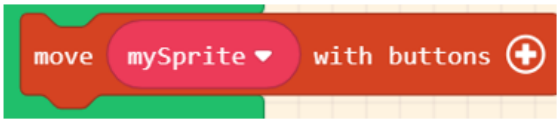
You're almost ready to play your game!

If you try to move your character with the arrow keys, you will notice they stay still.

Lets make a controller!

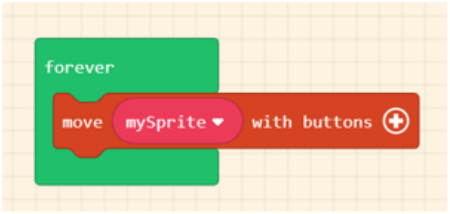


Click on this section and find this code block



Find this section and find the loop code block

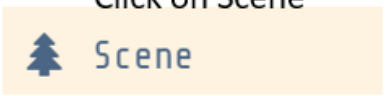
Set them up like this



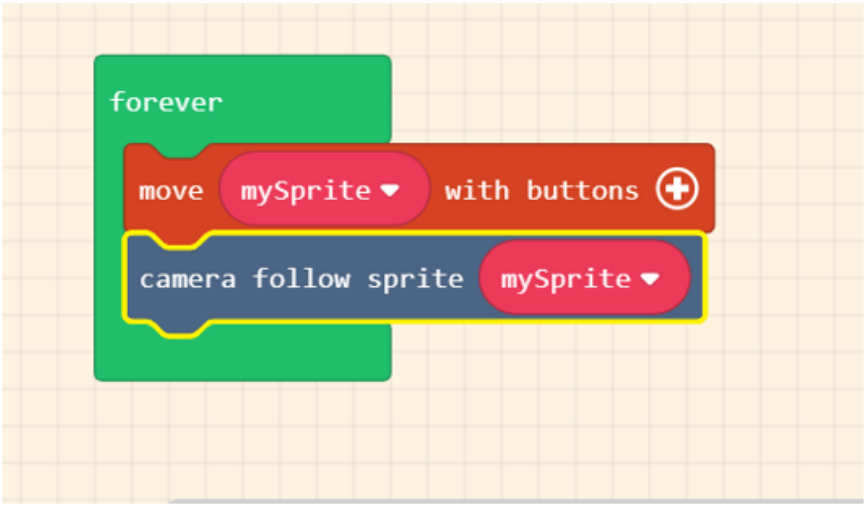
Your character now moves around but only over a small section of your map.

We need to make the camera follow them.

Click on Scene



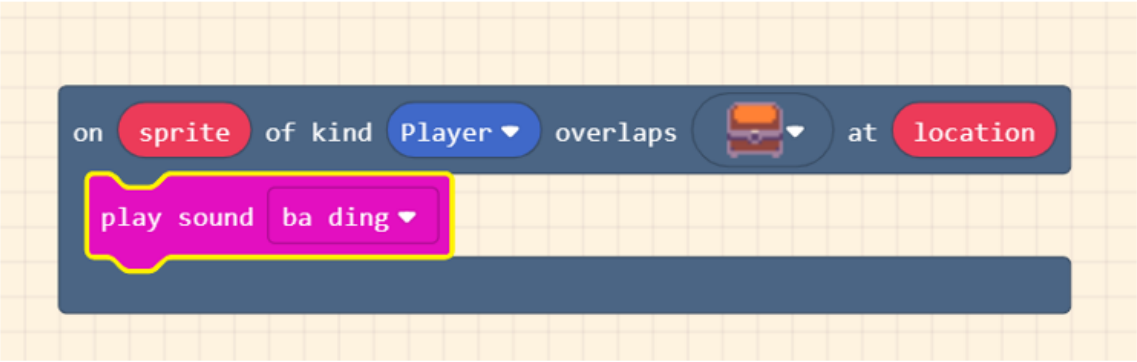
Find this tile



Lay them out like this

You can now play your game and test your maze, see how long it takes you on your first try and adjust it if you notice something wrong.

Try and make something like this to finish your game off!



Did you enjoy this activity? Can you list 3 skills that you have used by creating this code?

1.
2.
3.

Some of the jobs associated with today's activity are:

Software Developer(4) Animator (5) Games Developer (6)

There are many more that you can find on the My World of Work (7) website along with lots of other information to help you plan your career.

Website references

1. Games Design video guide https://bit.ly/37BMUTa
2. Ted Ed Video https://bit.ly/2XqFvS3
3. MakeCode https://arcade.makecode.com/
4. Software Developer https://bit.ly/3dv3Aww
5. Animator https://bit.ly/2XqFSvV
6. Games Developer https://bit.ly/3eJBmyt
7. My World of Work https://www.myworldofwork.co.uk/