For Teachers

Download PowerPoint for best delivery

Read teacher notes document

See PowerPoint notes for additional information

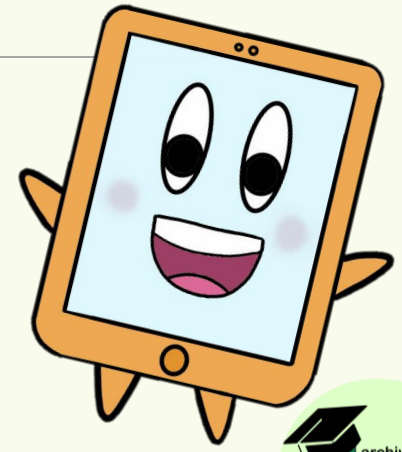
During this lesson you will need lots of open floor space so make sure to be somewhere with space, like the hall. If you can't be in their, consider moving you tables to one side instead.

Gaming Algorithms

Gaming Algorithms

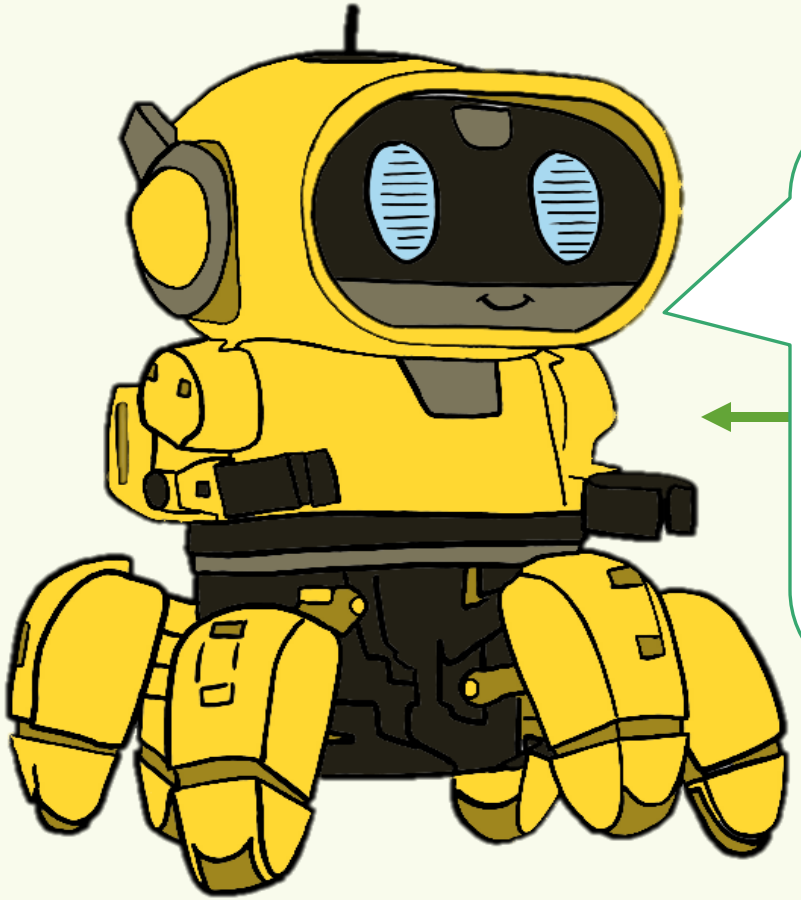
Lesson Aims

- To use algorithms to code a program
- To recognise what an algorithm is
- To recognise what coding is



Favourite Games

Share some of your favourite games with the class!

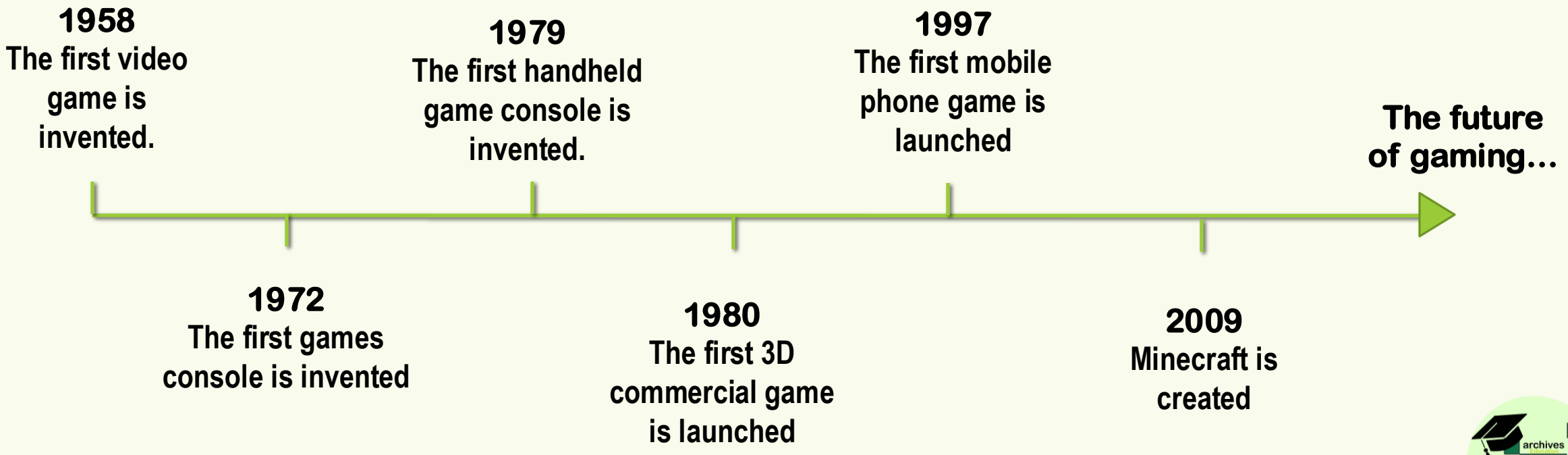


How many of those games need IT to work? What is your favourite game that uses IT? Have you ever played any of these?

- Minecraft
- Sims
- Electric toys
- Mario
- Nintendo Wii
- Xbox
- Play Station

A history of gaming

Soon we will be using technology to help design a very well known game, but first let's discover how technology has helped to change the way we play games today! Click on each one to learn more.



A histo

Soon we will be using t… let's discover how technology has helpe… ne to learn more.

1958
The first video game is invented.

197
The first … console is …

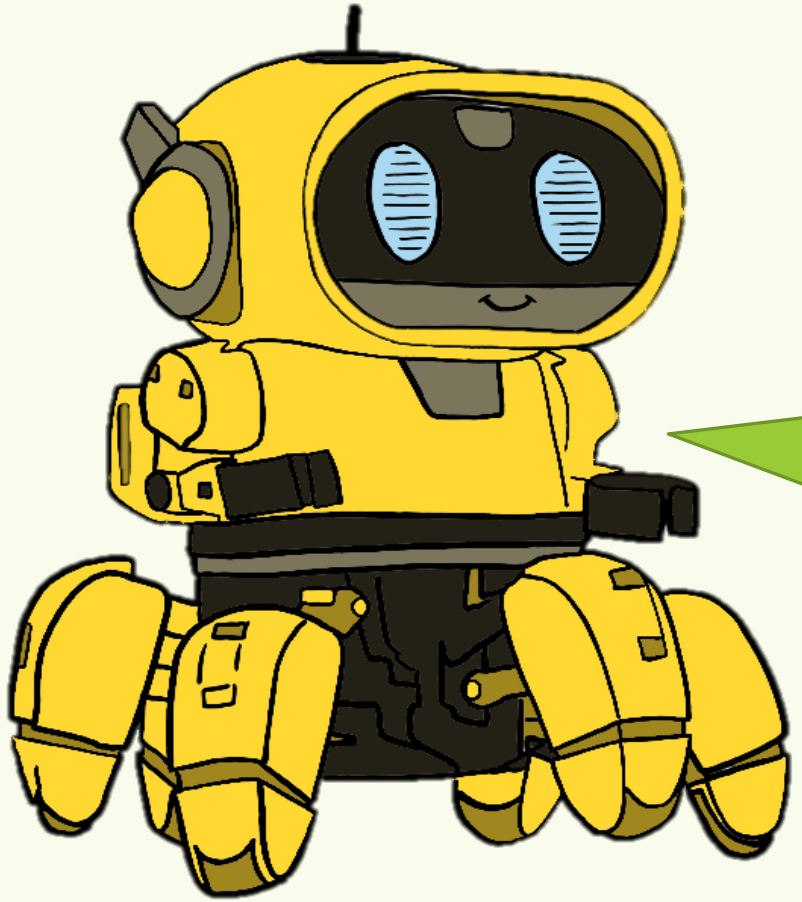
The future of gaming…

…t is …d

The future of gaming…

Gaming has changed so much in such a short game and it keeps on evolving! With VR (virtual reality) continuing to develop and video gaming said to become even more immersive as technology continues to develop. Will you grow up to help be a part of these new changes?

But how do they make them?



Once someone comes up with an idea for a game, in order for it to work, it must be given some instructions!

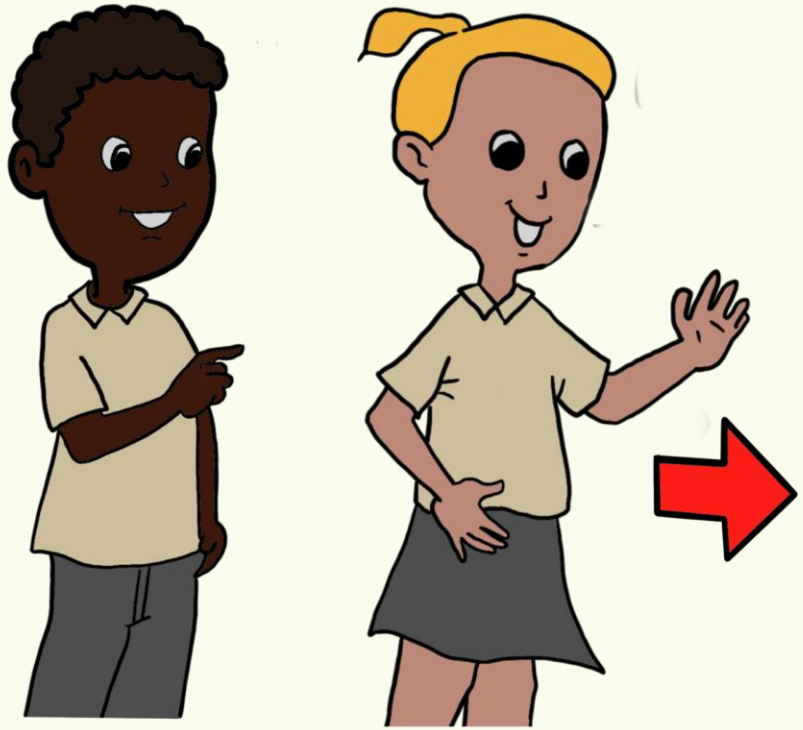
Giving instructions

Pair up and choose one person to be the robot and the other to give instructions.

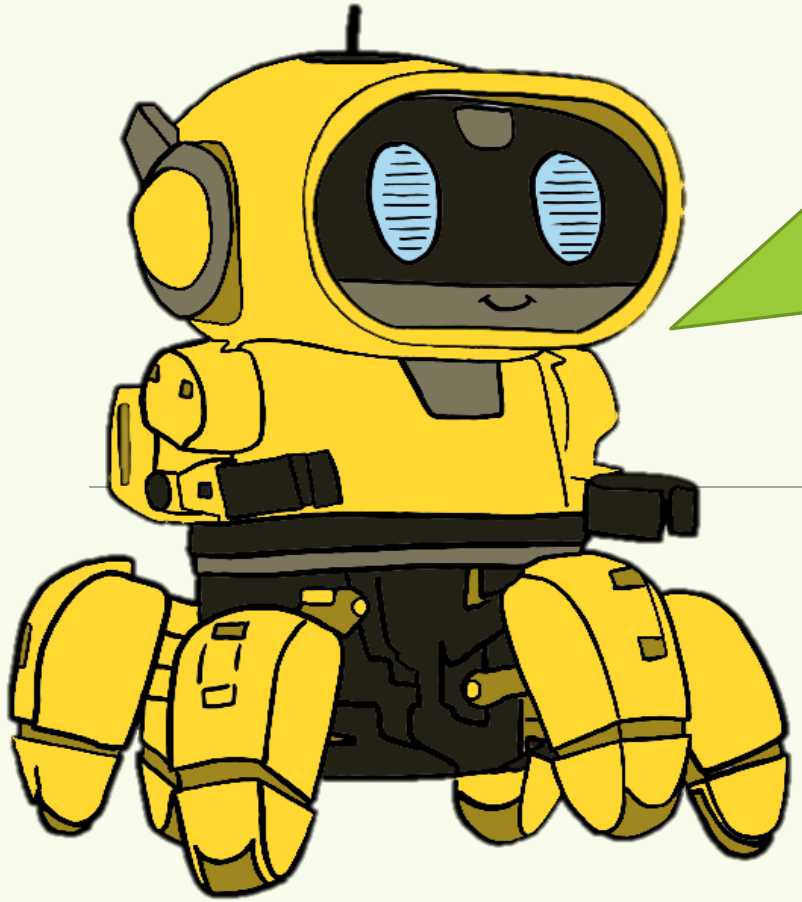
Rules:

1. Choose a starting and ending spot. Make it simple, remember there is not lots of space with all the other robots about!

2. Use simple directional language, such as forwards, backwards, stop go, left and right.



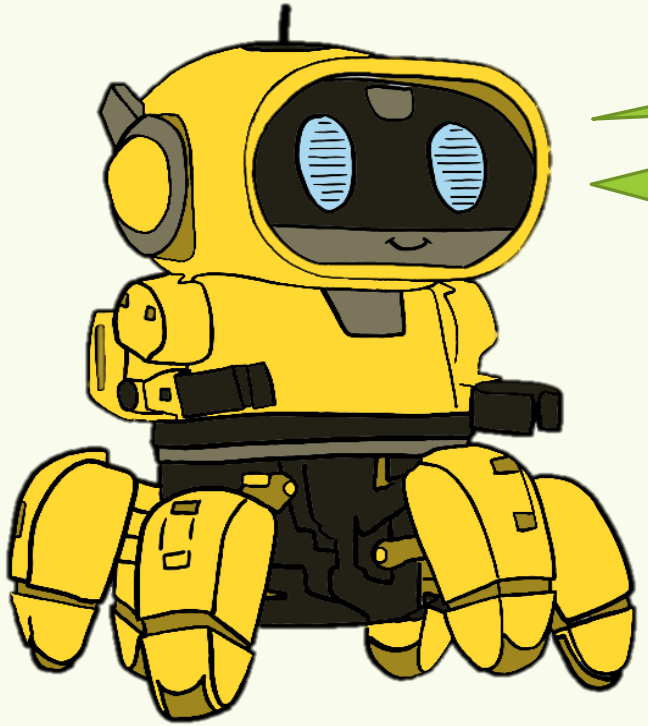
Giving Instructions



Just like you, us robots and games need instructions too! However, we have great memories so can store lots of instructions!

For example, you might have an Alexa and instruct it to put on a timer, turn on the lights in your lounge and play the song Thriller by Michael Jackson, all at once!

Creating Algorithms

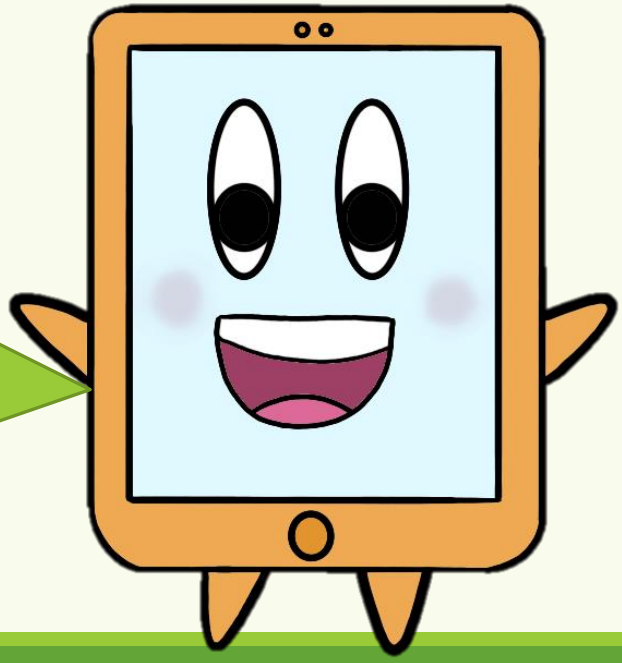


For example, why does this not say hello, I have used all the correct letters!

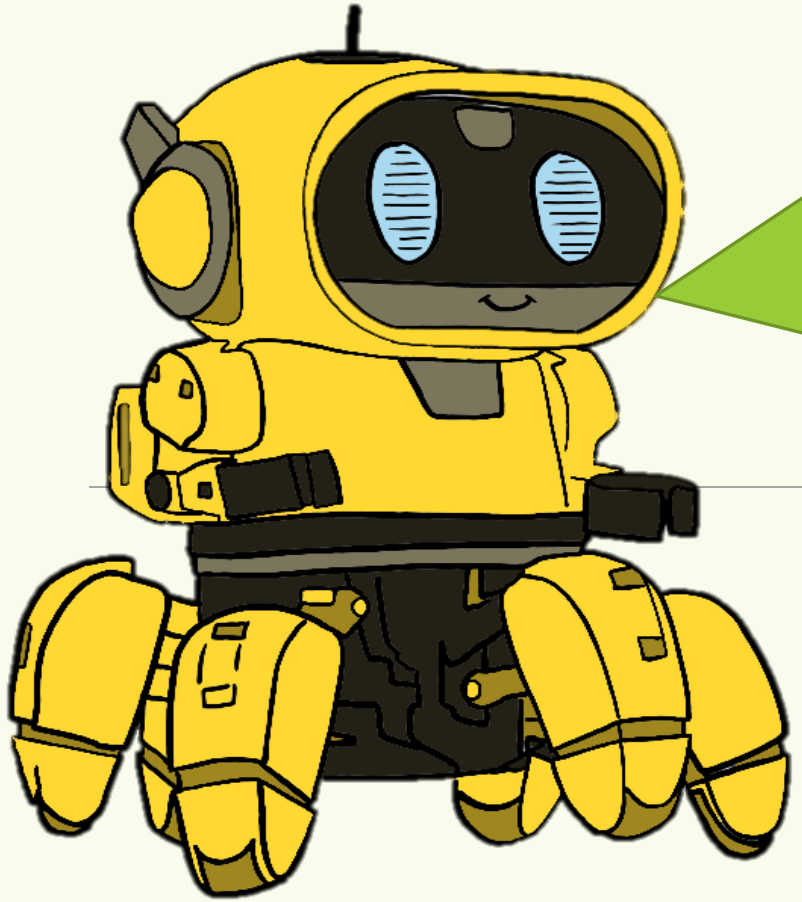
'code". The code is der, which is called m.

elhol

Because the letters are in the wrong order! The order is very important. Just like an algorithm.



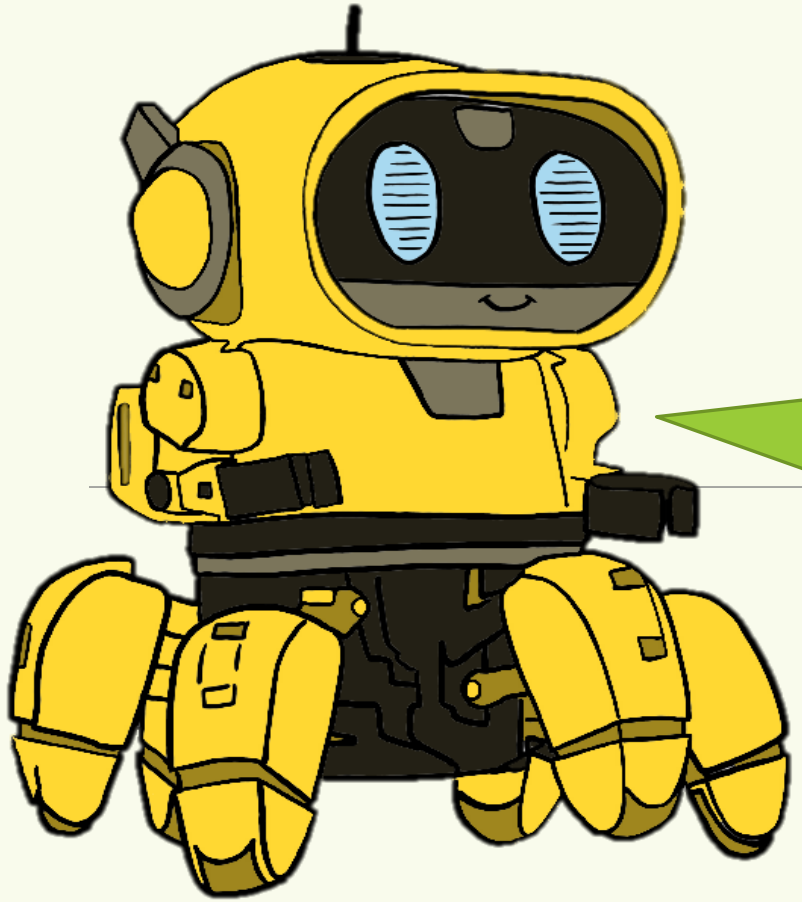
Coding Instructions



In games like Minecraft, it is designed so that things move around and look realistic. Wouldn't it look strange if a chicken just stood still?

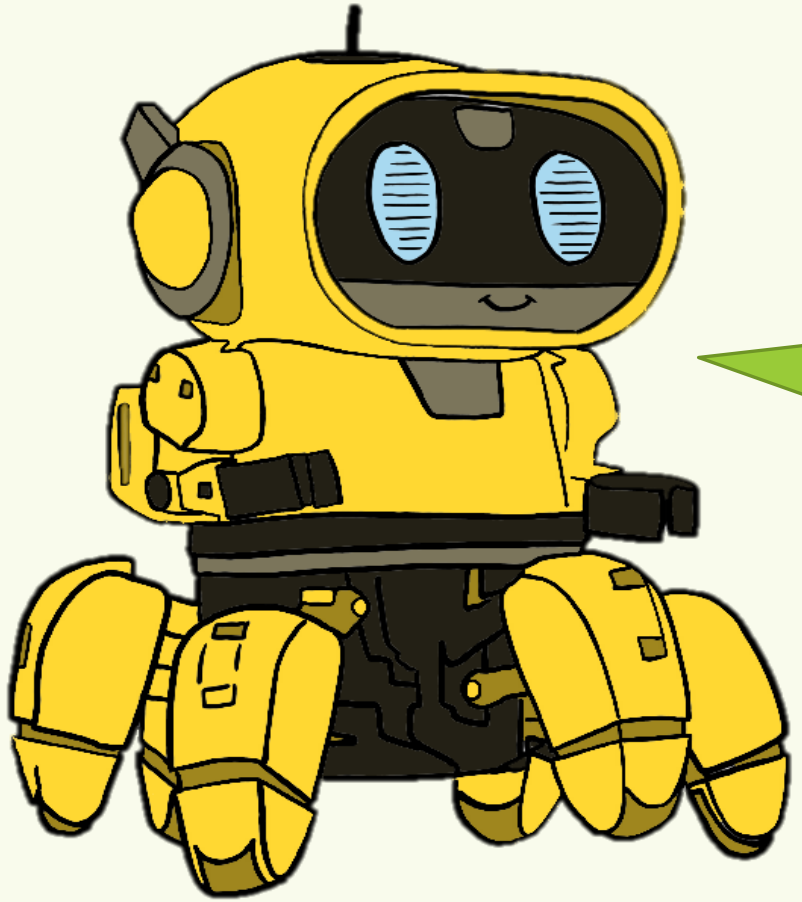
Games Designers need to create code (instructions) for the game so that things can move.

Your Task



Have a go at following some of these tasks using Scratch Jr.
https://www.scratchjr.org/teach/activities

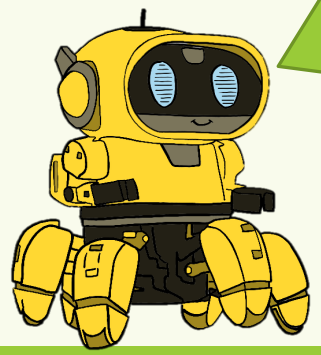
Coding your own Game



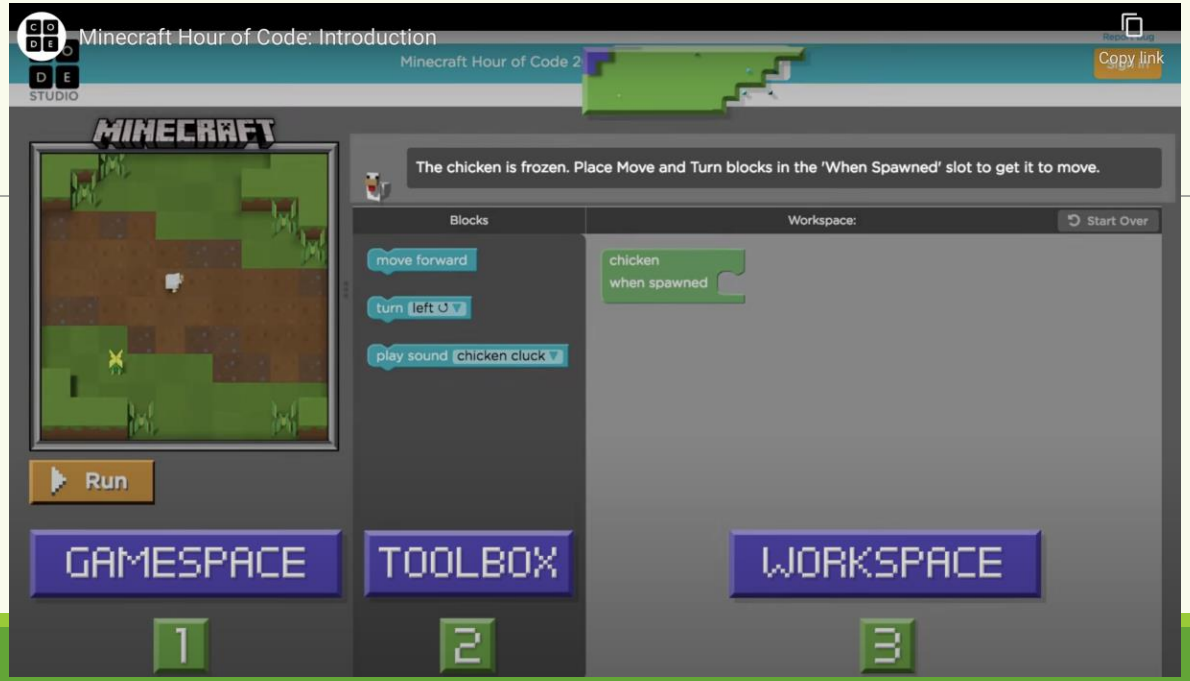
Now that you have learnt some of the basics, it is time to create your own game! Follow the tinker sheet to help you.

Optional Task

Have a go helping the Minecraft design team by completing different coding tasks. Watch the videos at each step if you need help. Remember to collect you certificate at the end and put a copy of it into your workbook.
https://studio.code.org/s/minecraft/lessons/1/levels/1

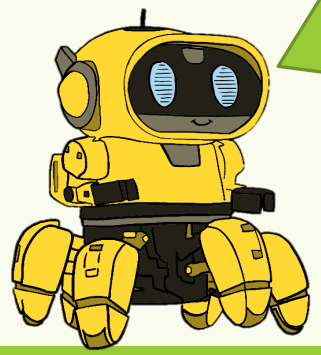


Remember to be safe on the internet. Let's go through our class code to remind ourselves how to safely use IT before we start!

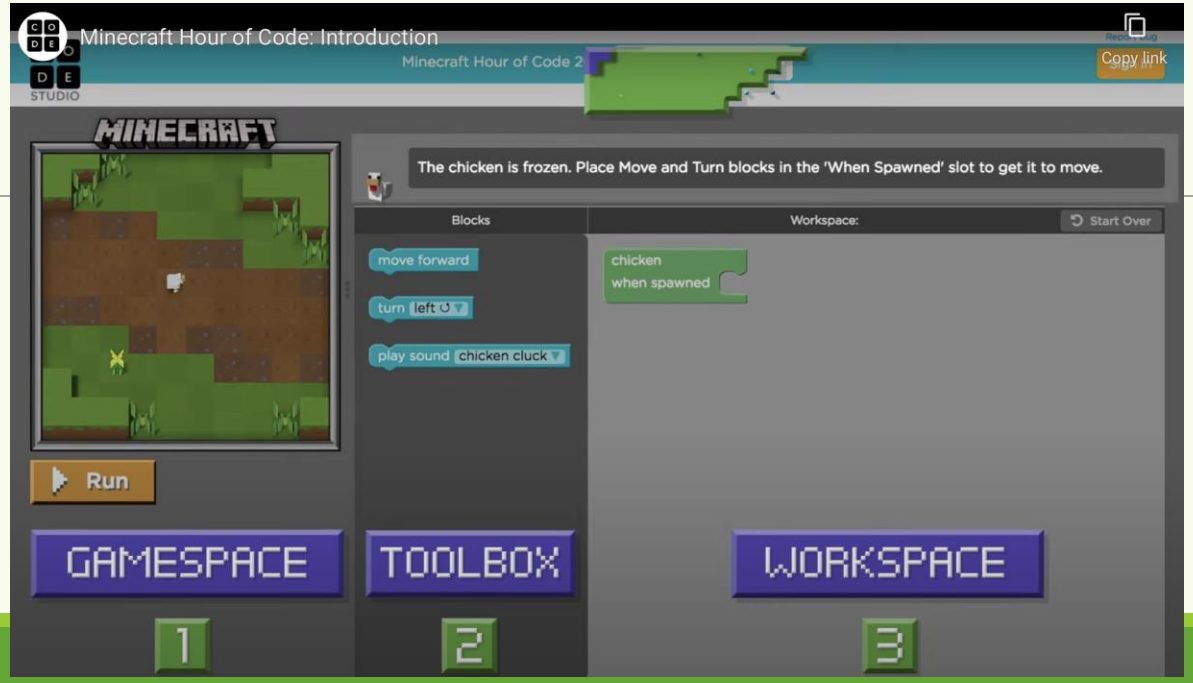


Share your code!

On the final level, you have the option to create your own code. Take a screenshot of your code or you doing your coding and share it with us at AIT, we'd love to see and share what you have created!



*By sending us these images, you as a school consent to the images of the children being displayed on our website and or social media (please specify when sending them in).



Did you enjoy learning about the gaming industry?

Jobs you might like in this area are…

- Game analyst
- Games programmer
- Games artist
- Games designer
- Games producer
- Games tester

And so many more!

Turn to the next slide to meet some of the real people who work in the industry!

Did you enjoy learning about the gaming industry?

Go to our website to watch short interviews with real professionals and learn all about their jobs and how they got there.

Step 1: Follow the link https://archivesit.org.uk

Step 2: Click on Gallery in the education section of the homepage

Step 3: Click on interviews