Broken Tech Roleplay

In this activity, the children will write a simple Scratch program. They will then 'hack' someone else's code and change 2 things. Returning to their own program they must work systematically to debug their code and find what has been changed. This process should teach the children the fundamental skills of debugging.

What do I need?

● Laptops 1:2

Teacher Background Information - Why are we doing this?

From the KS2 National Curriculum:
● design, write and debug programs that accomplish specific goal

Children like to get things right, and to get the right the first time, this isn't how programming works. No one writes a computer program correctly the first time. This activity encourages children to be systematic, working through each line of code one at a time to see what's wrong. It also encourages trial and error testing, to see what the program does in order to be able to find where it went wrong.

Setup

To make this activity simple to run, get the laptops logged in and Scratch loaded already. They don't need to save what they do, so each time the group swaps they just need to start a new Scratch window.

What do I do?

5 minutes - Model changing the backdrop by clicking on 'backdrop' in the bottom left corner and draw a simple path that is made up of 3 straight lines. Put a red x on the end, using 2 more lines. Drag the cat to the start of the line and then program the cat using 'move' and a number, and 'turn 90' to reach the X.

5 minutes - Children create their backdrops and then program their cat to move along the route.

3 minutes - 'Hack' someone's code. You have 2 minutes to change 2 instructions in the code on their computer.

2 minutes - Model trying to find the error in your code (that someone hacked). First, run the changed code and see what happens. Then, go through one block at a time correcting as you go.

5 minutes - Children return to their original code and try and fix the hack.