

KODU Week 2

This week's learning outcomes are:

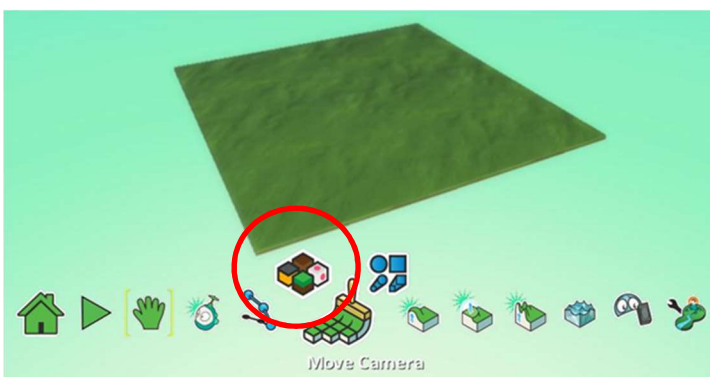
1. Take a more in depth look at the design tools available
2. Program characters to interact with objects, such as:
 - Eat Apples
 - Bump objects
 - Jump
 - Run Fast

There are a number of tools available to design the terrain.

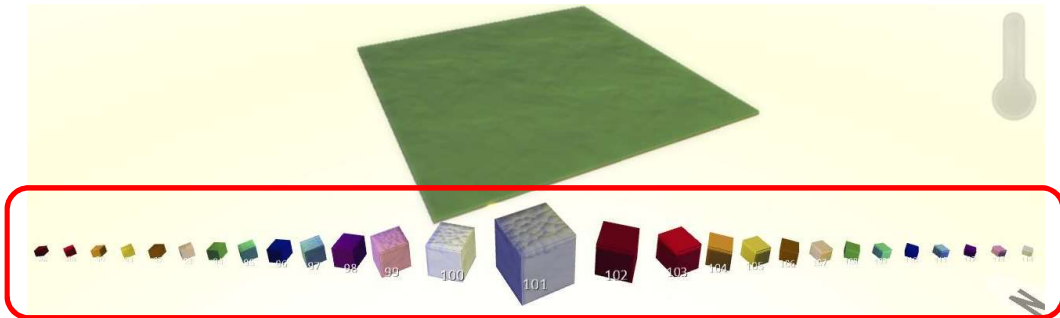
1. To add terrain, select the **ground brush tool** (shown below).
 - i. Click the left mouse button to start painting new terrain.
 - ii. You can change the size of the brush by pressing the left and right arrow keys on the keyboard.



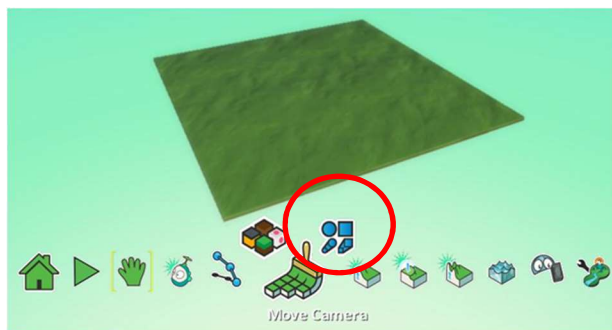
2. The terrain paint colour can be changed by clicking the four different coloured squares (shown below).



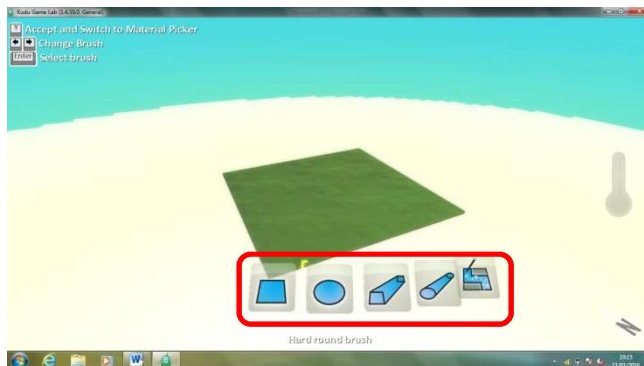
3. There are over 100 different colours of terrain available. Choose the terrain colour by pressing the left mouse button and then start painting the terrain.



4. The brush shape can be changed by clicking the shapes option above the **ground brush tool** (shown below).



5. Select the shape you would like then start painting the terrain.
 - i. You can change the size of the brush by pressing the left and right arrow keys on the keyboard.



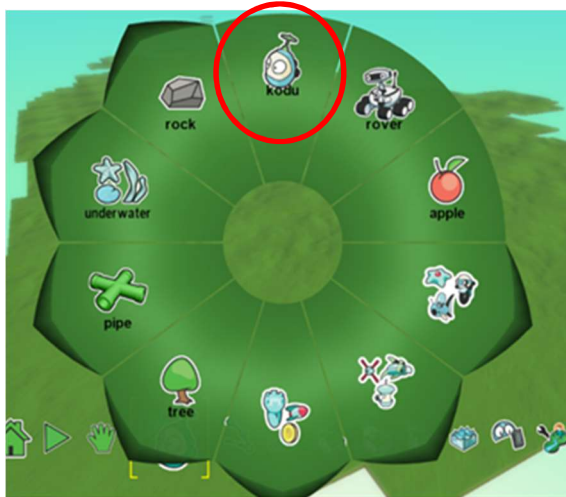
Eating Apples

You can program characters to interact with objects and other characteristics.

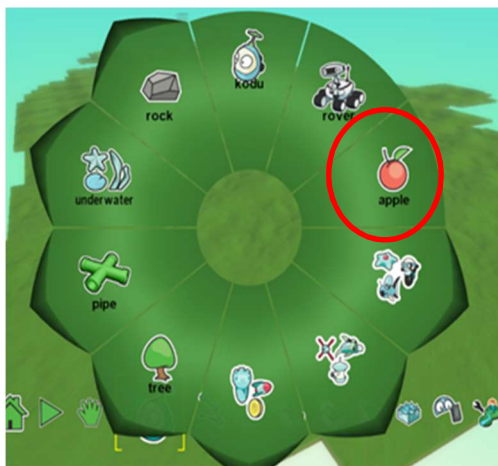
1. Add a KODU by clicking the **objects tool** (shown below).



2. Click on the terrain to bring up the pi menu then click on Kodu (shown below).



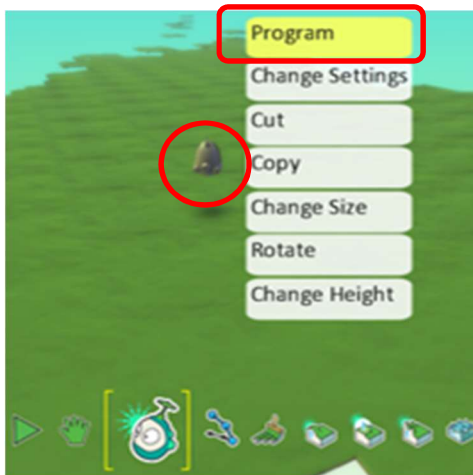
3. Add an Apple by following the steps below.
 - i. Click on the **object tool**
 - ii. Click the position on the terrain where you want the Apple to appear
 - iii. Click on the Apple from the Pi menu



4. To program Kodu first ensure that the **objects tool** is selected (shown below).

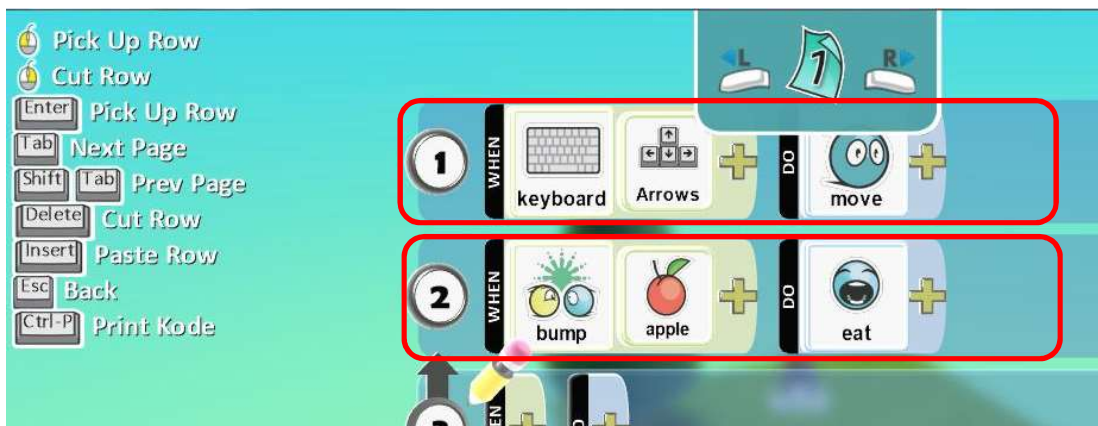


5. Point the mouse cursor at KODU then RIGHT click on KODU. This will bring up the menu shown below then select Program.



6. Add the CODE shown below.

- i. Line 1 - makes Kodu move.
- ii. Line 2 - makes Kodu eat an apple when bumped into.



8. Press the **ESC** key (located in the top left corner of keyboard) to exit the program screen.
9. Press the **Play Button** to start the game (Shown below). Kodu will now be able to move around the screen by using the arrow keys on the keyboard and will eat apples when bumped.

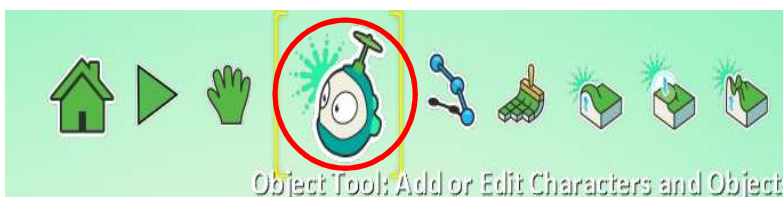


You can add extra apples to the terrain by repeating step 3 above. Remember we are programming Kodu to eat apples; we don't need to add any programming to the apples.

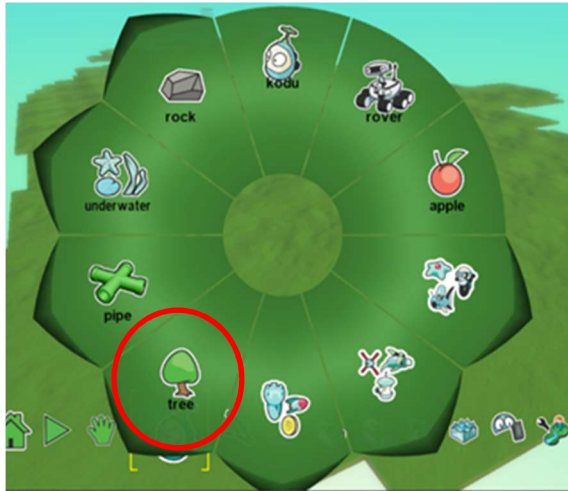
Bump Objects

We are now going to have a more in-depth look at the Bump function.

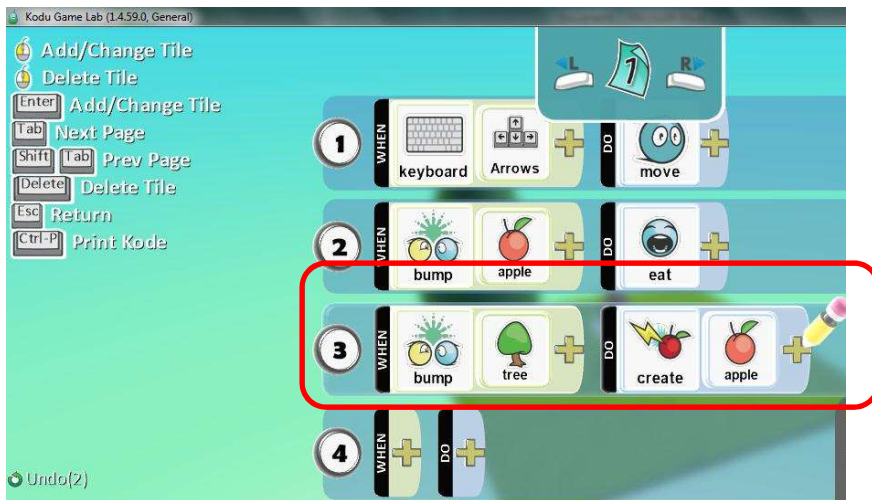
1. We are going to look at how to make your KODU bump into objects.
 - i. KODU can do a number of things when it bumps into different objects from shooting to creating new objects.
 - ii. For this example I am going to program an apple to be created when a KODU bumps into a tree
2. Add a tree by clicking the **object tool** (shown below).



3. Click on the terrain to bring up the pi menu then click on Tree (shown below).



4. Add the CODE shown below to Kodu.



5. Press the **ESC** key (located in the top left corner of keyboard) to exit the program screen.

6. Press the **Play Button** to start the game (Shown below). Whenever KODU bumps into a tree an apple will be created



Making KODU jump.

1. Thirdly we are going to look at how to make KODU JUMP
2. Program Kodu by placing the cursor over KODU until highlighted, and then right click on KODU to bring up the program menu.



3. Add the following code (shown below).



4. Now when you PLAY your game KODU will jump when you press the **SPACEBAR** Key on the keyboard.

Making Kodu Move Quickly

1. Finally we are going to learn how to make your KODU move quickly
2. Place cursor over KODU until highlighted yellow then right click on KODU which will bring up the program menu (shown below).



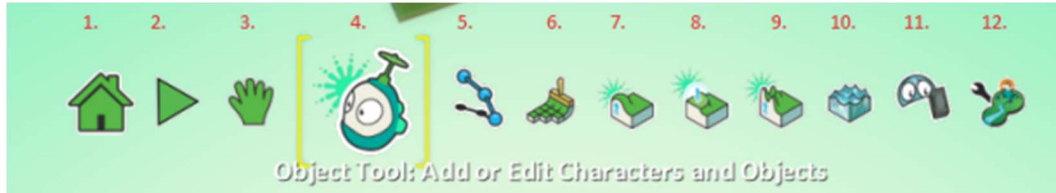
7. Add the following code that has been highlighted below.



8. KODU will now move faster while playing the game.

Kodu tools reference list:

For your reference here is a list of the tools within KODU. There are 12 different tools you can use.



1. **Home-** The home tool is simply to take you back to the menu, allows you to save your world and load worlds.
2. **Play-** the play button is simply to play the game you have created.
3. **Move Camera-** the move camera tool is to allow you to move the camera around your world when editing and get different views of what you have created.
4. **Object Tool-** The object tool is for adding characters and different objects into your world this ranges from ships and jets to apples and trees.
5. **Path Tool-** The path tool allows you to create paths that you can then program characters to follow when you are playing your game.
6. **Ground Brush-** The ground brush is your basic painting tool this is where you design the basics of your landscape.
7. **Up/Down Create hills and valleys-** This tool allows you to become more creative with your world by adding in hills and valleys instead of only having a flat surface.
8. **Make Ground Smooth or Level-** This tool is for when you perhaps make a hill too tall or too the ground too spikey it allows you to flatten it back out.
9. **Spikey or Hilly Ground-** This tool again allows you to be more creative when designing your land it allows to and in spikes and peeks
10. **Add, Remove or tint water-** The water tool allows to add water to your world change the colour of it and also remove it.
11. **Delete tool-** The delete tool is to delete any objects you no longer require
12. **Change: World Settings-** here you can change lots of settings for your world from the sky colour to the camera settings.