

## Week 3 Kodu

This week we are going to start thinking about what makes a good game and start to develop a storyline for a game.

This weeks learning outcomes are:

1. Programming multiple characters to interact with the environment.
2. Program the characters to talk (via pop up text boxes).
3. Understand how to use paths
4. Start to build a storyline for game (this may be on paper).

### Program Multiple Characters to Interact with the Environment.

#### Adding the First Character

1. Make a New World, add some terrain and a few trees (shown below).



2. Add a Rover by clicking the **objects menu** (shown below)



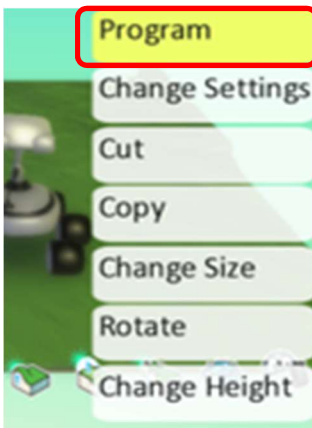
3. Click on the terrain to bring up the Pi menu and select Rover (shown below).



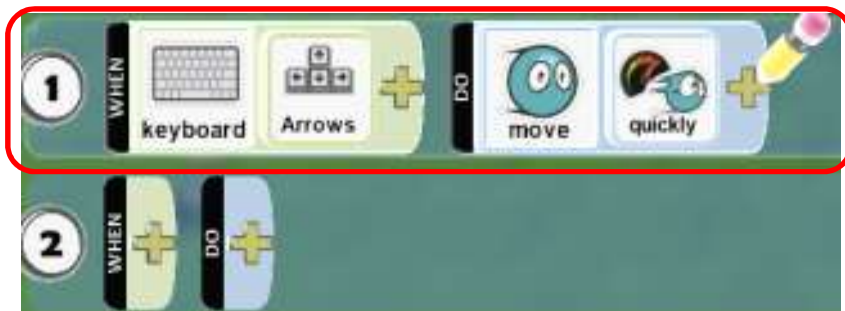
4. We are now going to program rover to move. Click the **Objects menu** (shown below).



5. Right click on Rover and select program (shown below).
  - a. N.B. you must ensure that the **objects menu** is selected before you are able to program characters.



6. Add the following code to make Rover move (shown below) (when you press the arrow keys on the keyboard).



- Press the **Play Button** to start the game (Shown below). Kodu will now be able to move around the screen when the arrow keys on the keyboard are pressed.

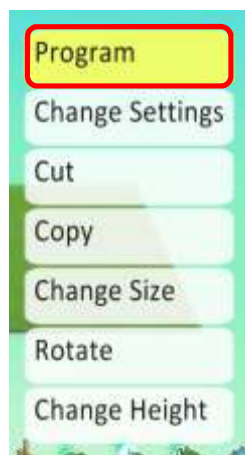


### Program the 2<sup>nd</sup> Character "Cycle"

- Add a Cycle to your terrain by using the **objects menu**. The cycle is in a sub-menu (shown below).



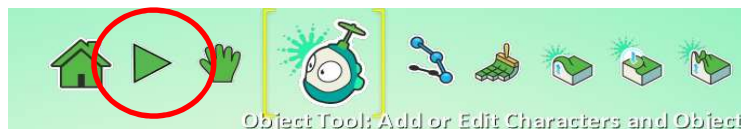
- We are now going to program the 2<sup>nd</sup> character "Cycle" to move using the **WASD** keys on the keyboard. Click the **objects menu** then right click on Cycle and select program (shown below). N.B. you must ensure that the **objects menu** is selected before you are able to program characters.



4. Add the following code to make Cycle move using the **WASD** keys on the keyboard (shown below).



5. Press the **ESC** key to exit the program menu.
6. Press the **Play Button** to start the game (Shown below). Kodu will now be able to move around the screen when the **WASD** keys on the keyboard are pressed.



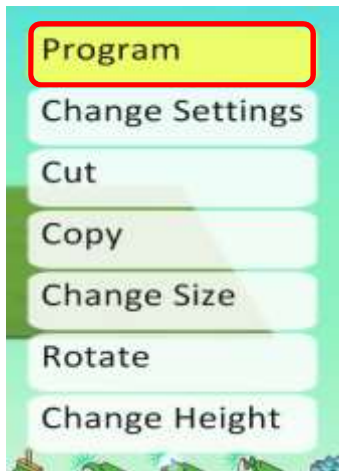
### Program the 3<sup>rd</sup> Characters “Jet”

In this example we are going to program a jet to move on a path. When following a path characters will follow the path without any input from the player.

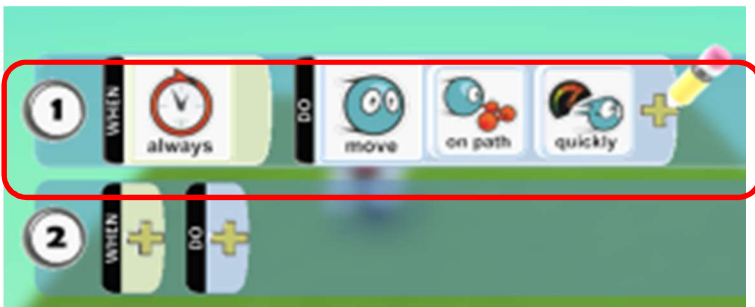
1. Add a Jet to your terrain by using the **objects menu**. The Jet is in a sub-menu (shown below).



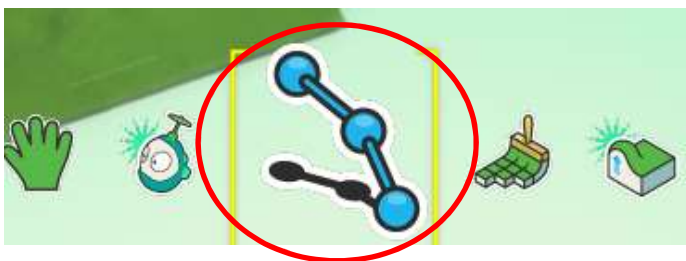
2. Right Click on the Jet and select program (shown below).



3. Add the following code to make Jet move (shown below). This code means that the jet will always follow the path.



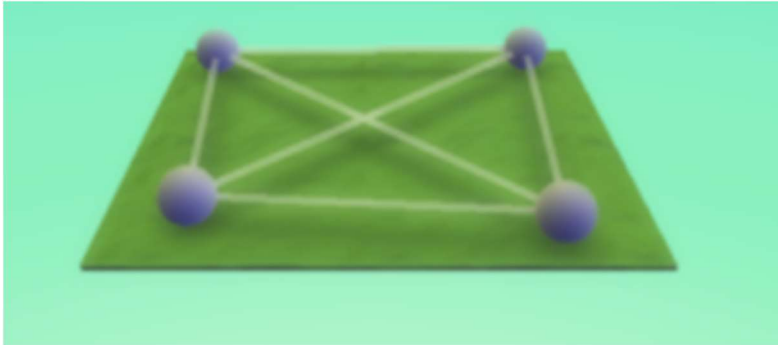
4. Click the **Paths** tool (shown below).



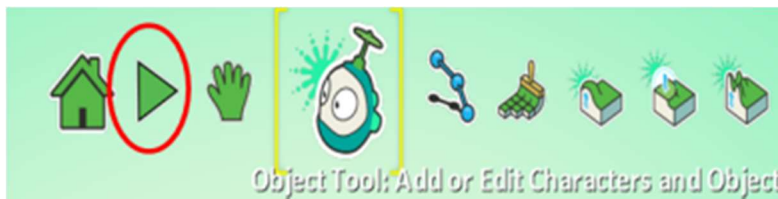
5. Add a path for the **Jet** to follow.

- a. To add a path click on the terrain where you want your path to start.
- b. Every time you click on the terrain a new Path Node will be created.
- c. Try and create something similar to below.

d. Press **ESC** to exit the path tool.



6. Press the **play button** to start the game (shown below).



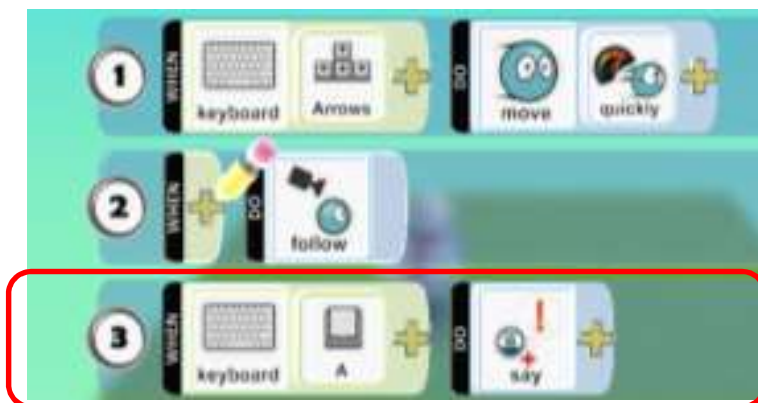
7. Your game should now have 3 characters that use the following controls;

- Arrow Keys - Controls Rover Character
- WASD Keys - Controls the Cycle
- Computer - Controls Jet

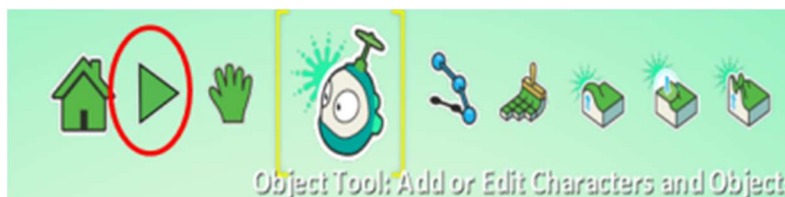
## Program Rover to talk.

Kodu allows characters to interact with each other using speech bubbles.

1. Add the following code to Rover to make him talk (shown below).
  - a. When you add the “Say” tile you will be asked to enter the text that you wish to appear in the speech bubble.
  - b. In the code below we are programming Rover to talk, when we press the “A” key on the keyboard.



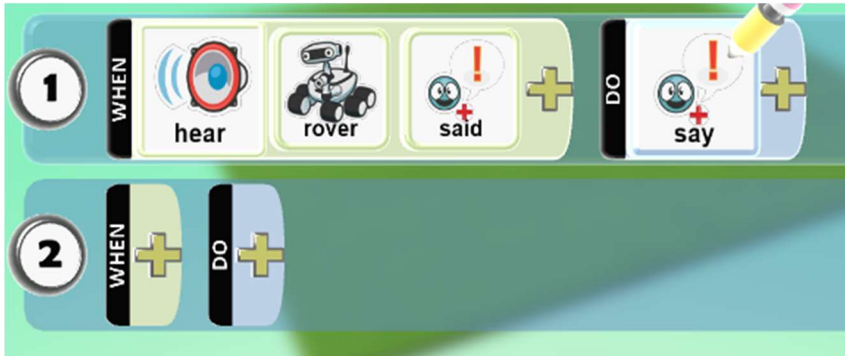
2. To test the talk functions press the **ESC** key to exit the program menu.
3. Press the **play button** to start the game (shown below) and press the “A” key to talk.



## Program a Tree to respond to Rover

We are now going to program the tree to respond to Rover when he talks.

4. Choose one of the trees, right click on it and click program.
5. Add the code show below.



6. Now the tree will respond when the rover talks.
7. To test the talk functions press the **ESC** key to exit the program menu.
8. Press the **play button** to start the game (shown below) and press the "A" key to talk.

