

Code a wild place

Build a calming scene to test your coding skills.

What you will need

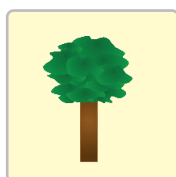
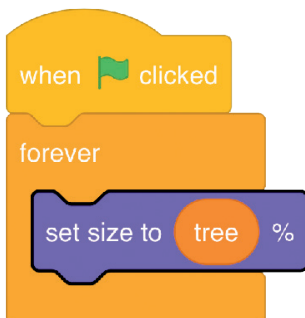
- A computer
- Access to the internet
- Scratch

How does it work?

This project uses a free, online coding language called Scratch. By creating programs using Scratch, you can improve your problem-solving skills. This project teaches how to set up your own variables.

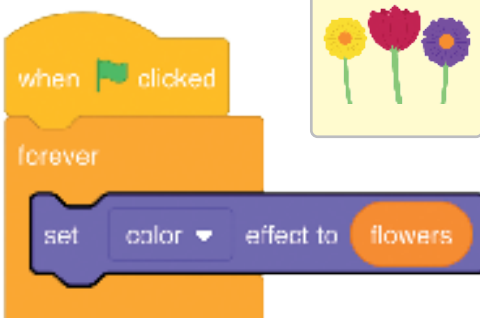


Tree script



- 1 First, go to rpf.io/serene-scene-on to open the starter project in Scratch.
- 2 Click on the tree sprite (icon) on the right-hand side of the screen.
- 3 Create a new variable, by clicking the "Make a Variable" button. You can find this in the Variables section on the left-hand side of the screen. Label it "tree" and then select "For all sprites". You should see the "tree" variable, set to "0" appear on the Stage (top right).
- 4 Right-click the "tree" variable on the Stage, and select the "slider" option from the drop-down menu.
- 5 Right-click on the "tree" slider again, and select "change slider range". Set the Minimum value as 100 and Maximum value to 300.
- 6 Now, it's time to build the script (a stack of coding blocks that makes a set of instructions) for the tree. Drag the colour-coded blocks from the list on the left-hand side of the screen and drop them onto the coding area in the middle of the screen. Snap them together to make the script.
- 7 Check each line carefully, then test your code by clicking the green flag. Moving the slider should make your tree change size.

Flower script



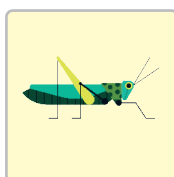
- 1 Select the flower sprite and create a new variable. Label it "flower", and select the "For all sprites" option.
- 2 Right-click the "flower" variable on the Stage, and select the "slider" option from the drop-down menu. Right-click the slider again select "change slider range". Set the Minimum value to -100 and the Maximum value 100.
- 3 Build the script above and test your code by clicking the green flag. Moving the slider shifts the speed that your flowers change colour.

Background script



- 1 In the Stage tab on the right-hand side of the screen, you'll see the "Backdrops" icon. Click on it.
- 2 Create a new variable by clicking the "Make a Variable". Call it "light". Once again, turn the variable into to a slider and set the range between a minimum of -40 and a maximum of 40.
- 3 Build the script, and test your code by clicking the green flag and moving the "light" slider.

Insect script



- 1 Finally, select the grasshopper sprite and build the insect script. You will need to create a new variable, this time called "grasshopper".
- 2 Right-click the "grasshopper" variable on the Stage, and select the "slider" option from the drop-down menu. Then, right-click again and set the slider range between 0.0 and 1.0.
- 3 Click on the green flag and move the slider. This should make your grasshopper move faster or slower.

The Raspberry Pi Foundation is a UK-based educational charity working to put the power of computing and digital making into the hands of people all over the world. Discover more step-by-step coding projects at rpf.io/scienceandnature



Raspberry Pi Foundation

TOP TIP!

To find out how to add more insects and forest sounds, go to tinyurl.com/SN-wildplace