Coloring Randomly:
Random Selection in Alice

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Step One: Color Method Coding

Drag an If Else statement into your method editor, and choose true on the menu that pops up. We will use this statement to choose colors for the penguins.

Step One: Adding Randomness

Click on world in your object tree, and then click on the functions tab. Scroll down until under random you see choose true probabilityOfTrue of the time.

This button is a random generator. Depending on what you enter into the probabilityOfTrue space, when your world runs it will select true a certain percentage of the time, and it will select false a certain amount of the time.

Drag this command into your method editor, and drop it over the true on your If Else statement. A menu will pop up with different percentages on it. Click on other and then enter in .25 in the calculator.

This means that each time your program runs, there is a 25% chance that this random generator will select true, or about 1 in every 4 times.
Step One: Changing Colors

Now we’ll actually work on changing the colors. Click on penguin in your object tree and then click on the properties tab. You should see a button that says color. Drag and drop this button over the part of your if Else statement right under if where it now says Do nothing.

Click on cyan. Then, click on your whichPenguin parameter, and drag and drop it on top of the penguin part of your color command.

This command means that if the random generator selects true, whichever penguin you select for which Penguin will turn cyan. If it selects false, the Else part of the If Else will kick in, and nothing happens. At least not yet....

Step Two: Adding Text Objects

Now we’re going to insert text objects into our world. We’ll write a method that makes the correct color name appear when a penguin changes color, and disappear before the next penguin changes color.

Click the add Objects button, and scroll to the end of the object folders. Click on the Create 3D Text icon.

A text editor will pop up. Type in the word Cyan. Click OK.
Now the word Cyan will appear on your screen with your penguins. Move it further away from the camera and higher up in the sky with the position controls.

Now we will write a method that tells a word to appear when a penguin turns that color. Create a new world method called penguinsNameColor. Give it an object parameter called whichPenguin.

Now add an If Else statement to your method editor, and set it to true. Click 

penguin on the object tree and then go to the Properties tab. Click on the color button and drag it to your method editor, dropping it over the true part of your If Else statement. Then choose penguin.color as, and when the color menu appears, choose cyan. Then, click on your whichPenguin parameter and drag it over the penguin part of your If Else statement.

Now we want to make the command tell the word Cyan to appear if the penguin turns cyan, and then disappear again after 2 seconds. So click on Cyan in your object tree, and then go to the Properties tab. Click on the isShowing button and drag it under the If part of the If Else where it says do nothing. Drop it there, and click on true. Then click on the more... part of the command you just added. Click on duration, and then 2 seconds. Then click on the IsShowing button again, and drag it under the command you just wrote, this time selecting false.
Step Three: Text Method Coding

Now we want to tell the other words to appear when the penguins turn that color. So drag another If Else statement into your editor, and drop it under the Else part of your first If Else statement. Now go through the same process with the Red text object that you just did with the Cyan text object. After that, add another If Else, and do the same thing with the Purple text object. In the final else do the same isShowing code for the Green text object.

Step Four: Putting it Together

Play your world. Each penguin should change colors in turn, and as they change, the appropriate color word will appear in the sky. Try pressing restart; your penguins may be different colors each time it runs! Congratulations! You now know how to use random selection in Alice!