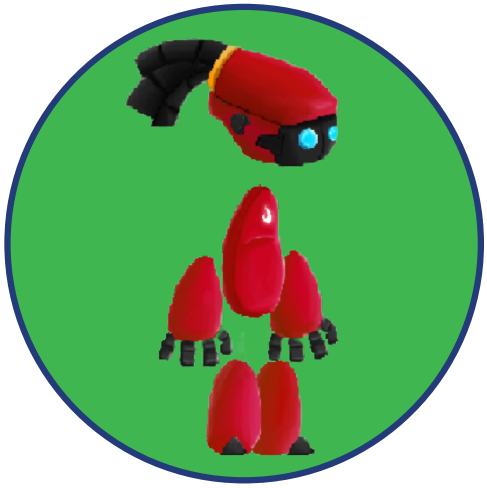
YALANJI QUEST



Yalanji Quest - easy

Follow the Elder's instructions to collect the ripe Lilly Pilly fruit to finish the first level and receive your Junga card.

INTRODUCTION

What you will make

You will make a game where Indigi Bot needs to collect the lilly pilly fruit.



What you will need

HARDWARE

A computer capable of running Scratch 3

SOFTWARE

Scratch 3:
either online
rpf.io/scratchon
or offline
rpf.io/scratchoff

DOWNLOADS

Offline starter project
https://scratch.mit.edu/projects/741195588/

What you will learn

- How to use broadcast
- How to clone a sprite
- How to use scoring

Additional notes for educators

Here is a link to the completed project
https://scratch.mit.edu/projects/731705596/

Code Club Australia acknowledges the Traditional Owners of Country throughout Australia and their continuing connection to land, sea and community. We pay our respects to First Nations people and their living cultures and to Elders past and present.

YALANJI QUEST

Yalanji Quest - Bubu



ACKNOWLEDGEMENT

We acknowledge and pay respect to Yalanji elders both past and present and acknowledge the people who have paved the way to sustaining Yalanji Language, Culture and Science and the First Law.

The concept of Yalanji Quest is a partnering initiative with INDIGI LAB and the Telstra Foundation. The aim and objective of the project is to increase more awareness about the importance of First Nations cultures in STEM education and provide cultural resources for teachers and students to understand Indigenous perspectives in science.

The Yalanji people are from North Queensland. Their country extends from south of Mossman to Cooktown in the north, and Palmer River in the west. They have a strong relationship and connection to the land and rainforest developed over thousands of years, shared through legend and history. This interactive map will show you the general location of the Yalanji people.

Nature is hugely important to the Yalanji culture. They have intimate knowledge of the cycles of life, animals and rainforest, passed down through generations. Their seasonal calendar is used to identify the changes in season on the land and is broken into 5 different times of the year.

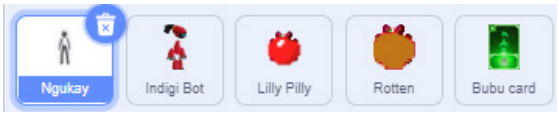
This first quest is to explore Bubu, the land, and its during the Jarramali (stormy) season, November to December on the Yalanji seasonal calendar where you can find plenty of mayi (food) to eat in the bush and Junkar which grows on a tree's near creeks. Junkar is a cherry like fruit that is delicious to eat during this time but with the runoff from heavy rain some mayi can become toxic. So to ensure that you won't get ill it's important for you to collect fruit that is high off the ground in the stormy season.

STEP 1: STARTING THE GAME

We are going to use the sprite Ngukay to welcome the player and explain the game.

Open the starter project - https://scratch.mit.edu/projects/741195588/

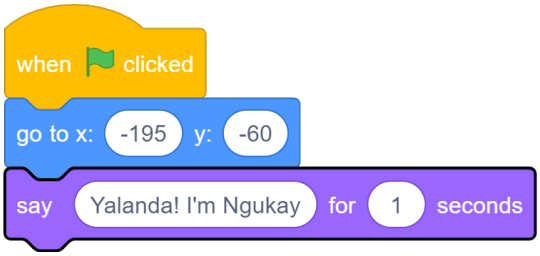
Select the Ngukay sprite.



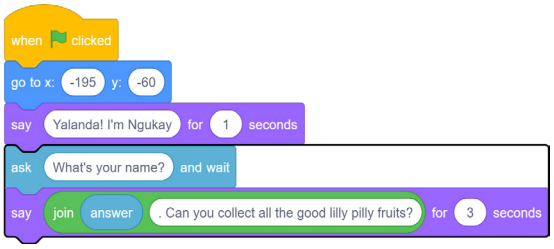
Start with the event when the green flag is clicked. Code Ngukay to go to x: -195 y:-60.



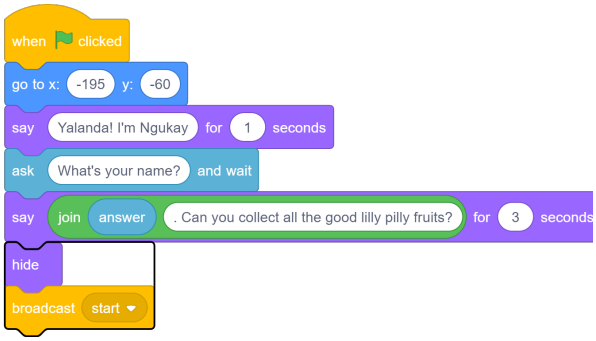
Next get Ngukay to say his welcome for 1 second.



Next add a sensing block that asks the player their name. Then we will get Ngukay to say a response. To create the response add in a join operator block that joins the answer and a sentence for 3 seconds.

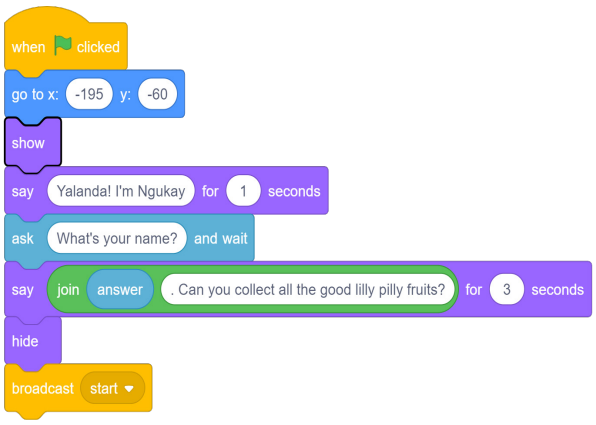


Once this is finished we need Ngukay to hide so that the game can start. To make it start we will send a new broadcast start. We will use this broadcast to let the other sprites know when to show on the screen.



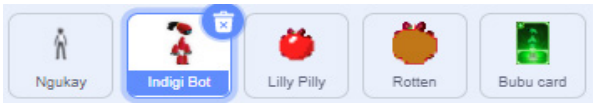
Test your code. You should get asked to type your name in and have the game explained to you. Press the flag to start again. What's happened?

We need to add a block so the Ngukay will show at the beginning.

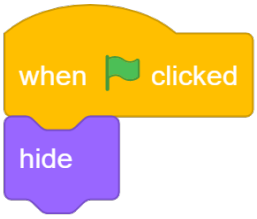


STEP 2: MOVING INDIGI BOT

Select the Indigi Bot sprite



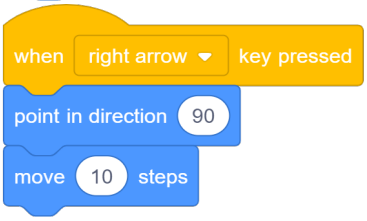
Let's code Indigi Bot for what to do when the green flag is clicked. We don't want Indigi Bot on the screen when Ngukay is talking so the first block is to hide.



Indigi Bots game starts when the broadcast start is received and this is when he needs to show on screen and go to the starting position.



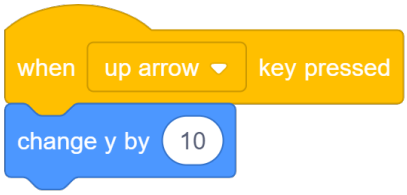
Let's code Indigi Bot and how he moves. When the right arrow key pressed Indigi Bot will point in direction 90 and move 10 steps.



When the left arrow key pressed Indigi Bot will point in direction -90 and move 10 steps.



When up arrow key pressed change y by 10.



When down arow key pressed change y by -10.



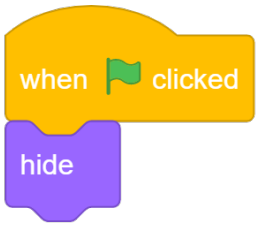
Test your code. Can you get Indigi bot to move around the screen? If you don't like how he moves try changing the values.

STEP 3: LILLY PILLY

Select the lilly pilly sprite.



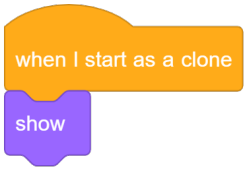
Start by coding the lilly pilly to hide when the green flag is clicked.



We want to have multiple lilly pillys on the screen for the game so we are going to code the sprite to clone itself. When start is received repeat 6 times create clone of myself.



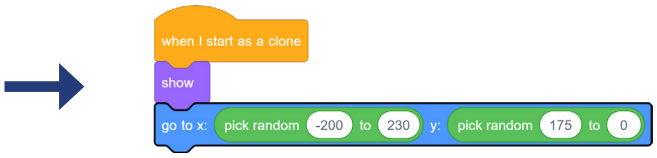
Now to code what each of the clones will do when I start as clone. The first thing is to show on the screen.



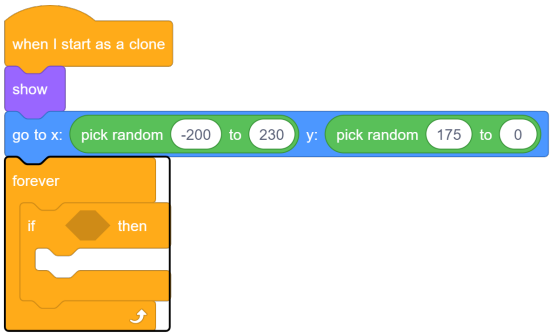
Test your code. Do you only see 1 lilly pilly? This is because all 6 clones are in exactly the same place. Let's fix this.

Add a go to block. Inside the x and y fields add a pick random operator. Add in the co-ordaintes.

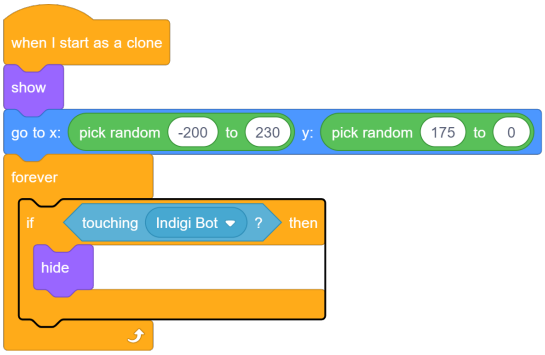
If you test again now you will see 6 clones appear.



For the game we need the clones to disappear when Indigi Bot touches them, to make it look like they have been picked. Add a forever block and inside it and if then block.

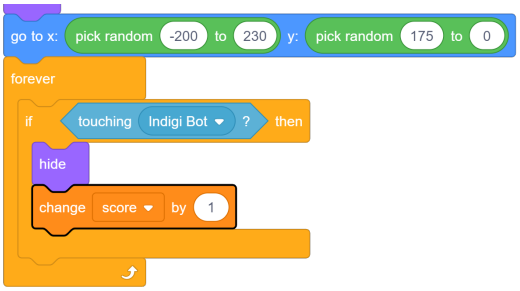


Inside the if then block add a sensing block of touching Indigi Bot. If the lilly pilly is touching our Bot we want the lilly pilly to hide.

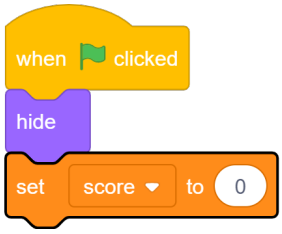


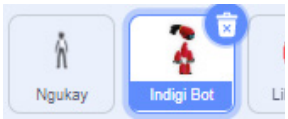
Test your code. Do the lilly pillys hide when Indigi Bot touches them?

Let's add in some scoring. When a lilly pilly touches Indigi Bot change score by 1.



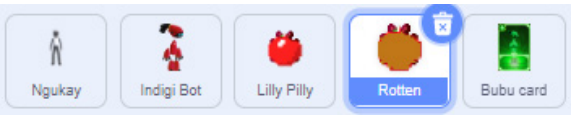
We need to tell the game to set the score at 0 at the start of a game. **Select the Indigi Bot sprite.** Add onto the green flag code.



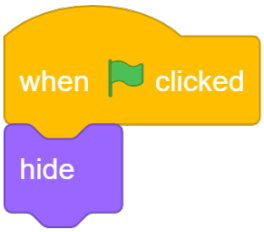


STEP 4: THE ROTTEN FRUIT

Select the rotten sprite.

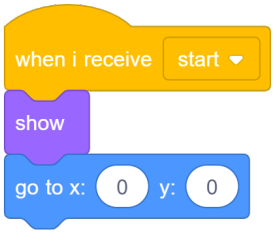


When the green flag is clicked the rotten fruit needs to hide while Ngukay is talking.

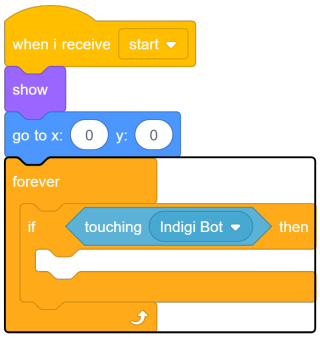


*TIP - the next code is built the same as the code for the lilly pilly. You can drag and drop the code from the lilly pilly onto the rotten sprite and change the specifics, or you can build the code again.

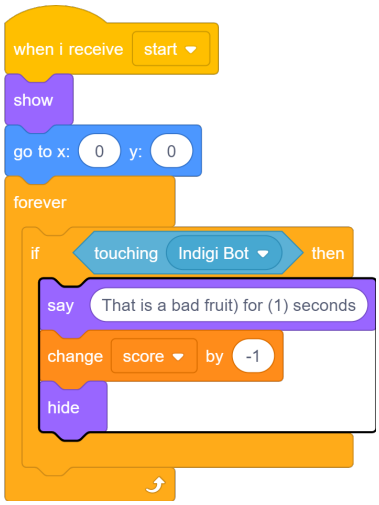
When the sprite receives start it needs to show and go to position x 0 y 0.



Add a forever block and inside it place an if then block that has the sensing block inside it of touching Indigi Bot.



Add a say block that tells the player it is a bad fruit. The next block needs to change the score by -1 and then hide.



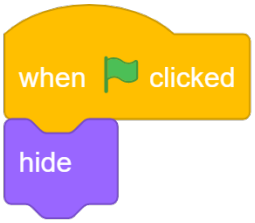
Test your code.

STEP 4: RECEIVING THE BUBU CARD

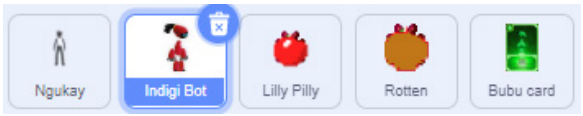
Select the Bubu card sprite



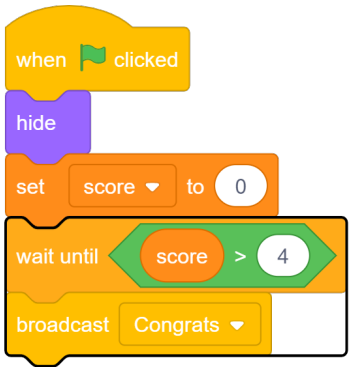
Code the card to hide when green flag is clicked



We want the card to show when the player reaches a score of 5. We need to add code to the Indigi Bot sprite.



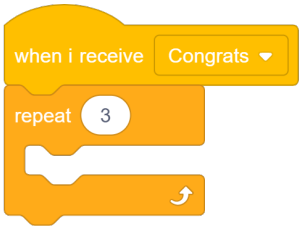
Under the code you've started for the green flag add a control block wait until. Inside it add an operator block that shows the larger than symbol. Add in the variable score, so when the score is more than 4 the action will happen. Then send a new broadcast of Congrats



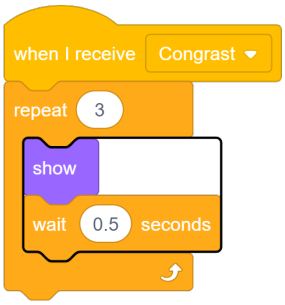
Switch back to your card sprite.



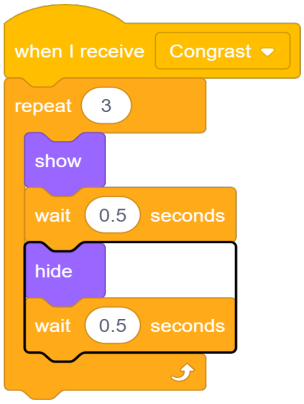
Start with when I receive Congrats and add a repeat block.



We are going to make the card flash on the screen. Add blocks show then wait 0.5 seconds



Then add blocks to hide then wait 0.5 seconds.

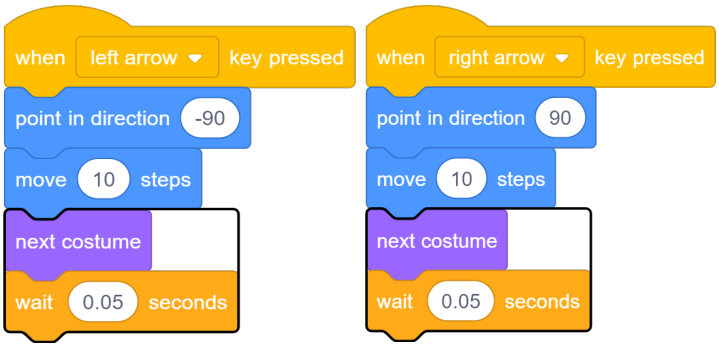


To make the card stay on screen at the end add a show block after the repeat block has finished.



Test your code. Your game should now work!

Do you want to make Indigi Bot look like he is running? Add this code to your project on the Indigi Bot sprite.



Challenges:

Sprite movement

Can you make improvements to the way that the sprites work in the game? You might try to:-

- Make Indigi Bots movements more fluid
- Improve the random positions of the lilly pilly fruits
- Have Ngukay interact more on the screen
- Create a more interesting way of showing the Bubu card

Add in sound

Our project currently doesn't have any sound. Can you add some in? Perhaps it could be for:-

- Collecting good fruit
- Collecting bad fruit
- Ngukay's introduction
- A congratulations at the end when the card appears

Incorporating Hardware

If you have access to a Makey Makey, can you create a real life controller for your game?

Congratulations!

You have completed the Bubu challange and learnt how to pick the Junkar fruit from the tops of the trees. Make sure you download your certificate for completing the project.

