Qld Hide and Sneak

Create a hide and seek game that explores unique places throughout Queensland.

INTRODUCTION

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

What you will learn

• How to incorporate different backdrops
• How to use broadcast functions
• How to manipulate sprites

Starter Project
https://scratch.mit.edu/projects/756064441/

Additional notes for educators

Here is a link to the completed project
https://scratch.mit.edu/projects/746485976/

Read this blog post for information about the Code of Origin project by Code Club Australia.
STEP 1 - CHANGING BACKDROPS

Open the starter project - [https://scratch.mit.edu/projects/756064441/](https://scratch.mit.edu/projects/756064441/)

Select the koala sprite. Most of the algorithms will be attached to this sprite.

Start with the event **when this sprite clicked**. Add a sound block that will play. Add a block for **next backdrop**. Test your code. Clicking on the koala should make the backdrops change.

Start a new event **when backdrop switches to Start**. Add blocks to set the size, go to specific x y coordinates and point in direction 90. This will have the koala showing on the Qld map at the start of the game.

Test your code.

STEP 2 - SETTING ALL BACKDROPS

Remain on the koala sprite. Start a new event **when backdrop switches to sugar cane**. Add blocks that set the size and coordinates. It is important to get these right as this positions the koala to be 'hidden' in the scene.
Start with the event `when backdrop switches to Barrier Reef`. Add blocks to set the size, coordinates and direction.

```plaintext
when backdrop switches to Barrier Reef
set size to 60 %
go to x: 200 y: 35
point in direction -90
```

Start with the event `when backdrop switches to cattle`. Add blocks to set the size and coordinates.

```plaintext
when backdrop switches to cattle
set size to 20 %
go to x: -110 y: -145
```

Start with the event `when backdrop switches to Daintree`. Add blocks to set the size, coordinates and direction.

```plaintext
when backdrop switches to Daintree
set size to 40 %
go to x: 180 y: 35
point in direction -90
```

Start with the event `when backdrop switches to Qantas`. Add blocks to set the size, coordinates and direction.

```plaintext
when backdrop switches to Qantas
set size to 30 %
go to x: -110 y: 0
point in direction 90
```
Test your code. As you click the koala on each different backdrop it should swap to the next backdrop and be ‘hidden’ in a new position. You can change any of the inputs to create your own hiding places.

STEP 2 - CREATING A DISTRACTION

Select the butterfly sprite

Start an algorithm with the event when the green flag is clicked. Set the butterfly to go to the front layer so that sometimes it will hide the koala. Add blocks to set the rotation style and direction.

Add a forever block and inside it put a move block. This will have the butterfly continually moving.

Test your code. The butterfly should move. Do you notice a problem? Let’s fix that.
Inside the forever block, and the code **if on edge, bounce**. This will have the butterfly bounce from the edge of the screen and continue movement.

If you click on the costumes tab you will notice that the butterfly has different costumes which can make it look like it is flying.

Add a block that changes to the **next costume** and then a **wait** block. Change the timing to suit what looks best.

Test your code. Your game is now complete. The butterfly should be a distraction flying over the page, sometimes over the top of the koala. And each time you click the koala the backdrop should change, with the koala in its next hiding position.
Challenges:

Add more pages
Queensland is known for many more famous places, landmarks and scenes. What new backdrops can you add and how can you hide the koala in these backdrops?

Increase difficulty
Often games increase in difficulty with each new level that the player works through. How could you add this feature? Perhaps there is a time limit on each backdrop that determines if you get to the next screen or not. Maybe the koala starts really small and slowly increases in size the longer it takes for the player to find it.

Distractors
At the moment there is just the butterfly distractor. Could the distractor be:
• a different sprite in each level
• multiplied every new level that is reached eg 2 butterflies on the 2nd screen and then 3 on the 3rd
• the sprite could change size, speed or colour depending on the level or backdrop

Congratulations!

You have created a game that will help others learn about Queensland.

Which state or territory will win the Code of Origin?