



Things to do with your Kookaberry

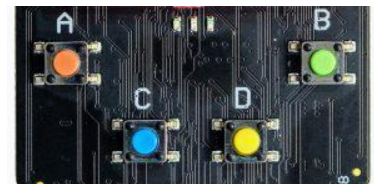
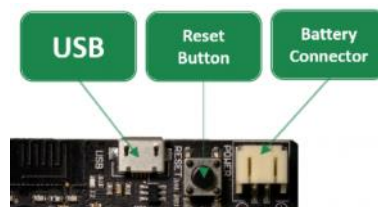
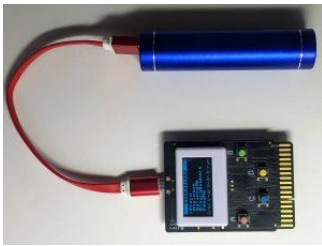
Overview

This document suggests some fun things (and some serious ones) to get you started using the Kookaberry straight out of the Class Kit box.

No internet or WiFi access is needed to operate your Kookaberry, and no coding skills will be required. Only a few Apps will require you to connect a peripheral.

Turning your Kookaberry on

- Take a Kookaberry out of its bubble wrap packaging. Keep the packet to store it back in the box when you have finished.
- Select a blue cylindrical battery and one of the flat ribbon USB leads and connect the battery to the Kookaberry using the USB lead



- The Kookaberry is now active (the green light should be glowing on the back), but the screen has to be turned on by pressing the Reset button on the back of the board and Button B on the front of the board in the following sequence
 - Hold the board in your left hand with your thumb on the left hand bottom corner of the screen and your index finger resting on the reset button on the back of the board.
 - Now place the thumb of your right hand on the green Button B with your right index finger underneath to press against when you press Button B
 - Now hold Button B down and press the reset button once and release. Don't keep holding it down. The screen should now turn on.
- Navigate to the app of your choice using Buttons C or D.
- In general, Button B will start to run an App, and Button A will exit back to the Menu.

Much more detail on getting up and running can be found in the [Tutorial: Getting Started](#) on the Kookaberry website.



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ReTimer

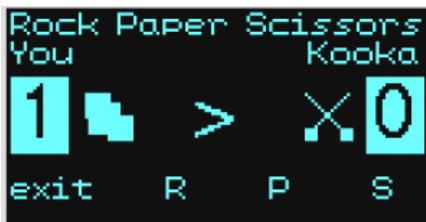


Imagine that you are starting a car in the [F1 in Schools competition](#). When all the lights go out, a trigger press sets the car off down the track. The time between when your eye registers that the lights are out and your pressing the trigger is your reaction time.

The three LEDs on the front of the Kookaberry light up in turn until they are all on. When they all go out press Button B.

Champions have reaction times of less than 20 Msecs. If you can achieve less than 200Msecs you are doing well!

Rock, Paper, Scissors



This is just your stock standard Rock, Paper, Scissors game. Button C is Rock(R), Button D is Paper (P), and Button B is Scissors(S)

[Binary Numbers](#)



This App helps you experientially learn the relationship between binary numbers (base 2) and decimal numbers (base 10). Click on the link in the heading for full details of this App

The App has three modes of operation selected by pressing Button B. The mode is shown at the bottom right of the screen,

Tip: To calculate the decimal value of the displayed binary, add together the decimal values of the bits showing as "1".

- **Show:** This shows the binary equivalent of decimal numbers from 0 to 31. Buttons C and D decrease or increase the decimal number at the top of the screen, Its decimal equivalent is displayed. The decimal value of each bit is shown as little numbers against each bit.



Things to do with your Kookaberry

- **Dec:** This demonstrates the conversion of a **decimal** value to a binary one. Button C picks a decimal number at random and Button D shows the binary equivalent.
- **Bin:** This demonstrates the conversion of a binary number to a decimal one. Button C picks a binary number at random and Button D shows the decimal equivalent.

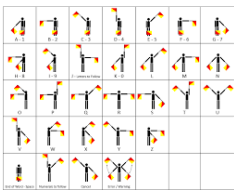
This App supports NSW Syllabus outcomes ST3-11Di-T and TE4-7DI; and National Curriculum outcome [ACTDIK015](#) and [ACTDIP016](#)

Lander



This is a game where you juggle thruster force and fuel to bring a lunar lander to rest on a small platform. It is harder than it seems. The instructions are on the screen, but click on the link in the heading for full details of this App

Semaphore



This App needs a partner and two Kookaberries, as you will be sending messages to each other using the Kookaberry's in-built radio. A traditional semaphore system uses flags but the same principal applies.

A [buzzer](#) needs to be attached to Pin 4 of each Kookaberry using the 3-wire Jst/Jst connecting lead. Click on the link in the heading for full details of this App.

Three types of message can be sent and received, a wave, a like and a sound signal. Stay within about 5 metres of each other.

Press Button C to send a Wave; Button B to send a Like; and Button B to send a sound signal.

This App supports NSW Syllabus outcomes ST3-11Di-T and TE4-7DI; and National Curriculum outcome [ACTDIK014](#); [ACTDIK023](#)

Music Demo



This App plays tunes from the micro:bit playbook. Attach a loudspeaker to P2, scroll to MusicDemo and press Button B to run.

If you have downloaded KookaSuite, you can analyse the micro:bit musical notation by running the KookaIDE and following the instructions in the [MusicDemo App](#) description on the Kookaberry website.

This App supports NSW Syllabus outcomes ST2-11Di-T and Mus3.3; and National Curriculum outcome [ACTDIK007](#)



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[BalanceMe](#)



This app emulates the egg and spoon race that is fully described in the [BalanceMe App](#) description on the Kookaberry website (which includes a video) and used in the [Practice Makes Perfect Lesson Plan](#). Attach a buzzer to P2; scroll to BalanceMe and press Button B to start.

This App and the Lesson Plan supports NSW Syllabus outcomes ST2-11Di-T; ST3-11Di-T; PD2-4; PD2-8; and National Curriculum outcomes [ACTDIP016](#); [ACMSP120](#); [ACMSP119](#); [ACPMP067](#); [ACPMP064](#)

[MoveMusic](#)

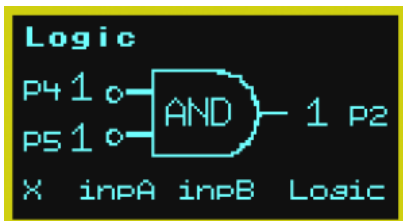


This app uses the Kookaberry's accelerometer (all smartphones and tablets have one - it is what makes the screen rotate to suit your viewing angle) to play the scale of C Major in the seven octaves of a standard piano. It is best if you have a handle for this app - see how to print a 3D one at [this web page](#).

Attach a Loudspeaker to P4, scroll to MoveMusic, and press Button B to start. Follow the instructions in the [MoveMusic App](#) description on the Kookaberry webpage and review its use in the [Making Music Lesson Plan](#)

This App and Lesson Plan support NSW Syllabus outcomes ST2-11Di-T and Mus3.2; and National Curriculum outcomes [ACTDIK007](#); [ACAMUM088](#); [ACAMUM089](#); [ACMMG108](#); [ACTDIK007](#); [ACTDIK008](#)

[Logic](#)



This App is an experiential introduction to the decision making component of digital systems - Logic Gates. **IF** both John **AND** Sue are present **THEN** the lesson can start - otherwise it won't.... **IF** either John **OR** Sue is present **THEN** the lesson can start - otherwise it won't].

Try out the various combinations of logic gates using the buttons on the front of the Kookaberry and then give the [Tutorial: Start your Engines](#) a go.

This App and Tutorial support NSW Syllabus outcomes ST3-11Di-T and TE4-7DI; and National Curriculum outcome [ACTDIK014](#); [ACTDIP019](#); [ACTDIP020](#)