

Using Light Blue Bean to Teach Coding

Coding is a complex, yet fun industry that will never be obsolete. I find coding simple, but it may not be so simple for an inquiring mind that wants to learn the basics. Light Blue Bean is the perfect technology to teach coding to novice users and for developing little minds.

Internet of Things (IOT)

The IOT network is almost like the secret society of gadgets. The internet of things is the network in which items like vehicles, buildings and other items that have network connectivity, communicate with one another. Basically, anything that connects to the internet either from a network signal or Bluetooth is included in the internet of things. All the connected gadgets that people like to play with these days are connected to the IOT network.

Light Blue Bean

What is light blue bean you ask? Well, light Blue Bean is a device that connects your physical things to the internet of things network through Bluetooth technology. Light Blue Bean can be programmed wirelessly and can be placed into any inanimate object.

Other IOT Devices That Teach Coding

Is Light Blue Bean my only option? Everyone likes to have other options and no, light Blue Bean isn't the only IOT device on the market that can teach coding. There is an abundance of products that can help people learn how to code such as Arduino, Raspberry Pi and Netduino.

Computational Thinking

Thinking is the basis of human intelligence. Everyone thinks, so why not think computationally? The concept of computational thinking is essentially tricking the mind into thinking the way a computer thinks. These devices that teach coding will help people learn how to code by teaching them how to think like a computer. Computational thinking works in three processes:

1. Problem Formulation
2. Solution Expression
3. Solution Execution and Evaluation

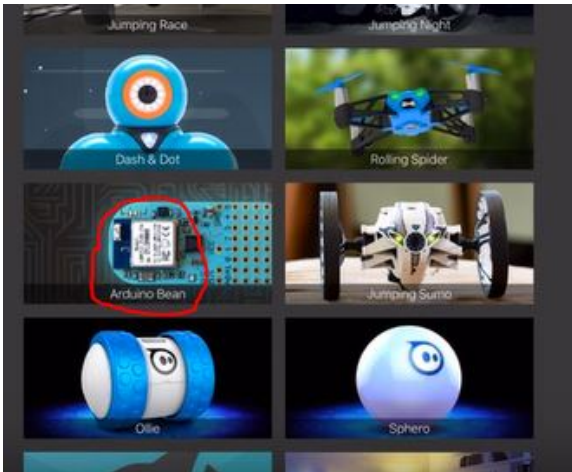
Once a problem has been formulated the student will use their human abilities to create a model that can solve the problem. The model is composed in a manner that allows a computational device to follow through with the solution.

Developing the skills needed for computational thinking will allow the student to be successful in coding ventures using IOT devices.

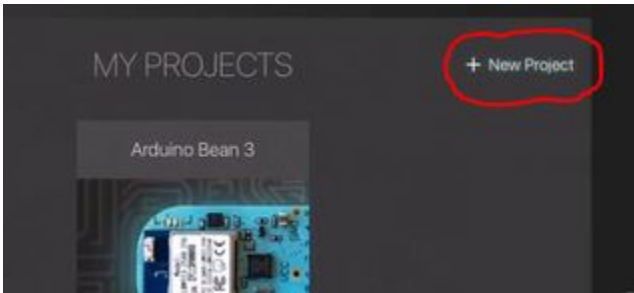
How to Use Light Blue Bean with the Tickle App

Light Blue Bean comes with an app to control it but it can also be controlled by other apps. One of the apps that is commonly used to control the Light Blue Bean is the Tickle App. Tickle is fun to use because the graphics are appealing to children. With the application, you can choose funny little characters and make them move around and speak. This is the application that I like to use to control the Light Blue Bean. To use Light Blue Bean with the Tickle app, complete the following steps:

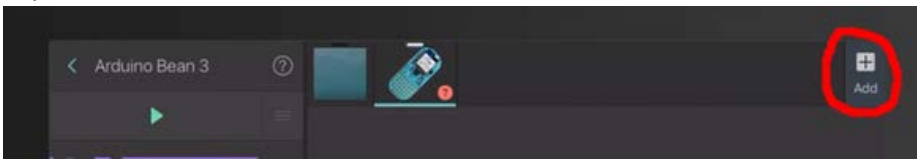
1. Download and open the Tickle app
2. Ensure that the Light Blue Bean is in range of the device with the Tickle app
3. Tap on the Light Blue Bean icon to connect to the bean



4. Click on New Project on the top right corner of the screen



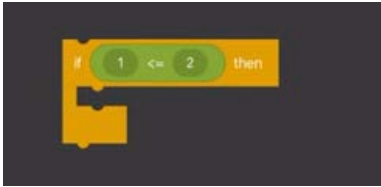
5. Tap on Add+



6. Tap on the desired Character
7. Scroll down to Control
8. Select the If Then statement
9. Drag and drop the statement to the right section of the screen



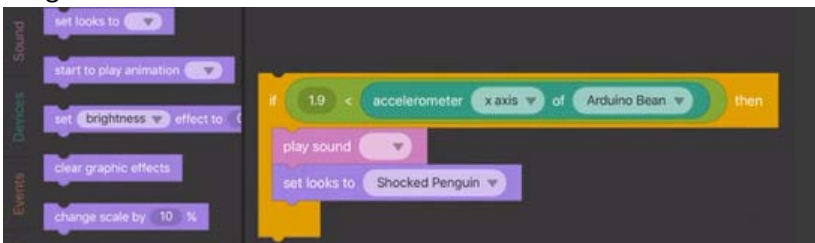
10. Scroll down to the sensing range
11. Drag and drop a greater than and less than statement into the if then Statement



12. Enter a desired speed in both the greater than slot
13. Scroll down to the devices code
14. Drag and drop the accelerometer into the less than slot



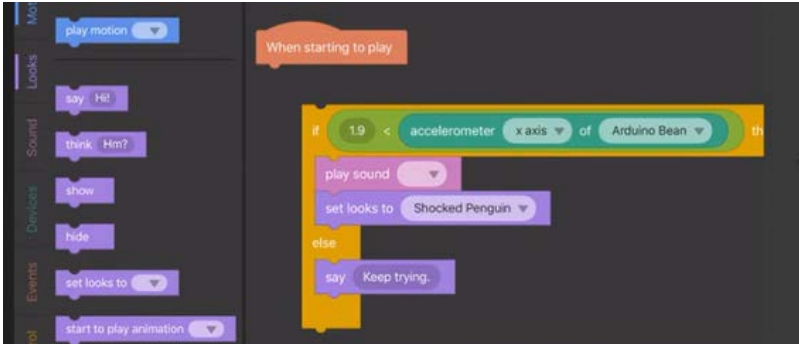
15. Click on the Drop-Down List that says iPad and choose the Light Blue Bean
16. Drag and drop the command that you would like to happen when the desired speed is achieved (i.e. playing a sound)
17. Drag the looks statement down to the if then Statement



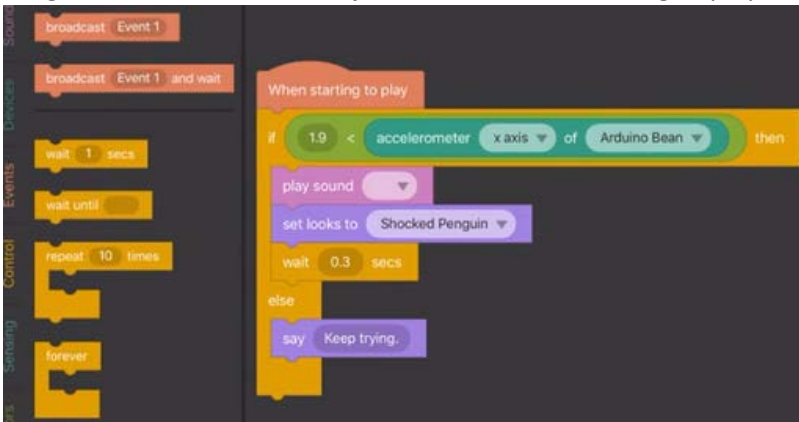
18. Tap on the drop-down list and choose a reaction that you want your desired character to have when it reaches the desired speed
19. Find the if then else statement and use this statement if you would like something to happen to your character if it doesn't reach the desired speed

Note: If you are using the If Then Else statement you need to drag and drop all the elements from the if then statement into the if then else statement. Once all the elements from the if then statement are transferred, drag and drop the blank statement into the left side of the screen.

20. Drag and drop a say code beside else
21. Change the text in the bubble to the phrase you want your character to say if it does not reach the desired speed



22. Select a wait statement and drag and drop it under the then statement line
23. Select a desired waiting time for the character to wait before it says the statement
24. Drag the whole statement to join it to the when starting to play line



25. Press play

Once the bean moves to a certain speed it will interact with the desired character and play a sound. The Light Blue Bean and the Tickle app together is an easy fun way to teach students how to code. I wish this type of fun technology was around when I was learning how to code.

The Downside of the IOT

Although the IOT is an amazing tool to connect wearable devices like the apple watch and GPS locators, there is a downside to it. There are hackers out there that can and will get into your IOT devices and shut them down or steal information. Always be careful of the networks that your device connects to and the security protocols.