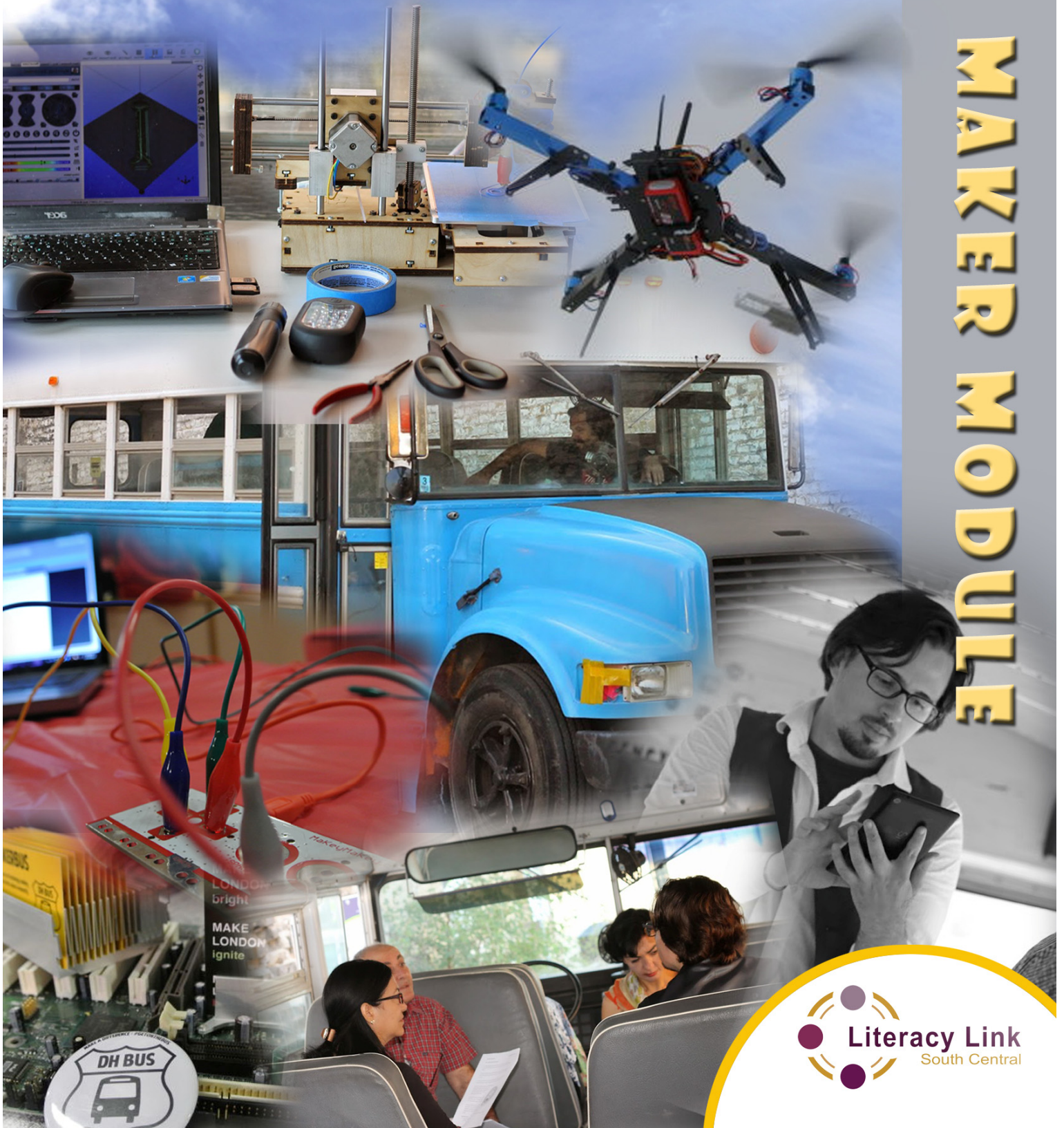




BLUETOOTH

MAKER MODULE



Acknowledgements

These Maker Modules were prepared for the Literacy Link South Central project “Using Technology to Facilitate Connections between Literacy and the Broader Community” (2014). Maker Modules available in this series include:

Augmented Reality
Bluetooth
Dropbox
Evernote

Leap Motion
Macrophotography
MaKey MaKey
Portable Podcasting

QR Codes
Tiny Scan
Word Lens
The World of 3D

Literacy Link South Central (LLSC) wishes to acknowledge the valuable contributions made by the following consultants, project staff and partners:

Beth Compton, MakerBus
Danielle Carr, Literacy-Technology Liaison
Herta Taylor, Literacy-Technology Liaison
James Graham, MakerBus
Kim Martin, MakerBus
Ryan Hunt, MakerBus
Summer Burton, LLSC

Titus Ferguson, UnLondon Digital Media Association
Tony Mejia, Literacy-Technology Liaison

The staff and learners of Nokee Kwe Native Education Centre, Collège Boréal London, Literacy London, ATN Access Inc., WIL Employment Connections and Youth Opportunities Unlimited for testing the Maker Modules and providing their feedback.



www.makerbus.ca/
dhmakerbus@gmail.com



www.llsc.on.ca
literacylink@bellnet.ca

© Organizations are encouraged to copy these materials; however, reproducing these materials for a profit is prohibited. 2014

This *Employment Ontario* project is funded in part by the Government of Canada.

**EMPLOYMENT
ONTARIO**

Introduction

To successfully complete this MakerBus Module, you will need:

1. Notes to the Literacy Practitioners
2. Bluetooth Pre Visit
 - estimated time 10 minutes
3. Bluetooth MakerBus Module
 - estimated time is 15 minutes
4. Bluetooth Post Visit
 - estimated time is 10 minutes
5. Evaluation Forms (optional)
 - learners' feedback is done on the bus
 - practitioners' feedback to be submitted at a later date
6. Equipment List:
 - smartphones
 - tablets
 - Jawbone Mini JamBox Bluetooth speakers



Notes to the MakerBus Facilitator: Have music preloaded on devices.

All instructional materials are available on the Literacy Link South Central (LLSC) website, should you need additional copies. Please visit: <http://www.llsc.on.ca/>.

Bluetooth Notes to the Literacy Practitioners

Learning Objectives:

1. Understand the basics of Bluetooth
2. Enable Bluetooth on a phone
3. Connect to a wireless speakers
4. Play music using Bluetooth
5. Unpair the wireless speaker from a phone



Notes to Practitioners:

The optional Pre Visit for this lesson, while not essential, is designed to lay the foundation for the learning that will happen on the Bus. During the previsit you will talk about Bluetooth and determine your learners' prior knowledge. Encourage learners to share what they know. This will increase their confidence and help learners realize that they have practical and marketable skills. The Pre Visit is estimated to take only 10 minutes, but can vary depending on how much discussion is generated.

Competencies include: B1.2

Their time on the bus will give learners more information on Bluetooth and how it works, and will give the students an opportunity to enable Bluetooth on their smartphones or tablets. If they do not wish to do this or don't own one of these devices, there will be additional smart phones and tablets available for them to use on the bus.

Competencies include: A3; and D2.

The optional Post Visit similarly encourages students to share their learning, hopefully reinforcing it. It is also estimated to take 10 minutes. Competencies include: B1.2; and B2.2.

Bluetooth Pre Visit Activity

Practitioner Guide

Conversation starter:

You have no doubt seen people walking around seemingly talking to themselves, only to find out that they are actually on the phone with a small headset just over their ear. The technology that makes this possible is called Bluetooth. It allows you to use your phone without actually holding it up to your ear.

Discuss as a group:

1. For those who are not familiar with it, can someone describe what Bluetooth does?
2. Have you used Bluetooth? For what?
3. What advantages does it have?
4. Who might be most likely to use it?
5. Are there any limitations that you can think of?
6. What other technologies can you compare it to?

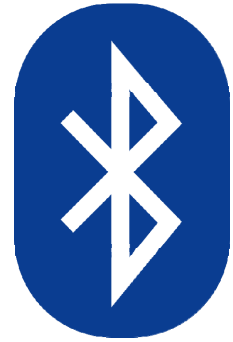


Note: As mentioned in your Practitioner Notes, learners will be asked to enable Bluetooth on their own smartphones. Some learners may be hesitant to do this, so discuss their concerns with them, and let them know that there will be additional devices available for their use on the bus, if needed. Assure learners that Bluetooth provides a secure connection within a limited range (33 feet). As part of the MakerBus task, learners will also be asked to unpair their devices from the speaker on the bus, thereby terminating this connection.



Bluetooth MakerBus Module

Do you recognize the symbol on the right? You may have noticed that your mobile device is labelled, “Bluetooth ready”. Or you may have considered buying wireless headsets, speakers and other digital technology that connects through Bluetooth. This module will give you an opportunity to learn how to use it.



You will learn:

1. the basics of Bluetooth
2. how to enable Bluetooth on your phone
3. how to connect to a wireless speaker
4. how to play music using a wireless speaker
5. how to unpair the wireless speaker from your phone



Part 1: The Basics of Bluetooth

Bluetooth is the name of a wireless technology that is standard for connecting devices without cables.

Bluetooth works by using radio signals to transmit information over short distances (generally 33 feet or less). These transmissions are small bits of rich data like phone calls or music. Bluetooth devices' battery life can last a long time because Bluetooth uses very little energy to function. The signals are secure and available almost everywhere.





Bluetooth is not WiFi. The main difference between the 2 technologies is that Bluetooth communicates one-on-one with a device, whereas WiFi communicates with multiple devices through a wireless router.

There are a number of Bluetooth devices, at a variety of price points, including headsets, speakers, keyboards and medical equipment such as stethoscopes and glucose monitors.



Part 2: Turn on Bluetooth

Follow the instructions to turn on Bluetooth for your Android or Apple device:

	 iPhone
<ol style="list-style-type: none">1. Hit the menu button on your phone and select Systems Settings2. Locate Bluetooth and tap on the right of the OFF button to turn ON3. Check the top of your home screen for the Bluetooth icon (this indicates that Bluetooth is on)	<ol style="list-style-type: none">1. Open Settings2. Tap on Bluetooth3. Tap on the toggle bar so it turns green or blue (This signifies that Bluetooth is turned on)

Your device is now ready and will now look for discoverable Bluetooth devices nearby.

Part 3: Connecting to wireless speakers

Now that you turned your device's Bluetooth on, let's try connecting to a Bluetooth ready device. You will be connecting your device to the Jawbone Mini JamBox wireless speaker.

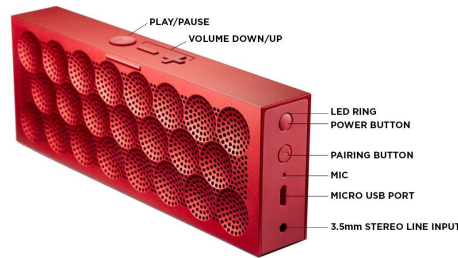


To begin, you will need to put the Jawbone Mini Jambox into pairing mode. Pairing means that both devices, in this case the speaker and smartphone or tablet, will be connected wirelessly and sending signals back and forth.



The Mini JamBox can pair up to 8 devices at once. Let's connect our devices together.

Put the Mini JamBox into pairing mode:

1. turn on the Mini Jambox by pressing the power button (LED light will flash white when turned on)
2. press and hold the pairing button (LED light will flash red and white and you will hear the Mini JamBox announce that it is in pairing mode)



Follow the instructions to pair Bluetooth to your Android or Apple device:

 ANDROID	 iPhone
<ol style="list-style-type: none">1. Go to your Bluetooth settings and tap Search for Device in the Bluetooth menu2. Tap on Mini Jambox in the Available Devices menu to start pairing3. Mini JamBox will appear under the "Paired Devices" menu when successfully paired	<ol style="list-style-type: none">1. Go to your Bluetooth settings and tap Search for Device in the Bluetooth menu2. Tap your Mini JamBox from the Bluetooth menu (If prompted for a password, enter '0000')3. When you see Connected, Mini Jambox and your device is successfully paired

Part 4: Play music using Bluetooth

You will play music from your device through the Mini JamBox. If you are doing this activity with a group, you will need to take turns. When multiple devices are paired with the same speaker, they compete for the Bluetooth signal, and only one will work at a time.





To play music on either Android or Apple device:

1. find the music application (app)
2. tap on a song to play it

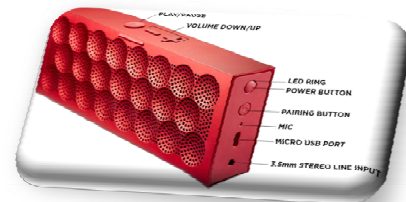
Again, take turns until everyone has had a chance to play music from their device using Bluetooth.

Part 5: Unpair Bluetooth device

Here are steps if you do not want the Bluetooth device on your phone or tablet:

 ANDROID	 iPhone
<ol style="list-style-type: none">1. Go to Bluetooth Settings (Under Wireless Controls in Settings)2. Now tap and hold your paired Device (an option will pop up)3. Tap "Unpair"	<ol style="list-style-type: none">1. Go to Bluetooth Settings (in Settings)2. Tap on the unwanted device3. Tap "Unpair"

If you have more than one Bluetooth enabled device paired with your smartphone, they can work in tandem. For example, you can take calls on a Bluetooth headset even when your phone is paired with the Mini JamBox. It's a great way to avoid getting a \$280 ticket for talking on your phone while driving!



Bluetooth Post Visit Activity



1. Discuss what you learned about Bluetooth with another classmate

2. Think about other situations where Bluetooth may be useful. Jot some down:

3. Are there any situations where using Bluetooth might not be a good idea? Why?

4. Share your ideas and concerns with the rest of the class. Did they agree?

Extension Activity:

What might be Bluetooth compatible at home? When you get there, check it out and see if you can pair your phone to any Bluetooth compatible devices at home. If you can, congratulate yourself - you have just used a new skill.