

Lesson 2: Organise your beats Create collections using

Create collections using lists



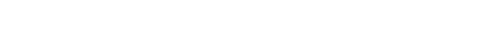
Learning objectives







Understand there are many layers to injustice.





Understand that data structures like lists can be used to store a collection of data items.



Know how to create a list to store items.

Make use of indexes to select items from lists.



Be able to code selection (if) statements to create different pathways through a program amazon future engineer







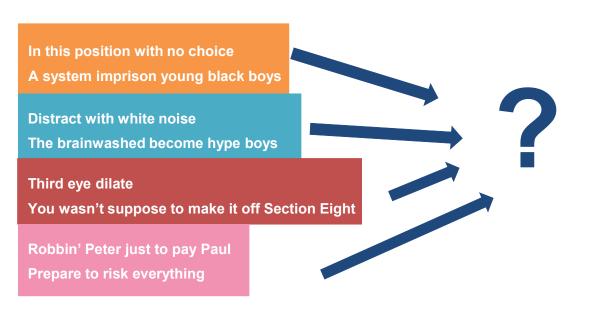








- Layers of injustice
- Knowledge of layers of racism, music and code will be instrumental in the message of your music that you will create in EarSketch.
- Listen to Verse 1, can you identify which layers of OUTKAST link with each of these lyrics:



	Open Minded Thinking
J	Uprightness
Γ	Truth, Transparency
	Kinship
A	Accountability
5	Sequence
	Teach Love

Layers of injusticeanswers





ORIGINAL LYRICS

Audio Verse 1

In this position with no choice

A system imprison young black boys

Distract with white noise

The brainwashed become hype boys
Third eye dilate

You wasn't supposed to make it off Section Eight

Robbin' Peter just to pay Paul Prepare to risk everything

OUTKAST IMAGINATION

Truthtelling

Calling out white supremacy — "Distract with white noise," "In this position with no choice"

Accountability

Mass Incarceration, Poverty, Lack of Education Systems, Institutional Racism — "A system imprison young black boys" Lack of Accountability — "The brainwashed become hype boys"

Uprightness

Resilience, Knowledge of Self, and Doing the Right thing — "Third eye dilate"

Kinship

Your risking everything to take care of your family — "You wasn't supposed to make it off Section Eight"





- We can store a collection of beat objects by holding them inside a list
- Lists are dynamic data structures which means we can insert new items, delete items we don't want from anywhere inside the list
- Each item in the list has an index which starts from zero.

drum1	
vox1	
kick1	

Image like that below but change to

beats = ["drum1", "vox1",

letters | ["drum1", "c"]
0 1 2

Recap using the fitMedia function



Last lesson you made us of the fitMedia function to play a drum beat or similar:

description:

from earsketch import *

pharrell_drum = ENTREP_BEAT_DRUMBEAT

my_tempo = int(input("Enter tempo (120
standard)")) setTempo(my_tempo)

fitMedia(pharrell_drum, 1, 1, 8)

Activity (pairs)

Partner A: Can you explain and summarise this code in just two or three sentences to your partner?

Partner B: Can you explain each line of code, one after the other in your own words to your partner?





• Create some more beat objects like you did with your selected drum beat:

ciara_drum = CIARA_SET_DRUMBEAT_1

pharrell_drum = ENTREP_BEAT_DRUMBEAT

khalid_drum = KHALID_NORM_DRUMBEAT

alicia_drum = AK_UNDOG_STEEL_DRUMS

Place the objects into a list using your object names

drum_list = [ciara_drum, pharell_drum, khalid_drum, alicia_drum]

Activity

Create your own list of beats for an instrument of your choice.

Don't forget you can use the filters to filter all beats by a particular instrument such as drums.





ciara_drum = CIARA_SET_DRUMBEAT_1
pharrell_drum = ENTREP_BEAT_DRUMBEAT
khalid_drum = KHALID_NORM_DRUMBEAT
alicia_drum = AK_UNDOG_STEEL_DRUMS

fitMedia(pharrell drum, 1, 1, 8)

Activity (pairs)

Can you describe how we can play an item from our newly created list?

What parameter do we need to change?

What do we need to change the parameter to?





By including the index of the list, we can select to play ciara_drum using this code:

```
ciara_drum = CIARA_SET_DRUMBEAT_1
pharrell_drum = ENTREP_BEAT_DRUMBEAT
khalid_drum = KHALID_NORM_DRUMBEAT
alicia_drum = AK_UNDOG_STEEL_DRUMS
fitMedia(pharrell_drum, 1, 1, 8)
drum_list = [ciara_drum, pharrell_drum, khalid_drum, alicia_drum]
fitMedia(drum_list[0], 1, 1, 8)
```

Activity (pairs)

What would be played with each of these commands?





• Previously the beat was played by naming the object as one of the parameters:

```
ciara_drum = CIARA_SET_DRUMBEAT_1
pharrell_drum = ENTREP_BEAT_DRUMBEAT
khalid_drum = KHALID_NORM_DRUMBEAT
alicia_drum = AK_UNDOG_STEEL_DRUMS

drum_list = [ciara_drum, pharrell_drum, khalid_drum, alicia_drum]
fitMedia(drum_list[1], 1, 1, 8)
fitMedia(drum_list[0], 1, 1, 8)
fitMedia(drum_list[4], 1, 1, 8)
fitMedia(drum_list[3], 1, 1, 8)
```





- Use your knowledge of variables and lists to create your own collection of sounds
- Use the fitMedia() command to play items from your list
- You could create a list with many samples in and select which you want to play by changing the list index to create your best sound.

Activity

Using the music filters, select a drum, bass, vocals samples as well as another of your choice and organise them as variables in a list.

Use the fitMedia() function to play all the instruments simultaneously



fitMedia(drum list[3], 1, 1, 8)



```
ciara drum = CIARA SET DRUMBEAT 1
pharrell drum = ENTREP BEAT DRUMBEAT
khalid drum = KHALID NORM DRUMBEAT
alicia drum = AK UNDOG STEEL DRUMS
drum list = [ciara drum, pharrell drum, khalid drum, alicia drum]
fitMedia(drum list[0], 1, 1, 8)
fitMedia(drum list[1], 1, 1, 8)
fitMedia(drum_list[2], 1, 1, 8)
```

http://tiny.cc/yvip_l2_sol