Live coding music with Sonic Pi

Sonic Pi is a program that lets you make music by writing code, rather than pressing keys on a piano, hitting drums, or plucking guitar strings.

To **listen** to a piece click the **Run** button.

To **stop it playing** click the **Stop** button.

Click on the numbered tabs marked **Buffer 0**, **Buffer 1**, etc. at the bottom of the screen to find some **familiar songs** you can remix by changing the Sonic Pi commands described on this worksheet.

Push the tempo!

In Sonic Pi the command **use_bpm** tells the computer how fast to play the music. Here we're telling it to use a bpm (**b**eats **p**er **m**inute) of 60:
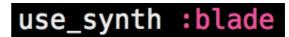
`use_bpm 60`

Change the number, then click the **Run** button to hear how your new bpm sounds!

Change the Synth

Synths (short for synthesisers) are what the computer uses to create a note electronically as you play it.   If you've ever played an electronic keyboard you've used a synth.

The **use_synth** command tells Sonic Pi which synth to use.

`use_synth :blade`

Try typing in a different value for the synth name (in pink) when you see the **use_synth** command. Some others to try are:

- `:prophet  :pluck  :supersaw  :pretty_bell   :mod_sine`
- `:chiplead :hoover :tb303      :zawa    :dsaw   :piano`

Click on the **Run** button again to hear the change in sound (it might take a few seconds to work).

Change the sample

Samples are small sound clips that have been made and recorded earlier. This command tells Sonic Pi to play the sample "loop_amen":

```
sample :loop_amen
```

Try changing some of the samples used in the tunes you're remixing. Some samples to try are:

```
:vinyl_rewind  :bass_drop_c  :bd_haus  :bd_808  :guit_em9
:drum_cymbal_open    :tabla_na    :misc_cineboom
:ambi_lunar_landing   :drum_cymbal_closed   :misc_crow
```

Change the FX

Effects (or **FX** for short**)** change the sound of synths and samples - like an FX pedal on an electric guitar.

This command tells Sonic Pi to use the "bitcrusher" effect.

```
with_fx :bitcrusher
```

Try changing the FX used when you see a **with_fx** command in the code you're remixing. Some to try out are:

```
:krush  :wobble  :echo  :reverb  :panslicer :ixi_techno
:gverb  :ring_mod  :distortion   :compressor :whammy
```

Keep going!

If you've enjoyed this workshop, you can carry on playing at home! Download Sonic Pi **free** for all types of computer here: **sonic-pi.net**