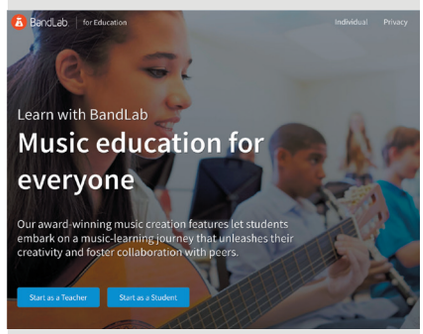
BandLab

KS3

James Manwaring

James Manwaring is Director of Music for Windsor Learning Partnership and has been teaching music for 17 years. He is a member of the Music Teachers Association and ISM, and he writes his own music blog.



Introduction

Over two resources – this month and next month – I'm going to be looking at cloud-based digital audio workstations: this month BandLab, and next month Soundtrap. We'll be bringing together projects and concepts across both applications, and also looking at how they are set up, managed and used in practice.

BandLab is a free online digital audio workstation (or DAW) that allows users to create music. It not only works for individuals, but can also be configured for education using a bespoke website (**http://edu.bandlab.com/**). This may work for a school with limited resources or budget, but can also sit alongside existing in-class software. If you're looking for another way to set homework for students, BandLab may provide that solution. Alternatively, you may enjoy using BandLab as a teacher, creating music and resources for your own teaching.

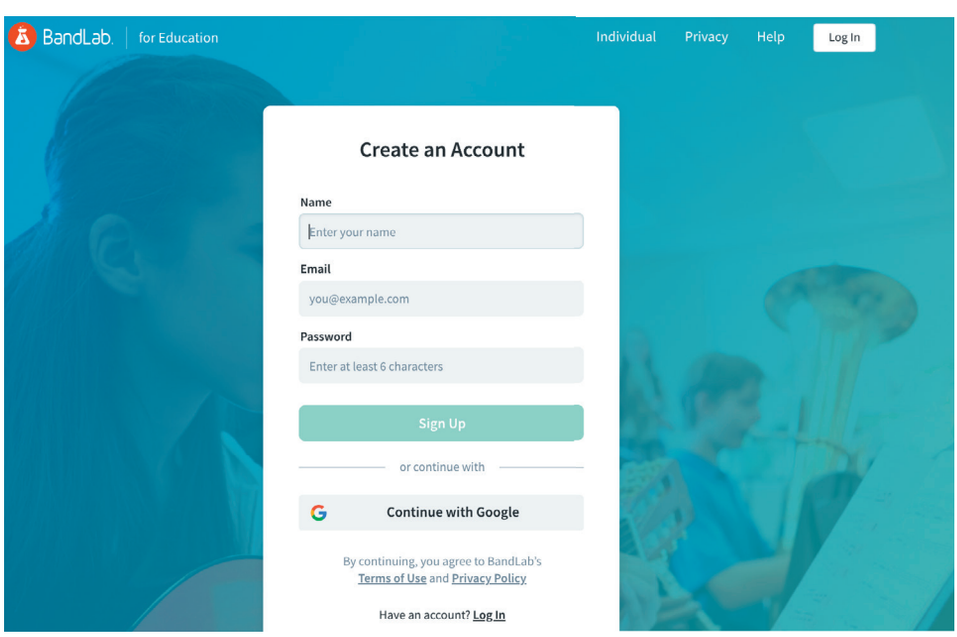
For the purposes of this resource, I will be using BandLab's education site, which allows you to create classes and operate them as a teacher. BandLab works best on the Google Chrome browser, so you'd be advised to download that before starting out with the DAW. BandLab does offer an app for iPhone and iPad, but unfortunately you can't use the educational version of BandLab with it.

Setting up BandLab

If you're planning on using BandLab with your music classes, it's a good idea to get everything set up and ready before telling the students. In this section we'll go through the steps required to set up classes and invite students, which is a simple process.

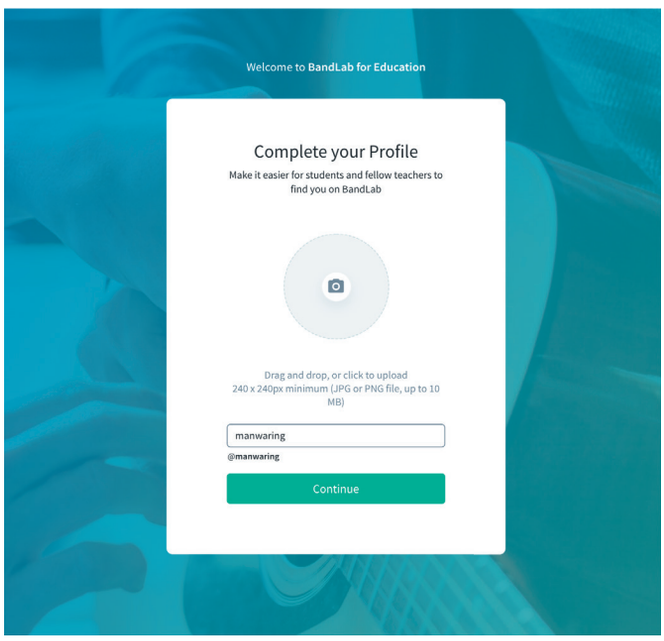
Setting up BandLab for class use: step-by-step guide

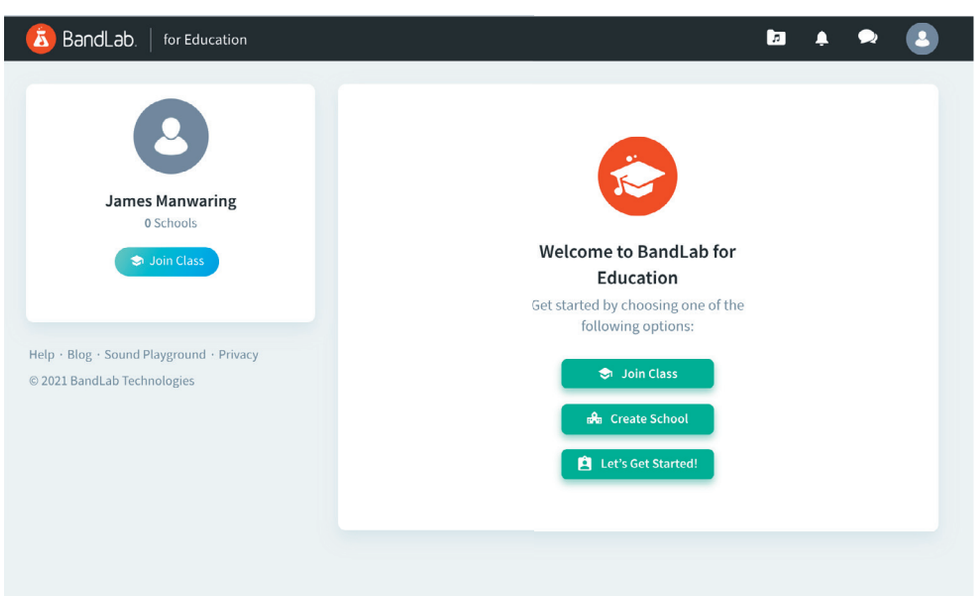
1 When you first visit the BandLab website, you'll be given the option to 'Start as a Teacher'. Click on this link to set up your teacher account:



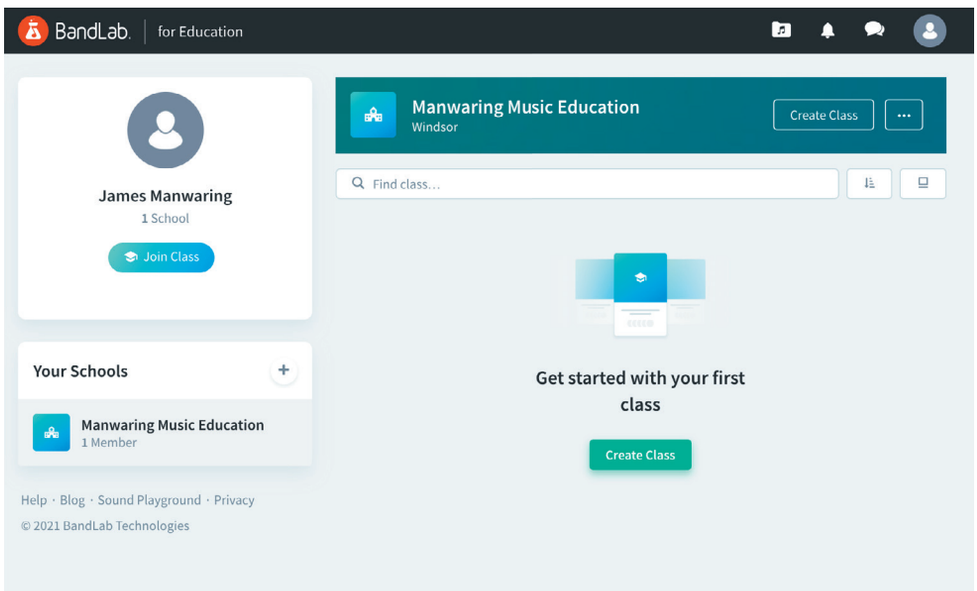
It's advisable to use your school email address at this stage.

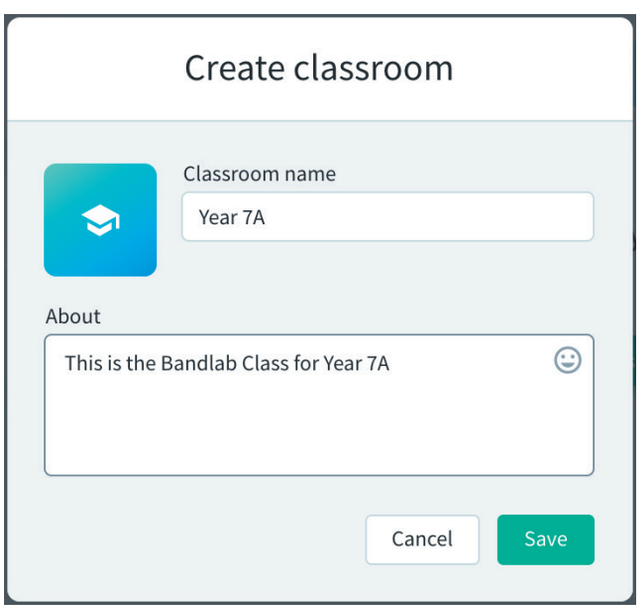
2 Once you've logged in, you can change your profile name and image, and you're then taken to the main screen where you can add a school and a class. It's a good idea to follow these steps and get everything set up right at the beginning. Once you've created a school, you can then add classes to that school. If you work across multiple sites, you can also add additional schools, and then put classes into those additional schools.



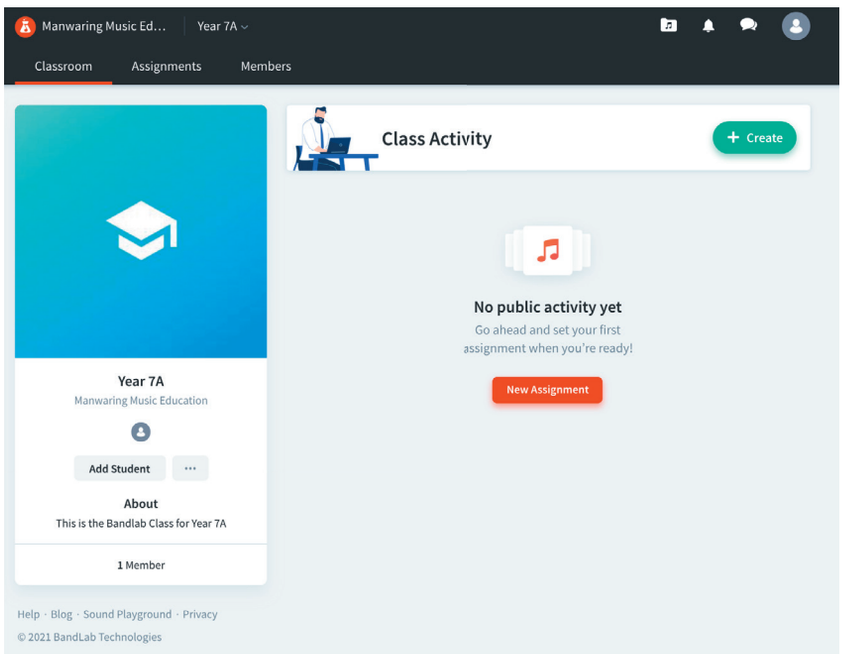


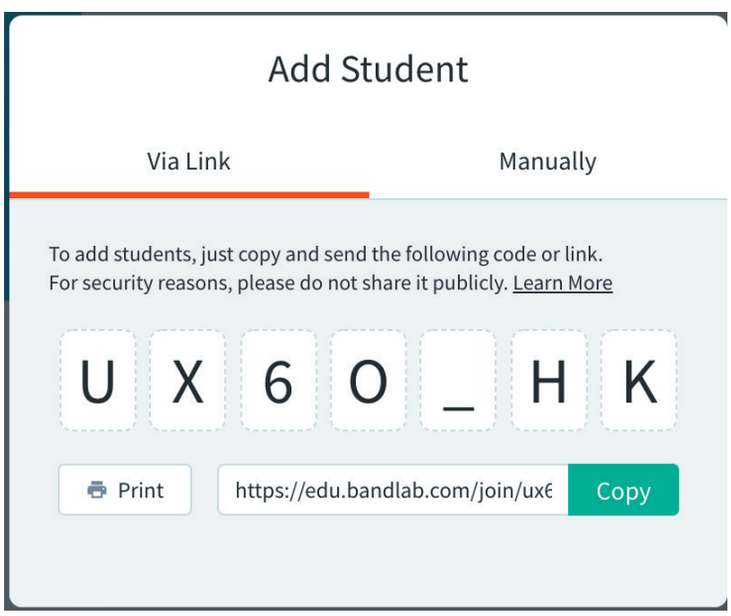
3 In order to start adding classes to your school, first work out how many classes you need: you'll save time later if you create all your classes in one go. You can add information about the class and then save and do the next one.





4 Once you've created your various different classes, you should start adding students. There's a really easy way to do this, but it may depend on context. The easiest way is to use a lesson to introduce students to BandLab and get them all signed up, preferably using their school email. Each class will have a unique code, which students can use to join that class. But you can also generate a link and send it to students: they simply click on it to join. They will also need a BandLab login in order to join, but they can easily sign up for an account, again using their school email address to add a layer of safeguarding to the process. In order to access the join code/add student screen, click on 'Add Student'.





5 Once students have joined the class, you can begin to set them Class Activities. The process of creating classes and adding students is not complex, but it's nevertheless important to check that all students are in their classes, and that they can remember their login details. Remind students that it's best to use Google Chrome, and to use **https://edu.BandLab.com/**: if they try to use the main BandLab page, they won't be able to log in.

How to use BandLab

BandLab is a digital audio workstation. With it, you can create music using loops, MIDI or recorded audio.

To introduce BandLab to students, you might consider showing them some projects that have been created, to get them excited about the software. But it's crucial to decide how you want to use BandLab yourself. Software, after all, is only as good as the ideas and the teaching behind it. If it's being used for composition, for example, students will need a clear idea of what they're trying to create. Like many other DAWs, BandLab has lots of features (though maybe not as many as paid-for software), but they're only useful when used musically.

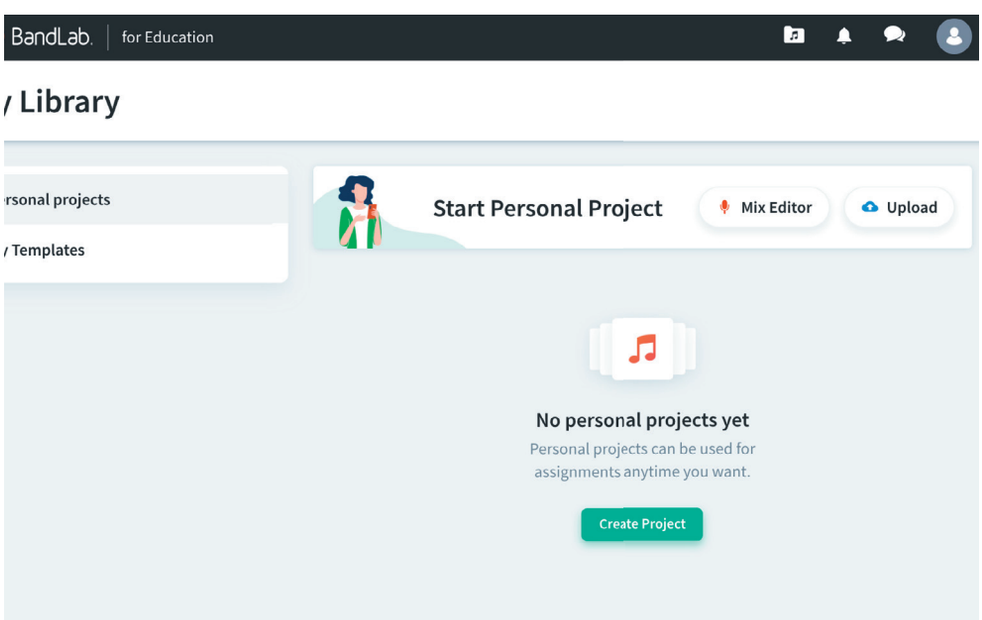
You might want to consider your current schemes of work, and look at how BandLab might support or enhance something you already teach. If you have a unit on film music, for example, BandLab might be a valuable tool to allow students to capture ideas. You may have a unit on structure in music, and BandLab might offer a good way of helping students to demonstrate understanding. In terms of composition, which is of course a regular focus in music lessons, think about generating a composition away from BandLab but capturing it using the software. Think through the pedagogy and process, and make sure that you start as you mean to go on.

The rest of this resource will look at some of the things you can do in BandLab, as well as suggestions for projects with links to potential curriculum.

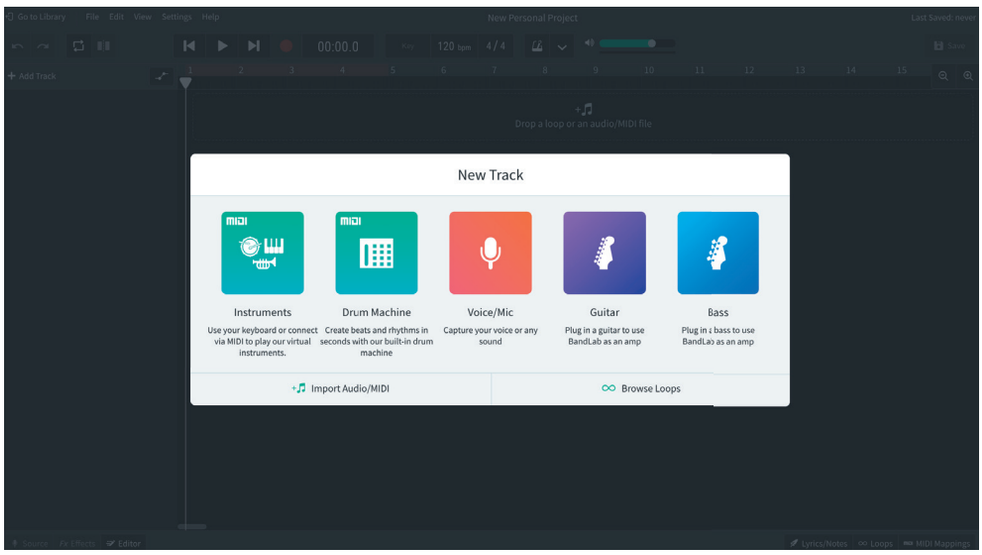
Once you've got to grips with the software, you can get more ideas and inspiration from BandLab Academy (**www.BandLabacademy.com**), or simply from looking at the projects on the BandLab webpage. These are very useful and easy to understand, and students should be able to use them to develop their own knowledge and understanding.

Creating your first project

You're now ready to start making your first project. Click on the folder icon in the top right hand corner that comes up with 'My Library'. Once you're in your library, you can either click on existing projects or 'Create Project'. You can also click on the 'Mix Editor' icon to open the mixer and start making music.

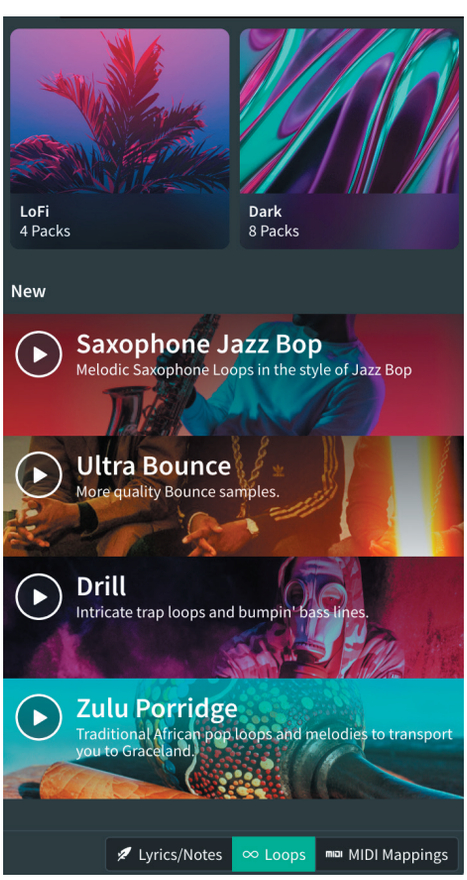


Once you've opened the Mix Editor, you will be presented with different options that are all shown below. In this resource, we're going to focus on 'Loops' and 'MIDI', but you can also record in audio if you have the right equipment (we'll come back to that later).

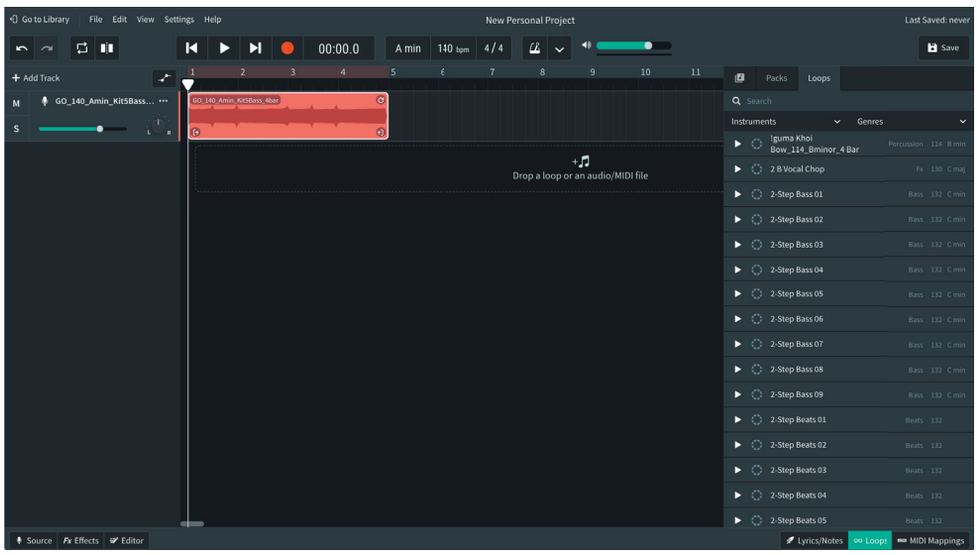


Loops

Loops are short musical ideas, beats, cells and rhythms. BandLab has a vast library of loops available. Once you've clicked to open the 'Mix Editor', click on 'Browse Loops' to open the loops library. There, you'll find a wide variety of styles, which BandLab groups in an engaging way. It's tempting to let students just play around with these loops, but it's also a good idea to give them something to try and create using the loops. This will help students get to know BandLab, but also gain some musical understanding in the process.

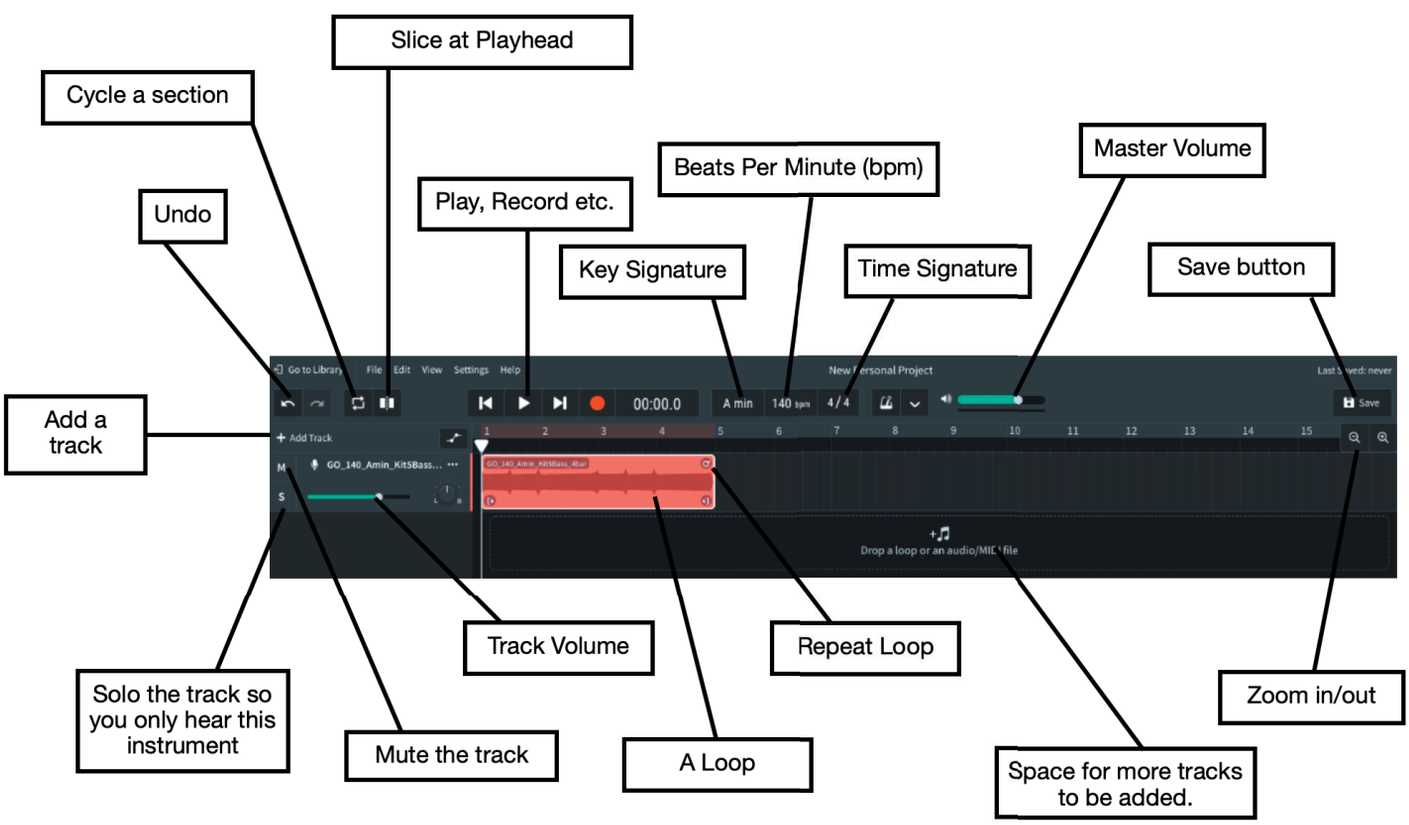


Students can quickly create music by simply dragging loops into the Mix Editor. The loops are stored in packs, and also a huge library. Students can listen to loops by clicking on them and then drag them to the sequencer section, as shown below:



At this stage, it's good to allow students the time to get to know the loops themselves, and to encourage them to explore, search and listen. By spending some time doing that, you might avoid a mess of loops being dragged into the sequencer in a random way.

As the students begin to explore the loops, they can also start to get to know BandLab and some of its functions. Below is an image that goes through each of the sections at the top of the main window:



MIDI

MIDI stands for Musical Instrument Digital Interface, and it's a key component in understanding music technology and how to use a DAW. MIDI is a musical language that's captured and interpreted within a piece of software. It's important to establish the difference between MIDI and audio: this distinction is key to understanding the material that we'll enter into the DAW.

A MIDI keyboard can be used to send MIDI to the DAW. This is a keyboard that will most likely be attached using a USB cable. Once it's connected, students can decide which instrument they want to use: the beauty of MIDI is that any instrument can be assigned to the MIDI keyboard or controller. Some students may look at a MIDI keyboard and simply think of a piano sound. They'll soon discover, however, that anything they play in using the keyboard can be converted to any instrument. There's a large number of instruments at your disposal in BandLab, and instruments can be changed at any time – it is, after all, a signal, and the sound is added by the DAW.

Audio

Audio is different to MIDI: it is captured and recorded using a microphone. Audio is centred around live input of either vocals or an instrument. BandLab can capture anything using a microphone, and there's even scope to import audio from other audio-capturing software. Students might record something on their phone, for example, and then import the audio into BandLab.

What makes audio different from MIDI, however, is that audio cannot then be changed to a different instrument. Once the audio is created, it can then only be manipulated in certain ways. BandLab will allow you to slice up the audio and add some effects, but it's slightly more limited compared to a more advanced DAW. But a student could combine loops, MIDI and audio in, for example, making a backing track in BandLab and then recording their own vocals over the top, also add some effects such as reverb.

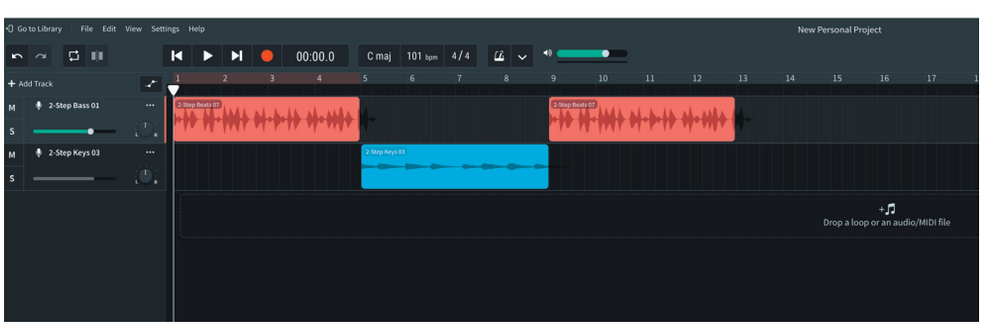
Project 1: Loops and structure

Loops are a useful place to start when getting to grips with BandLab, particularly if students haven't used a DAW before. It's important to provide a focus for any work, however, and this project will focus on using loops to explore structure.

Structure is a crucial concept in music, and there are of course several different structures that we commonly use, including:

- Binary form
- Ternary form
- Rondo form
- Sonata form

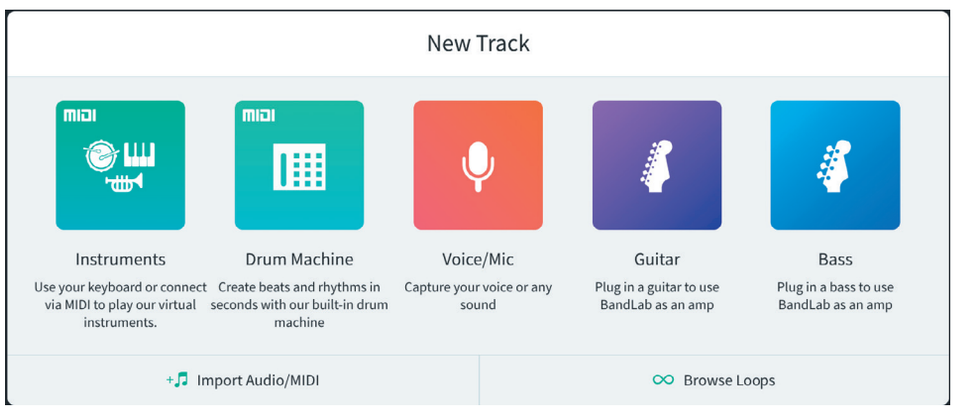
Start by looking at these structures, perhaps using some listening work. Students might be more likely to use electronic dance music loops in BandLab, so perhaps use something more 'classical' as a listening example. Once they understand the basic idea behind the different structures, they can begin to create their own examples in BandLab. The software allows them to do this quite visually: they can easily see a structure forming on screen, as in this simple example of ternary form:

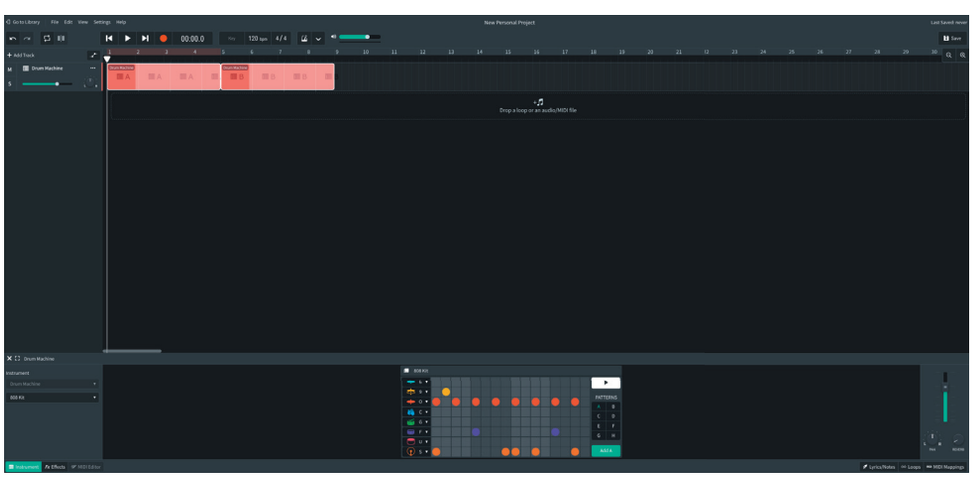


Project 2: Beats

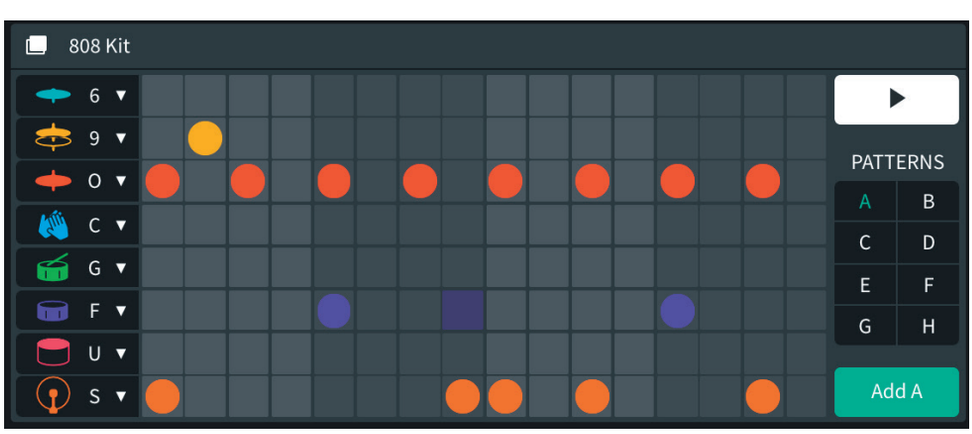
Another project to students can quickly work on is creating their own beats using BandLab's Drum Machine. This could easily be linked to work on rhythm, rhythmic notation or rhythms from around the world.

When you open the Mix Editor, you're given the option to launch the 'Drum Machine'. This will open up a new editor window with the Drum Machine at the bottom:





The Drum Machine is in the form of a grid, with sounds down the left-hand side (see below). You can create eight patterns using one Drum Machine, and then add them to the main mix. When you first open the Drum Machine, there will already be four bars of patterns A and B – these can be changed. When you change the pattern on the machine, it changes the pattern in the main mix – they are linked.

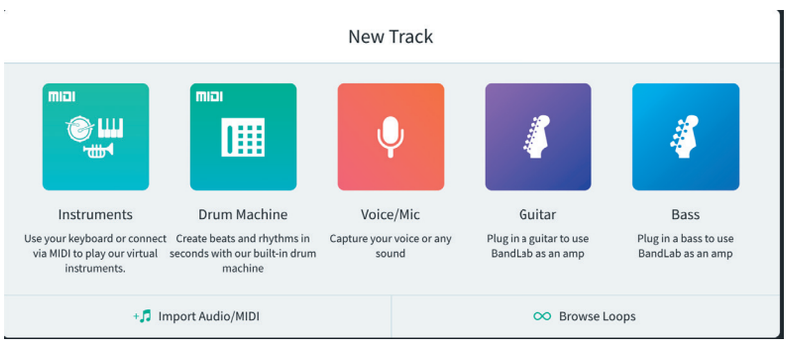


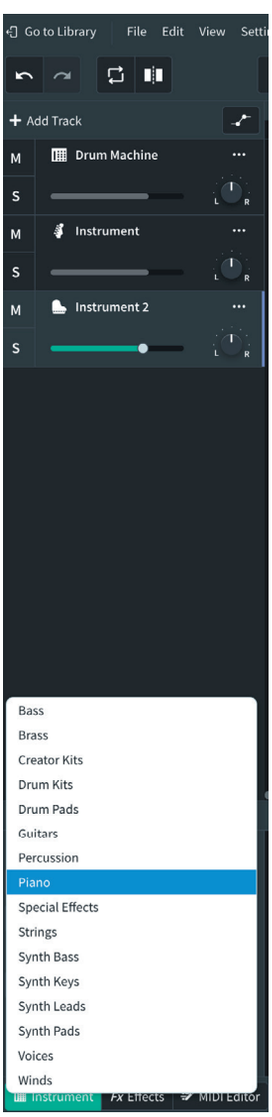
Working with the Drum Machine will help students grasp rhythm and also get them thinking about what a drumkit can do. There are lots of kits available: you can change the kit but keep the rhythm that's been created. Creating rhythmic patterns could then link in to the earlier Loops and structure project, and students could build on their work by making their own beats.

Project 3: Basslines

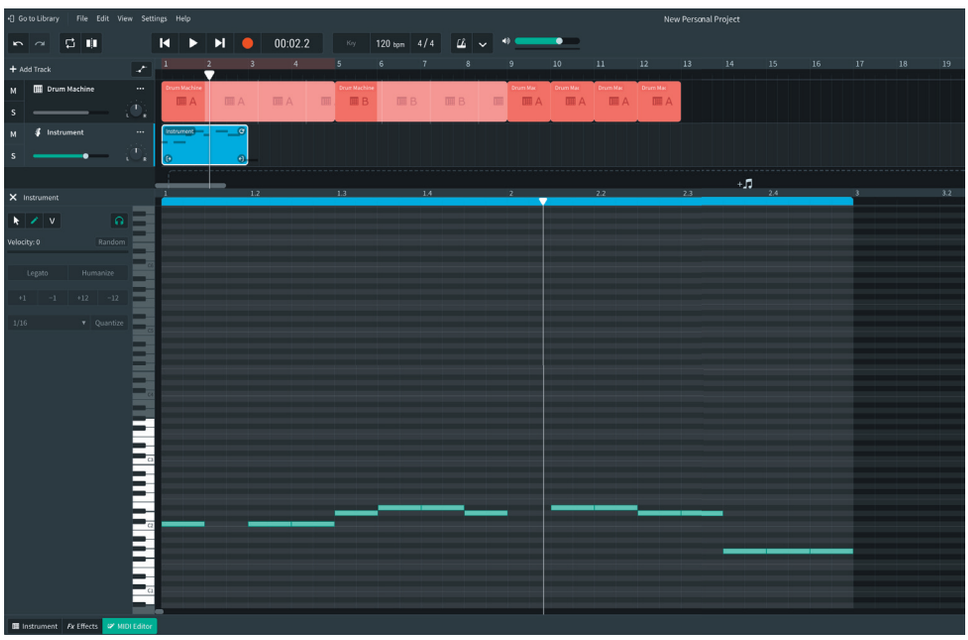
Once they've learnt how to create beats using the Drum Machine, students can begin to consider adding some melody to their work. There are two ways of doing this: using a MIDI controller keyboard, or using the MIDI Editor. A MIDI keyboard will allow students to play in their ideas as they listen to their beat. Alternatively, they can use the MIDI Editor, which we'll also use in Project 4. Although the MIDI Editor can be a bit fiddly, using it helps students to think about what they're inputting. If you have MIDI keyboards available, I'd encourage you to try both options.

1. First, create a set of beats that will be used alongside the bassline.
2. Now you're ready to add a Bass, and BandLab has several to choose from. Click on 'Add Track' and then 'Instruments'. Once you have an instrument track, you can click on Instrument in the bottom left of the screen to select the type of instrument – in this case Bass.





3 You will now have a Bass of some kind, and you're ready to start inputting notes using the MIDI Editor. You can select the MIDI Editor at the bottom left of the screen, and it will open a grid window. Using the pencil tool on the left, you can click and add notes to the bars. This process can take a bit of getting used to, but by the same token, anything you add can easily be altered or deleted.



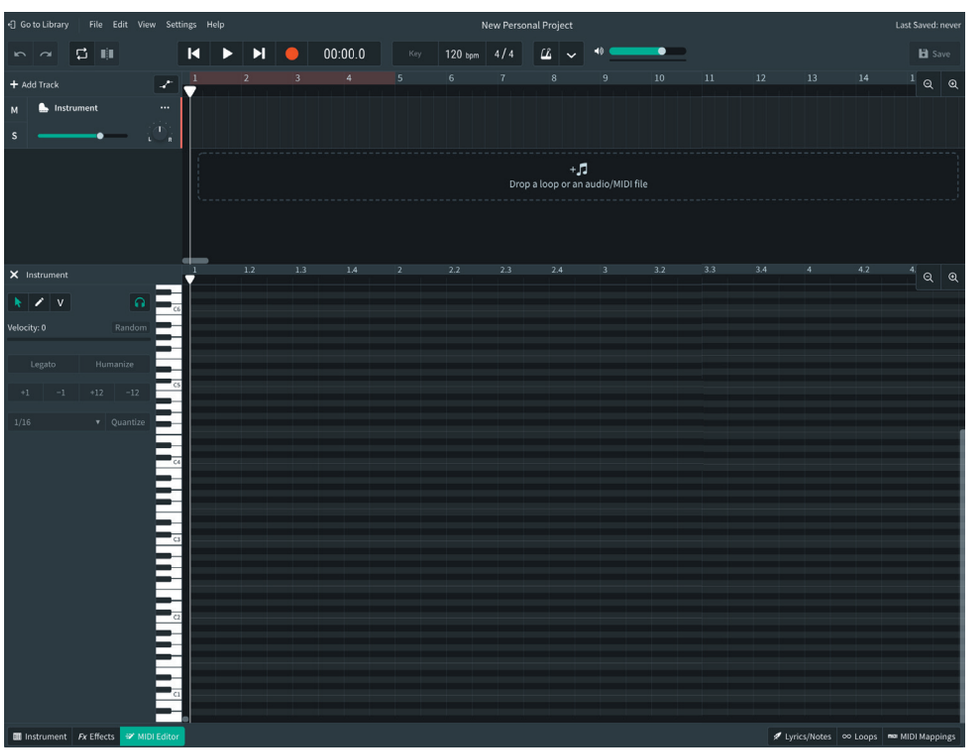
4 Each of the green lines on the image above represents MIDI signals that are now combined with the drumbeat. These notes can be made shorter or longer by clicking and dragging. They can also be removed by selecting and pressing delete. Students might use trial and error in making their basslines, or you can give them a set of notes that they can use. This can be a creative and exploratory activity for students, and they can begin to understand what makes a successful bassline. You might even want to couple the activity with some listening work on basslines through history.

Project 4: Chords

Creating a chord sequence in BandLab is a more advanced process. Consider your class and students before embarking on it. Students need to know not only the notes in the chords, but also how to input them into BandLab. But at the same time, the musical understanding and knowledge of using the DAW are two separate things. This project would sit well alongside a scheme of work on chords and harmony.

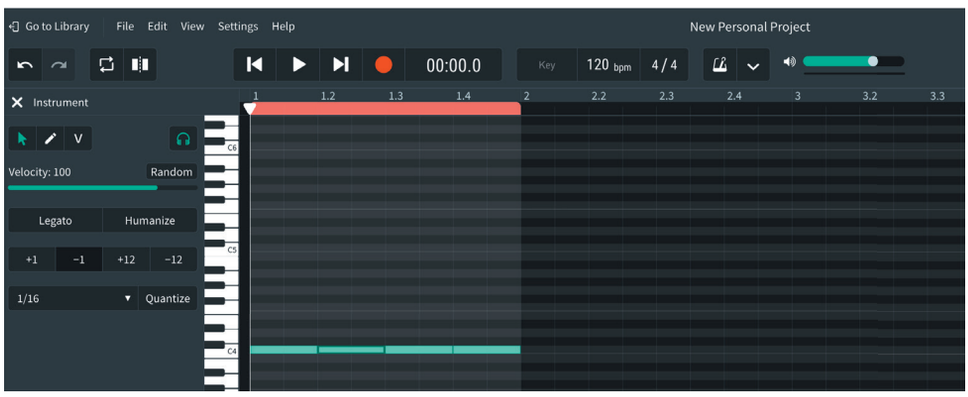
The process of inputting chords involves using the MIDI Editor. You can play chords in using a MIDI Controller Keyboard, but it can help with understanding if students input the chords themselves. The decision regarding how this fits in with your scheme is down to you: we'll focus here on the process within BandLab.

1 Open the Mix Editor and make sure you have a piano added. Then click on MIDI Editor in the bottom left-hand corner (highlighted in green on the image below):

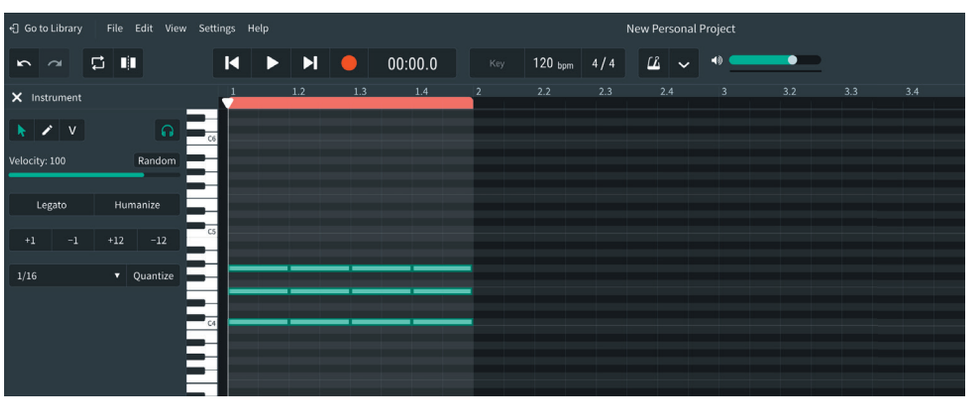


2 The MIDI Editor window breaks down into bars and beats along the top, with a piano keyboard on the left-hand side (see below). When you click on the small rectangular spaces, you are effectively adding a MIDI signal to a specific note on a specific beat. Select the pencil tool, on the right-hand side of the screen in the middle.

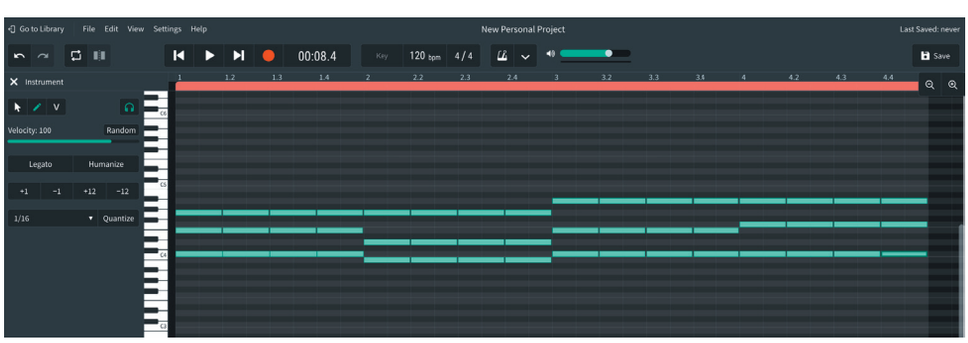
3 Now that you have the pencil you can begin to add notes by clicking on the grid area that fills the bulk of the page. In the image below you can see four notes added, all of them on middle C, or C4. Each green rectangle is equal to a crotchet beat, so here there is a C on every beat of the bar.



4 We can now make this into a C major chord by adding more notes using the pencil. Students may like to zoom in as the boxes and piano keys are quite small. They might complain that they can't play the piano, but this isn't about playing the piano as much as simply identifying notes. Below you can see four C major chords, each a crotchet beat long, lasting for one bar:



5 Now that we have a bar of C major, we could begin to add more chords. This work can easily be extended to begin looking at chord progressions, the cycle of 5ths, or cadences. A pop or blues backing track can quickly be created, and students can then bring in the skills learnt in Projects 1 to 3 to add drums, bass and melody. Add more chords by moving along to bar 2 and use the pencil tool to add notes. If a note is added in error, you can simply select it and press delete.

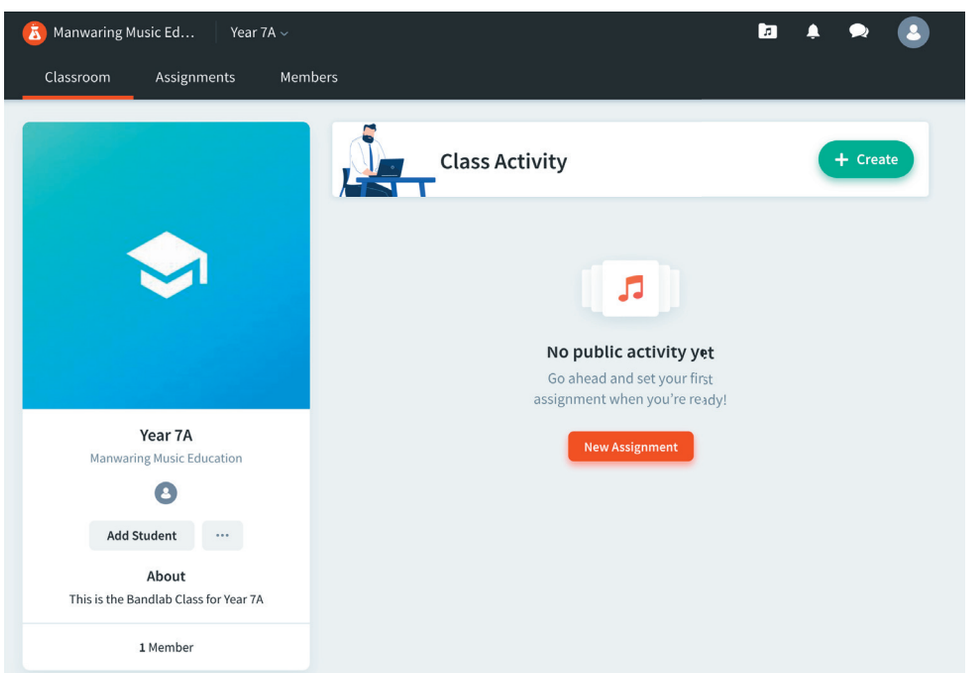


Creating an assignment

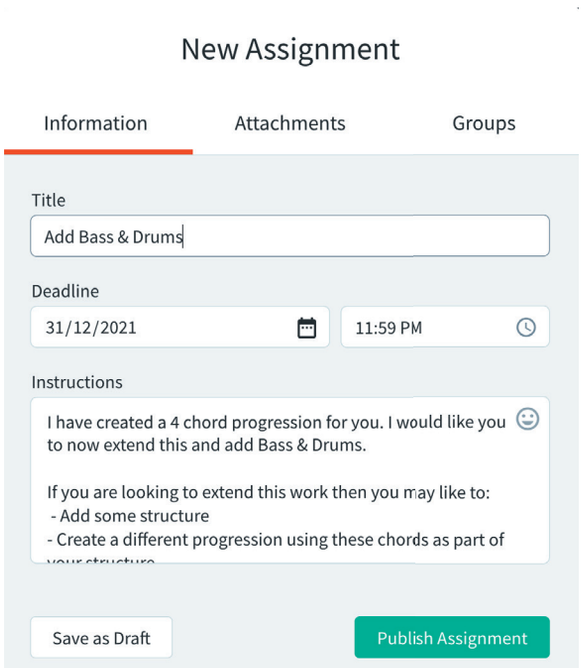
If you're looking to set your students bigger assignments, you can ask them to complete some work on BandLab and then submit it to you through the software. You can then give feedback and ask them to make changes to their work, or even make changes yourself and then save their work so that they can see what you've done.

The chord progression created above could be a good starting point for an assignment.

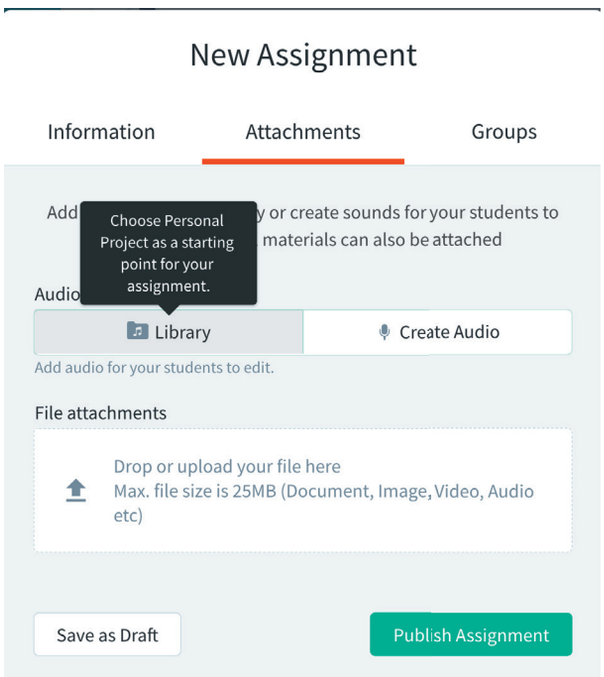
1 Return to your main page where all your classes are listed: click on the word 'Education' at the top left of the page. Once there, select a class and click on 'Create' and then 'New Assignment'. If you haven't previously set any assignments, you will see the orange 'New Assignment' button that you can also click on.

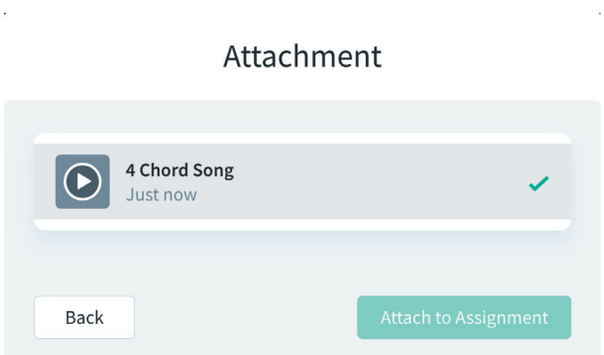


2 You can now fill in details about the assignment and you can set a deadline. All of this information will be seen by the students in the class.

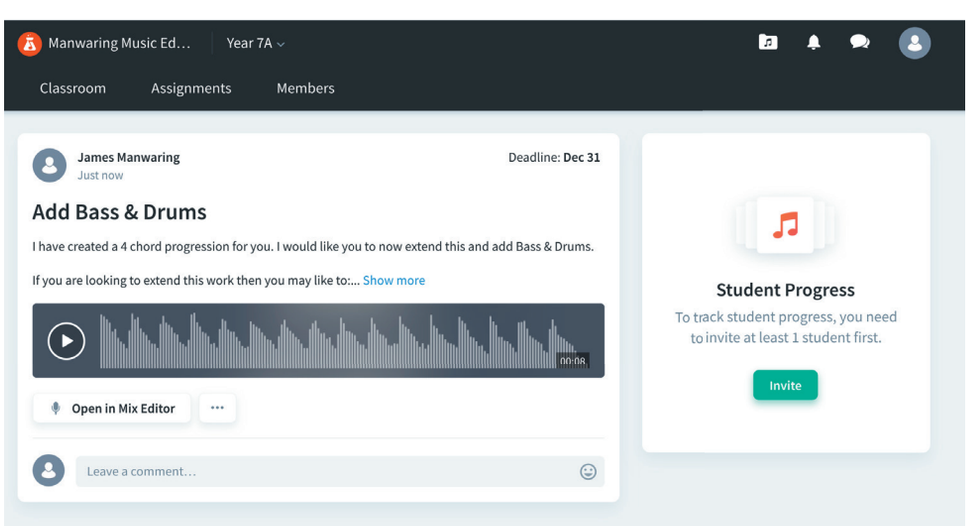


3 If you want to give them something to start them off, you can attach something you've created yourself in BandLab. For example, I'm going to attach the four chords that I created earlier.





4 Once you've attached something (if you decided to do that), you can publish the assignment to your class. All students in that class will now see that assignment. When they open the starting point of the four chords, they will all be opening their own version of it.



Conclusion

BandLab is free, easy to set up and fairly user friendly. Students can use it to create loop-based music, or record with MIDI or audio. The setup allows for teacher and class collaboration, and assignments can be set for students to complete. The Education platform is designed for schools, and it features many resources to help students and teachers. BandLab is a very useful way to get students creating music and engaging with music technology.