

## Section 3 – Activities and Resources

### Music Technology

#### 3a. The Basics

There are two common myths about the use of Music Technology in SEND Music Education:

- You can't lead truly effective music sessions unless you're using technology
- The only thing you'll ever need to lead effective music sessions is \*\*\* *INSERT NAME OF GADGET HERE* \*\*\*

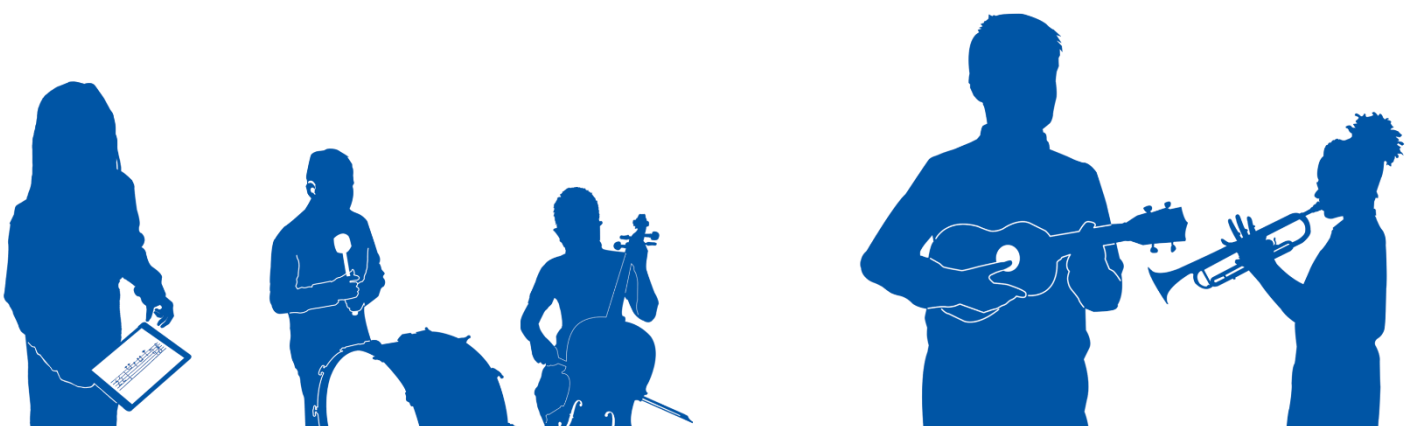
We're advocate the use of Music Technology alongside voices humming, hands clapping and tambourines jingling! Music is a whole world – and we think all young people should learn about its variety and richness.

We explore some ideas here – and there are others, so you can see the opportunities they offer. If you want to buy equipment we'd be happy to help you work out what's best for you.

#### The Benefits of Music Technology

We believe there are three compelling reasons to include aspects of Music Technology into your practice.

- **Sounds** - it gives us access to an enormous palette of sounds to use with SEND participants to provoke reactions we can measure using Sounds of Intent.
- **Control** - it gives us ways with to overcome physical limitations and enable participants to be proactive in music making.
- **Experiences** - it gives us tools to deliver experiences and facilitate learning. For example, a simple recording device enables participants to listen back to what they've done, or hear the sound of their own voice, perhaps for the first time

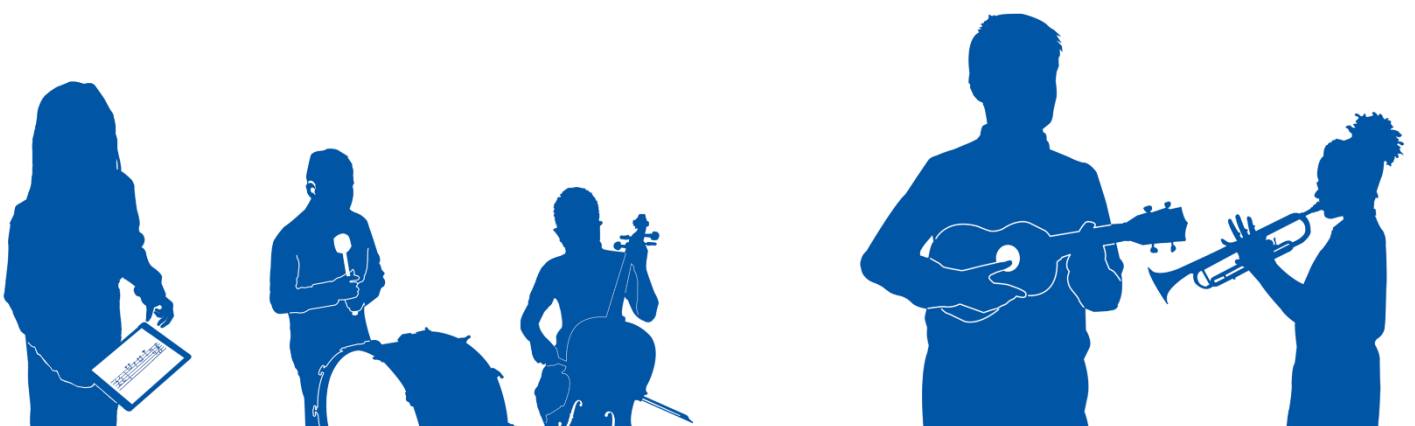


## 3b. Specialist SEND Music Technology

You may have a Soundbeam, an OptiMusic system, Apollo Ensemble equipment or other music technology. Here are a few general pointers to help you get the most out of any such equipment.



- As with keyboards, most manuals are available online. Download them. Print them off. Laminate a few key pages and stick them up where you need them.
- Try and set aside time for staff training to share learning and spread the load. If expertise resides in a single member of staff, and they're off sick, or move to another job, the equipment can quickly fall into disuse.

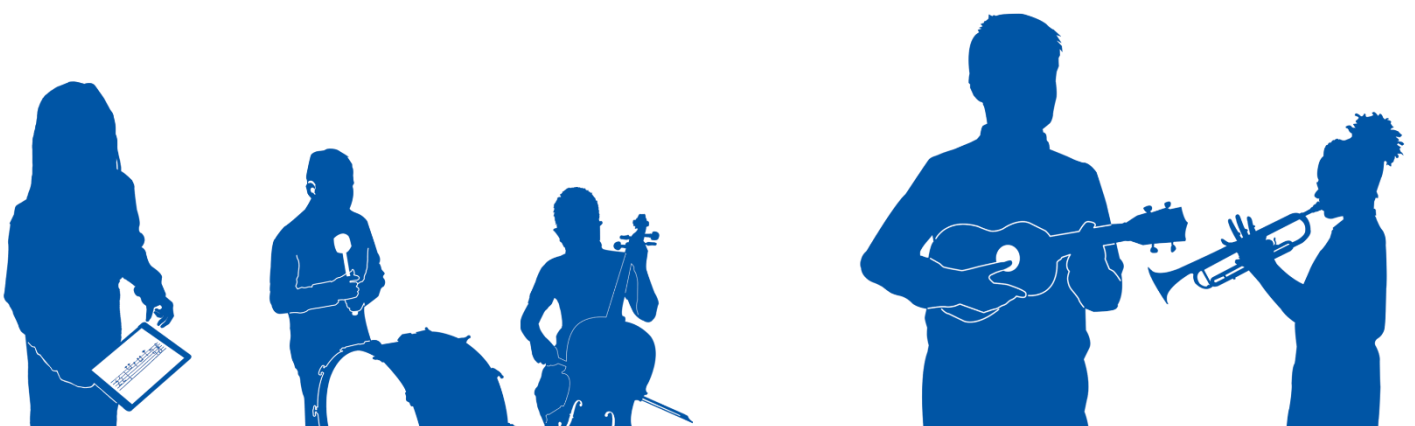


- Treat the equipment like a musical instrument - practice. Find your way around its functions settings so that you can easily adapt to the challenges of each session. If there's something you always forget how to do and end up looking in the manual, this can really interrupt a lesson. Spend a couple of minutes a day just going over it until it becomes second nature.
- Set the equipment up before the start of the lesson, and keep technical changes to a minimum, so you can keep your focus on the participants. Ideally, work with a colleague who can take responsibility for the technical aspects of the lesson
- Find a limited repertoire of things that work - sounds that your students really respond to and stick with those. You can go on to gently broaden horizons by introducing new sounds and new ideas, but start from a familiar base of repetition.

If you need more help, get in touch! At Yorkshire Youth & Music we have skills, experience and connections; we can point you in the right direction or organise some training for you.

### 3c. Microphones

In our experience, one of the most effective and attractive forms of Music Technology is the microphone. When used with a simple Effects Processor and Loudspeaker, it becomes an extraordinary, engaging and encourages even the most reluctant participant to vocalise.



We really like the Shure SM58 (pictured above) because:

- It's incredibly robust.
- It doesn't have an ON/OFF switch - just something else for children to fiddle with and break!
- You can unscrew the mesh guard and easily clean it.
- It uses a cable to connect. There are wireless alternatives which can be very useful but wireless technology does introduce more things that can go wrong!

There are certainly lots of less expensive alternatives around but – as with most things, quality comes at a price.

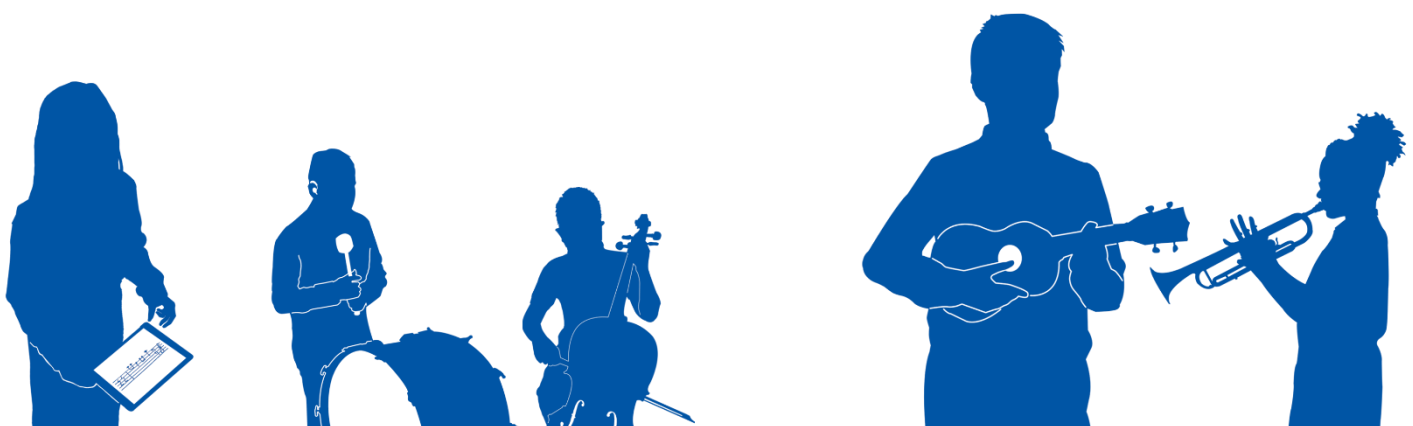
### Effects Processors

An effects processor is a box that takes in one sound and puts out something more interesting; making the voice sound like singing in a bathroom or a vast underground cavern. I can add an echo to everything I say, say, say, say, say, say, say.....

The inexpensive simplicity of something like the Alesis Nanoverb is an example.



There are some pretty simple (and sensibly limited) control knobs on the front panel. On the rear there are clearly labeled sockets which enable you to plug a microphone in and connect the output to your amplification/loudspeaker system.





## Amplification or Loud Speakers

You may already have a useful amplification/loudspeaker system. If you have a guitar amp, remember that one of its functions is to add distortion and a pleasing “grunge” to the sound of an electric guitar, which isn’t useful for vocal work. So if you amp has controls labelled something like “Distortion” or “Overdrive” try turning them down to zero.



You might be able to use the speaker system built into a smart whiteboard. Most systems have phono sockets into which you can plug a sound source.

So your microphone + effects processor + amplification/loudspeaker system will probably look something like this:



A couple of things to think about...

Pay attention to where you position the loudspeaker(s). It can be disorientating for a participant to sing into a microphone and hear sound come back at them from the other side of the classroom or behind them. Having speakers near to the children will help reinforce the idea of cause and effect; be careful with the volume controls.

NB. If a microphone is too near a loudspeaker it may cause an unpleasant howling sound (feedback). This is made worse if the microphone points directly at the loudspeaker.

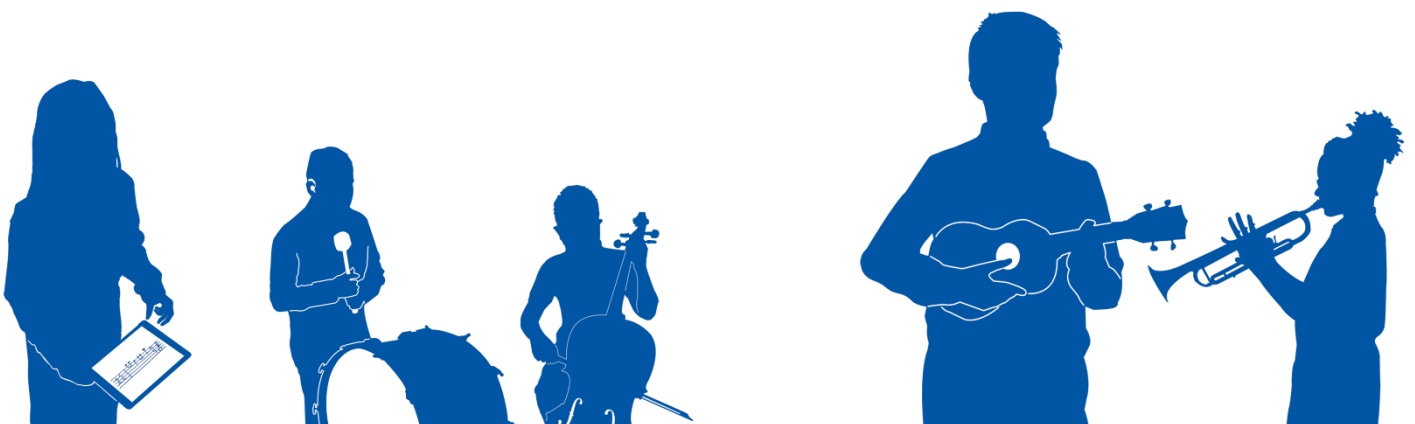
If you want or need to buy any equipment, feel free to get in touch with YY&M and we'll help you work out exactly what you should invest in.

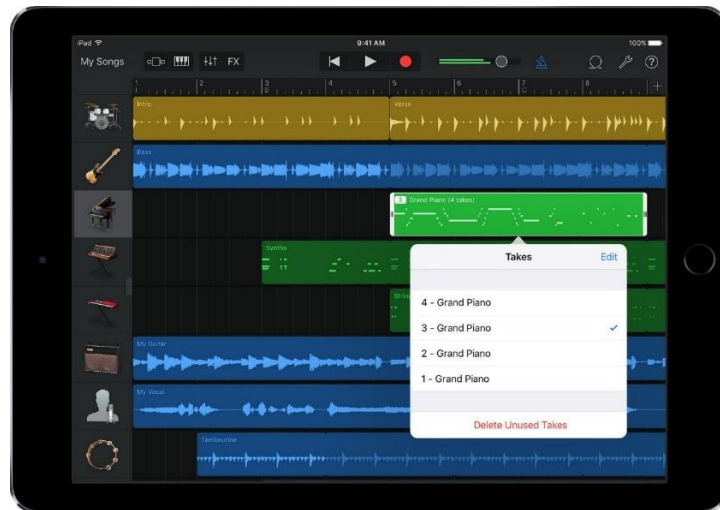
## 3d. iPads and Apps

### iPads

We're huge fans of Apple iPads! They are engaging, accessible and - most importantly - very musical pieces of technology. There are of course other tablets which may run some of the apps we find useful.

iPads are simple and easy to use; the touchscreen makes them very accessible, even to those with very limited movement; they're light and portable and can easily be passed around a group. In addition, when you make a sound on an iPad, the sound comes from a speaker within the device itself, not from somewhere else (though you can link an iPad to speakers if needed). And young people love them!



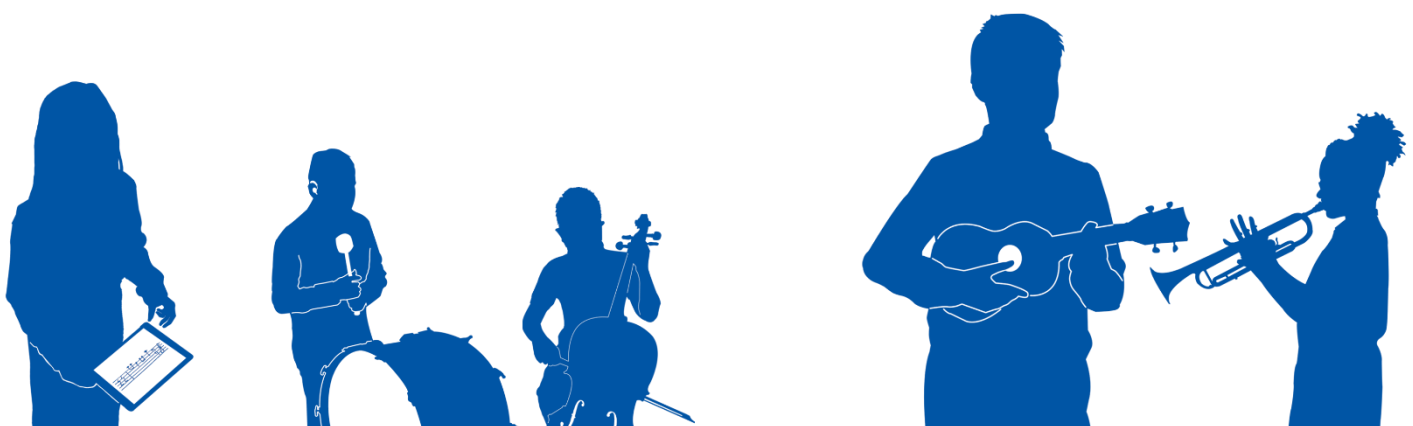


## Protective Cases

There are lots of good cases on the market; we like Gripcase. <https://gripcase.com>



Made from a pleasingly pliable material, they have easy-grip handles, and the curved design means that even if dropped face down, the screen will not come into contact with the floor. It's quite easy to fit the case, the power and headphones sockets are still accessible and importantly it does not muffle sound by covering the speakers.



## Screen Wipes

Anti-bacterial wipes are essential.

## Guided Access

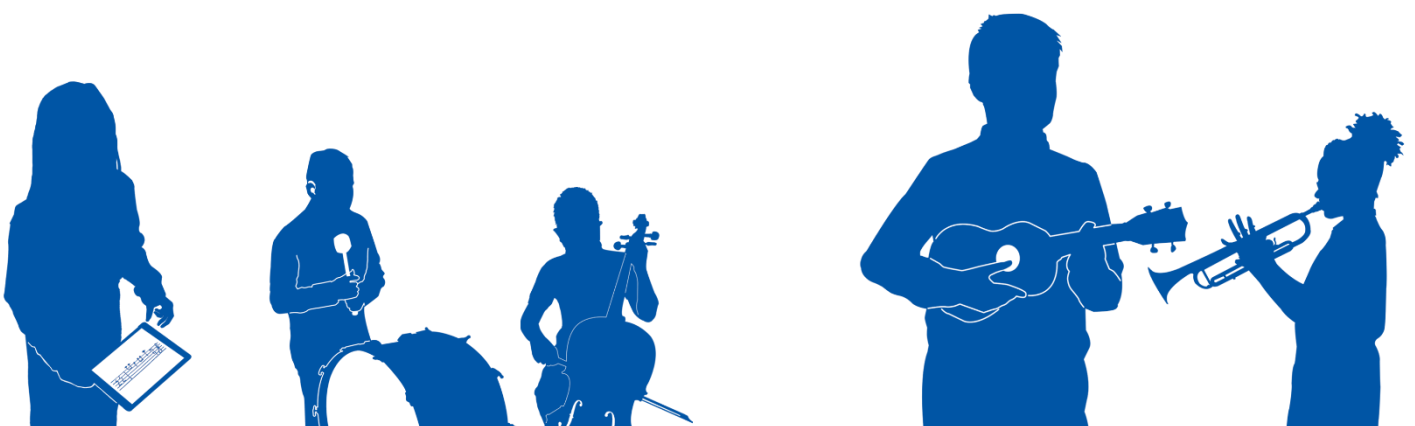
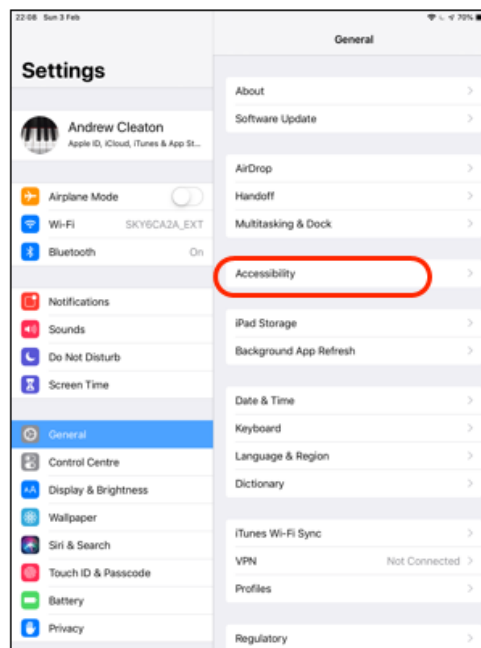
This is such a remarkably useful feature – it enables you (the teacher) to “lock” the iPad into an app so that no amount of prodding the HOME button will take you away. You can even draw round parts of the screen to make those areas inaccessible to wandering fingers.

This is how you set it up...

1 - Click on your SETTINGS app:

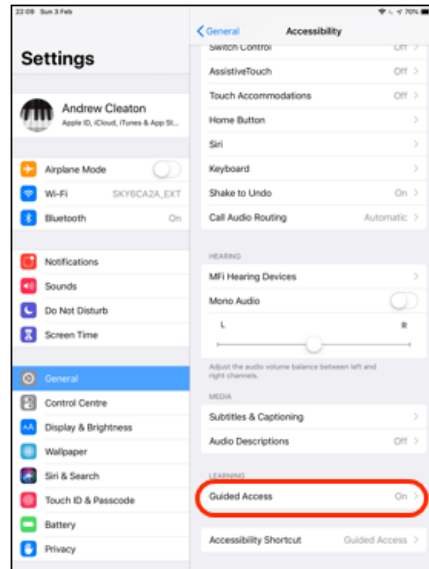


2 - From the GENERAL tab, select ACCESSIBILITY:

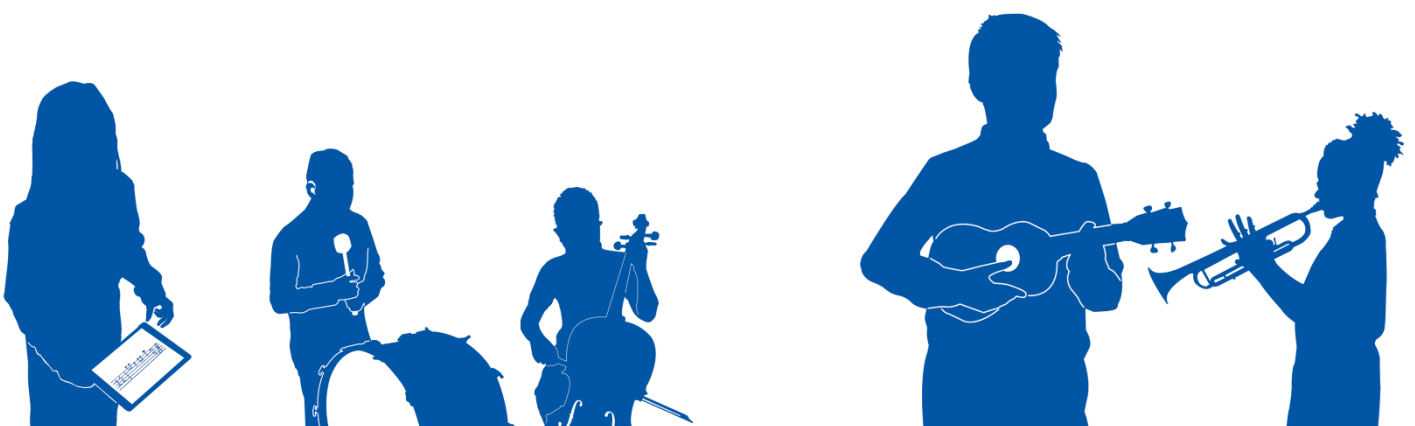




3 - Scroll down to find and select GUIDED ACCESS:



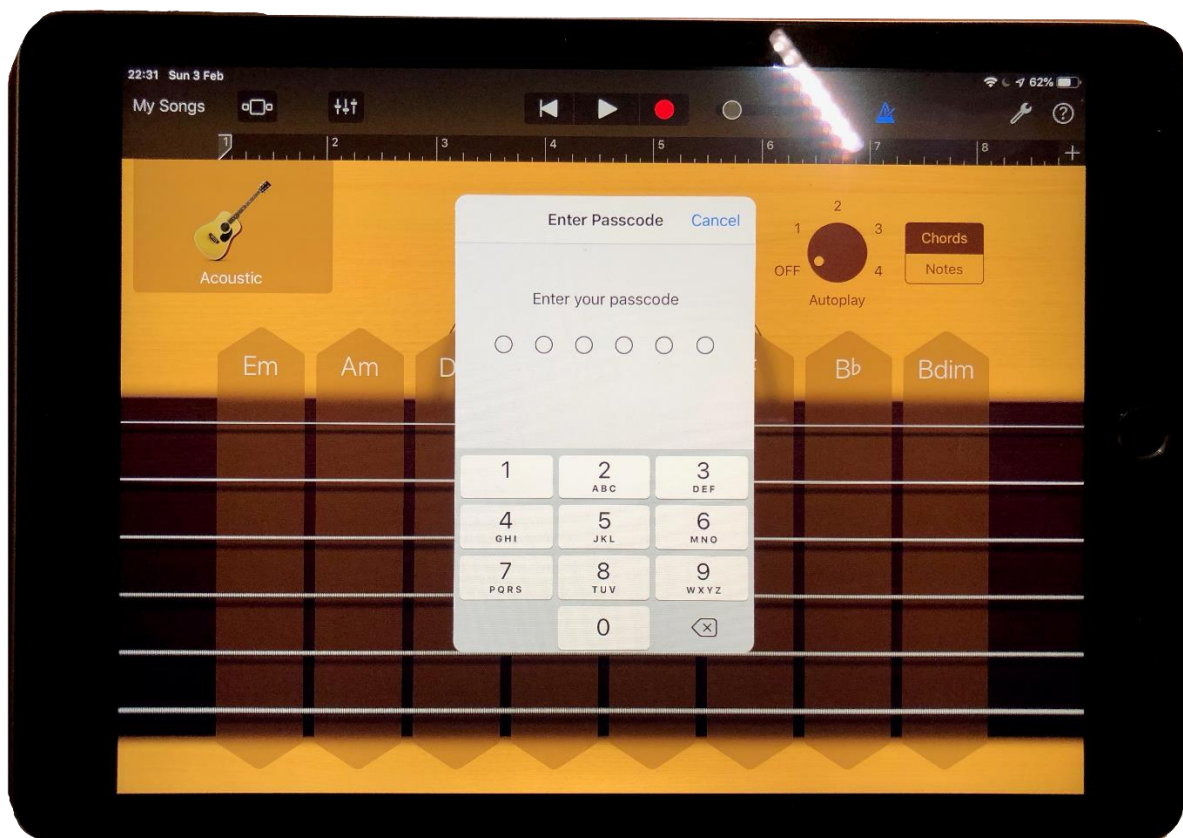
4 - Switch Guided Access to ON (Green Button) and click on “Passcode Settings” to choose a passcode number



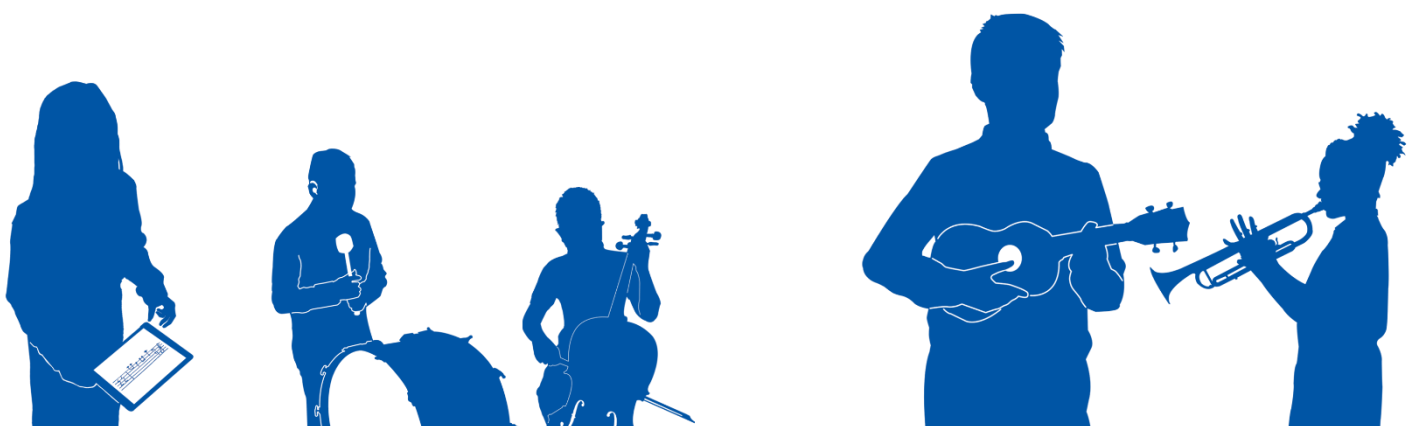
Some tips on choosing a passcode, which will be 4 or 6 digits: Make the number something staff will remember easily, but participants won't guess (avoid 1,2,3,4,5,6), and set the same pin for all iPads

When you open the app you want participants to use, press the HOME button THREE TIMES IN QUICK SUCCESSION. The iPad will "lock" and whatever they do, the children won't be able to do anything other than work with your chosen app.

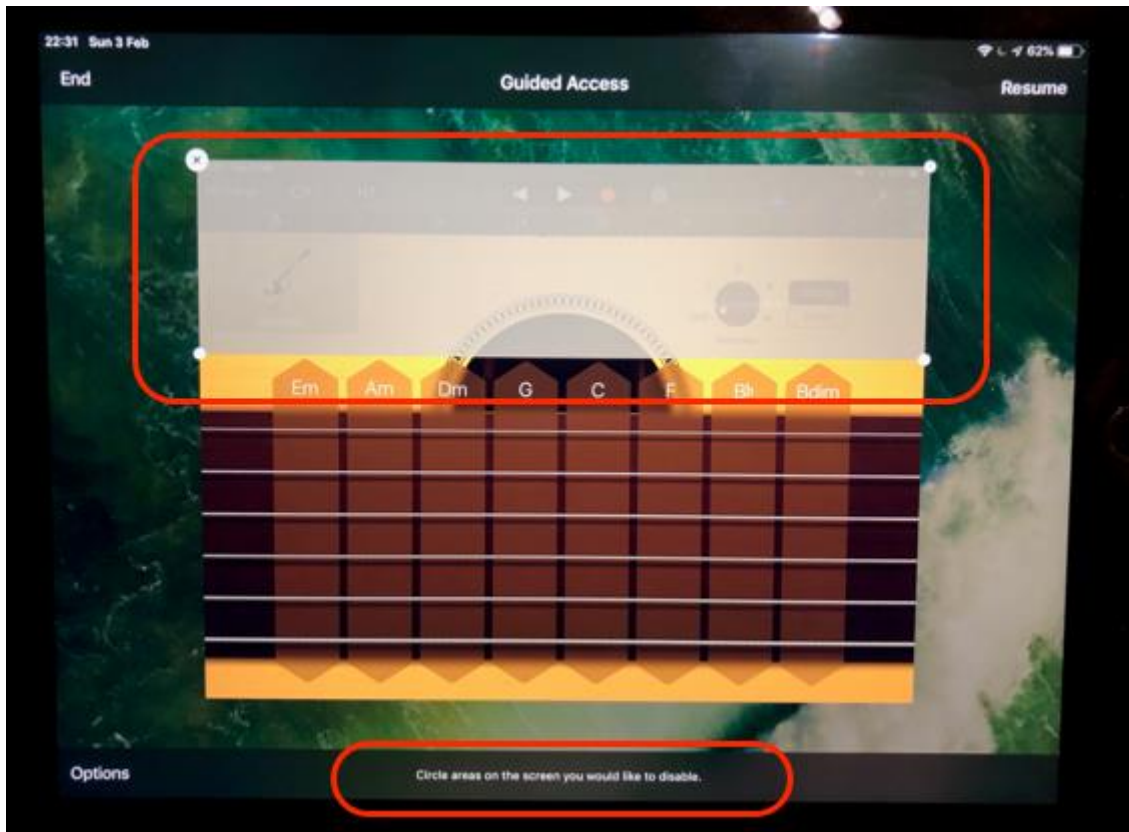
When you want to come out of Guided Access mode, you simply repeat the process - press the HOME button three times in quick succession and you'll be asked for the passcode.



Entering an incorrect code will lock the iPad again and make you wait 10 seconds before you can try to unlock it again! (Each time you get it wrong, this interval gets longer!)

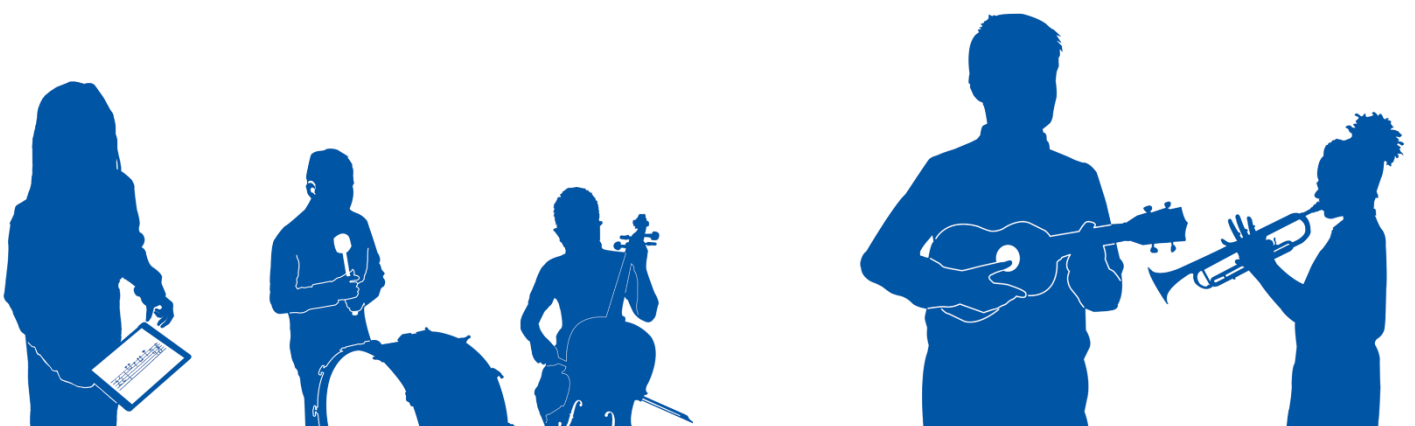


In addition, you can “draw” round a section (or multiple sections) of the screen that you want to make out of bounds. You can do this the very first time you enter an app in Guided Access mode or on the screen that you’re presented with on entering your passcode to exit Guided Access.



Note in illustration that, at the bottom of the screen, it says: “Circle areas on the screen you would like to disable.”

You’ll see that we’ve drawn around the upper part of the screen to cover up some of the controls and options that, for the purposes of this session, we don’t want to make available to participants. This area is now greyed out. The iPad will remember this setting for each app that you use so you don’t have to go through this process each time.



## Apps

“There’s an app for that!”

There are hundreds of apps and we’ve tried loads of them; we keep coming back to the same few and suggest you limit your options too. It’s better to work with just a few apps that you can learn in depth and find your way around quickly than to struggle with lots of different apps that you haven’t had time to learn how to use properly.

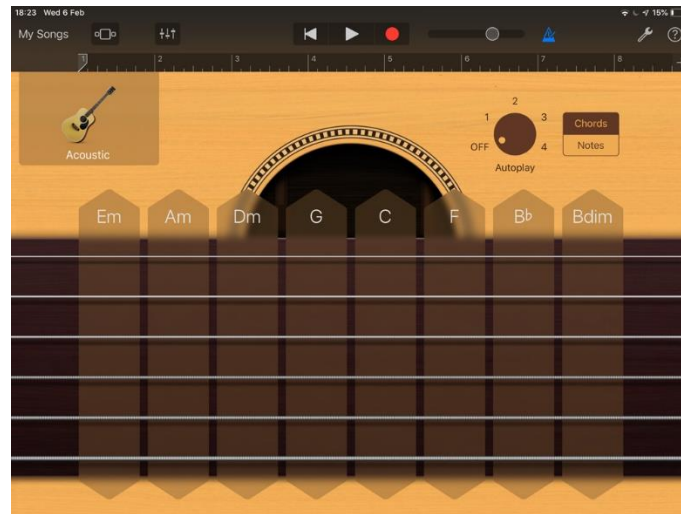
With a few exceptions, it’s worth paying for apps and avoiding free ones. In the world of app development, something free means that it may not be supported terribly well by the company that made it, so bugs may go unfixed. You may find that if Apple update iOS (the system that makes iPhones and iPads work) then your free app ceases to function. Also Apps that are free to download may be paid for by adverts that pop up intrusively. Free apps may also be paid for by what is known as “In App Purchases.” So you might download a free DJ-ing app that comes with a few samples and drum loops to get you going. BUT the developers hope to make their money by users paying for additional content - like more samples and a much greater range of drum loops. It only takes a WiFi connection and some inquisitive fingers to make purchases which can prove expensive.

### Garageband

Having said all that, there is one free app that we absolutely love. It’s free made by Apple and comes pre-installed on all iPads (or can be downloaded from AppStore). Garageband is a fantastic environment for making music. It comes with loads of brilliant sounds and can either be a very accessible first instrument for children with very little dexterity - or a fully featured composition and recording studio!

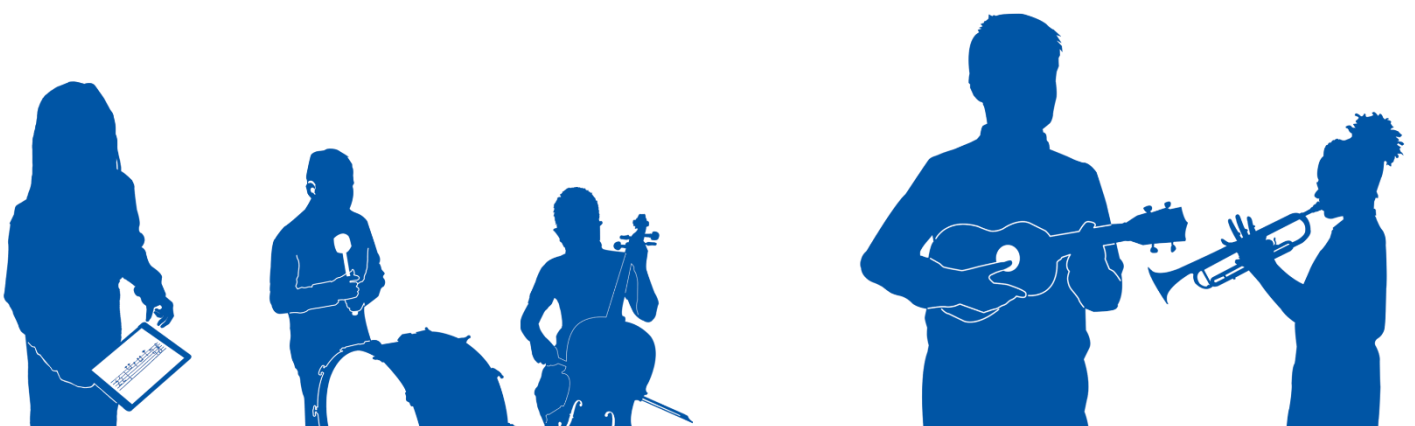
This screenshot illustrates Garageband with a virtual guitar selected:





The onscreen “strings” can be strummed - just like a guitar - or individual notes may be picked out. The musical material is already preset and makes sense musically and guarantees that the player will hear something that sounds musically coherent. Of course, you can customise to your heart’s content - but in most instances the choices made by Garageband will sound great straight out of the box! (Musical Example 12)

In this example, we’ve swapped the guitar for a drum kit! Tapping on each part of the kit onscreen will produce the corresponding sound - a cymbal crash, a tom tom hit or a bass drum beat, for example. (Musical Example 13)

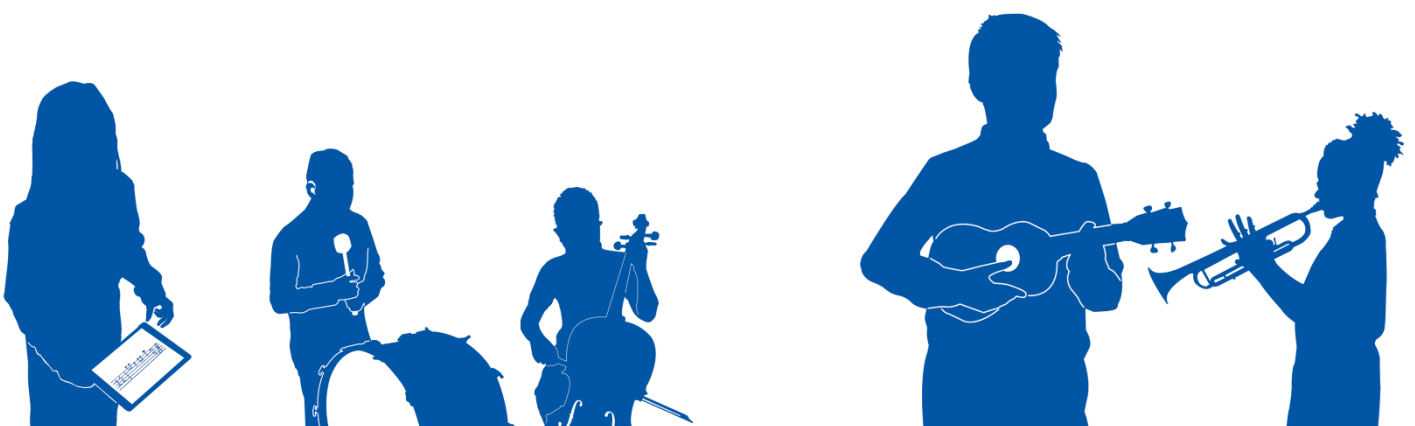
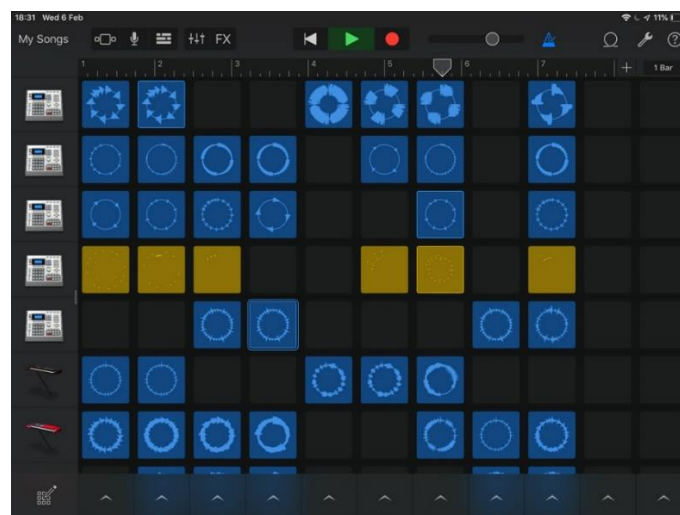




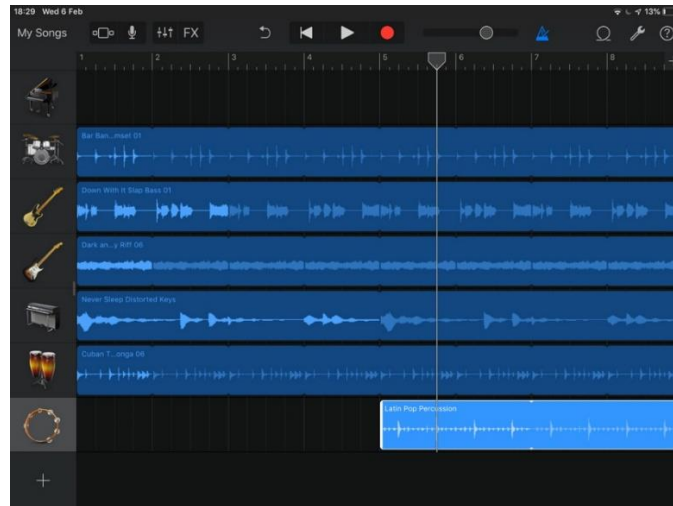
This screen shot shows Garageband's built in Sampler instrument. We've said "Hello!" Into the iPad microphone and now the keyboard will play the sound of our voice at different pitches. (Musical Example 14)



This is one of the more complex screens in Garageband, for budding DJs. Tapping on one (or more) of those blue or yellow tiles will start a loop of musical material playing. That might be a drum pattern, a bass line, synthesiser arpeggios or even effects. Again, the material is all very cleverly arranged so that everything fits together. Participants will have a great time exploring all the options, learning about how to build up music by adding layer upon layer of sound - all the time listening to, and evaluating what they've done. (Musical Example 15)



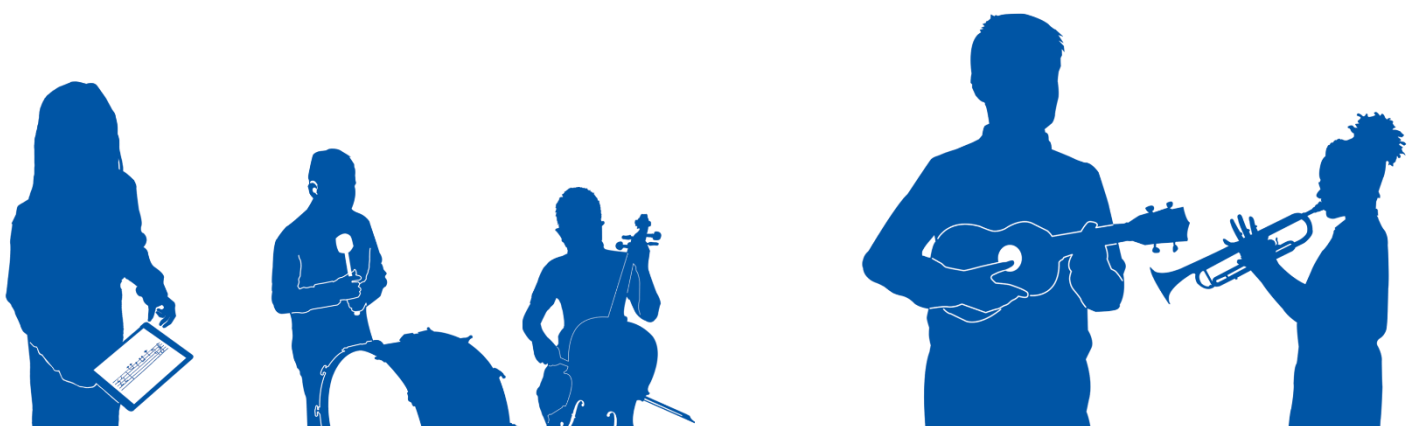
This final example from Garageband, shows it in full multi-track studio mode. Each of the blue “lanes” represents a different layer in the musical composition - the drums, the bass, the guitars etc...(Musical Example 16)

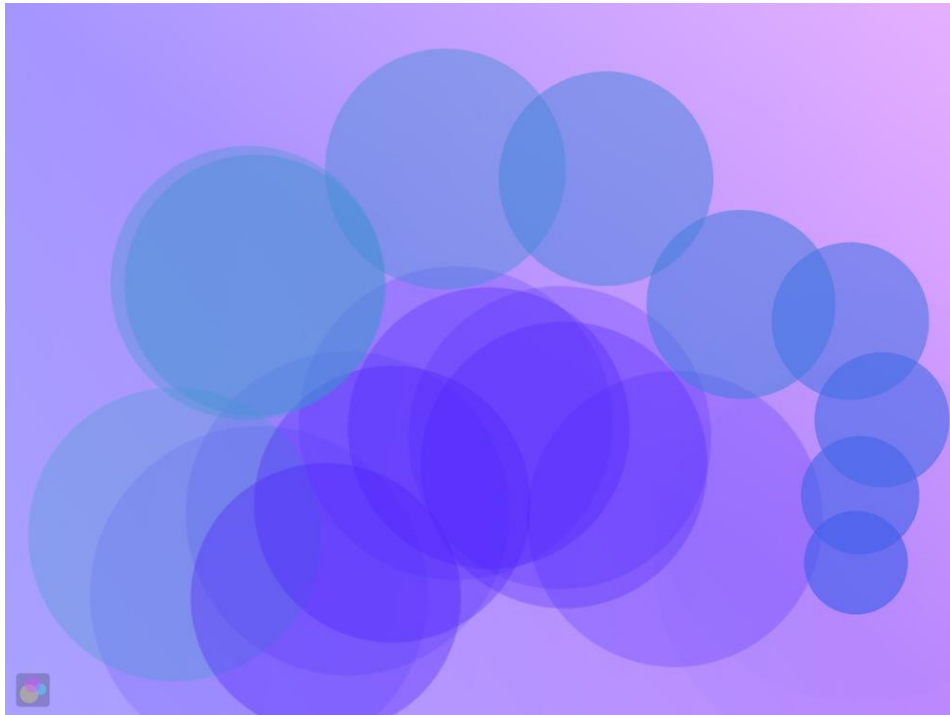


Hopefully these screenshots illustrate the breadth and depth of what this powerful is capable of.

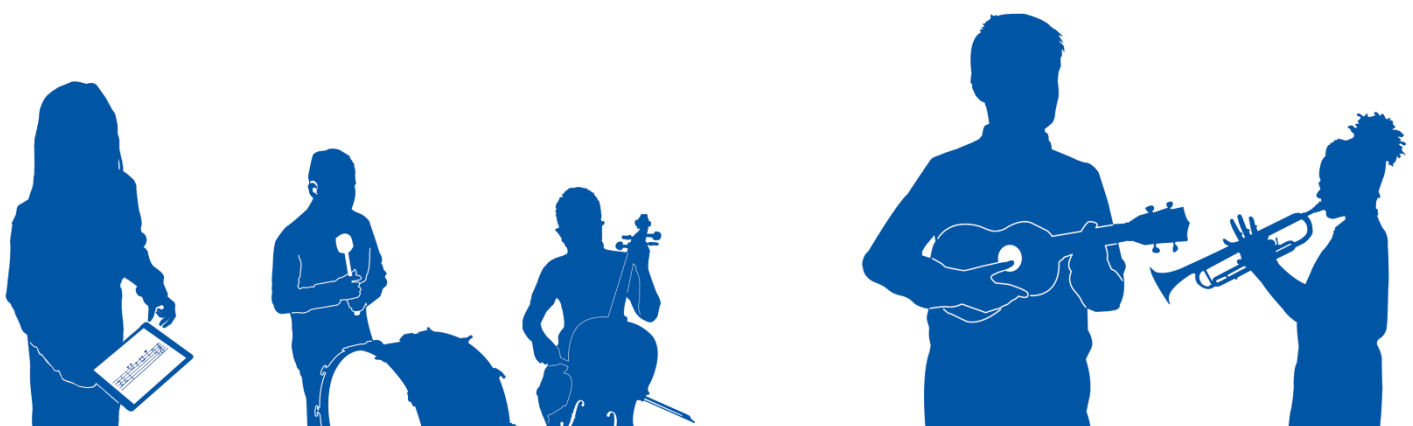
## **Bloom**

If that all seems a little daunting, then our next suggestion might be just the ticket! Bloom HD is a beautifully simple app developed by Brian Eno (formerly of Roxy Music and now respected as the godfather of “Ambient” music.) Against a gentle backdrop drone, any touch of the screen will play a single, crystal clear piano-like tone.





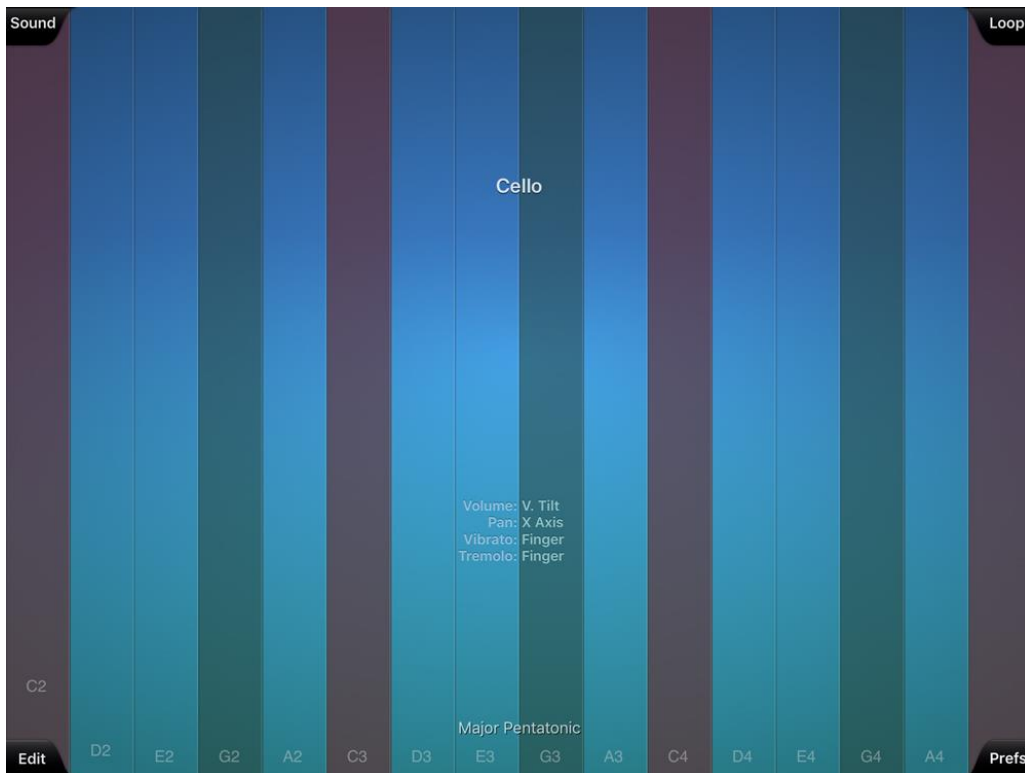
You can put down several fingers at once or even just rest your hand on the screen and gently rock it back and forth to play sounds. Each sound is reinforced visually with a circular shape that grows (or “blooms”) before fading away. Often likened to bubbles by children, these beautifully evolving colours are mesmerising! The notes within the musical scales of Bloom are chosen to sound “right” together. The result is something which never fails to delight and instil a feeling of peace and calm. One of the clever features of Bloom is that it remembers what you do and will (after a pre-determined time delay) play back (and keep playing back) what you’ve just done. This is fantastic news for children with very limited mobility as the investment of sheer concentration and hard work necessary to play even a single sound will be rewarded many times over. In this way, complex layers and textures may be built up over time. (Musical Example 17)



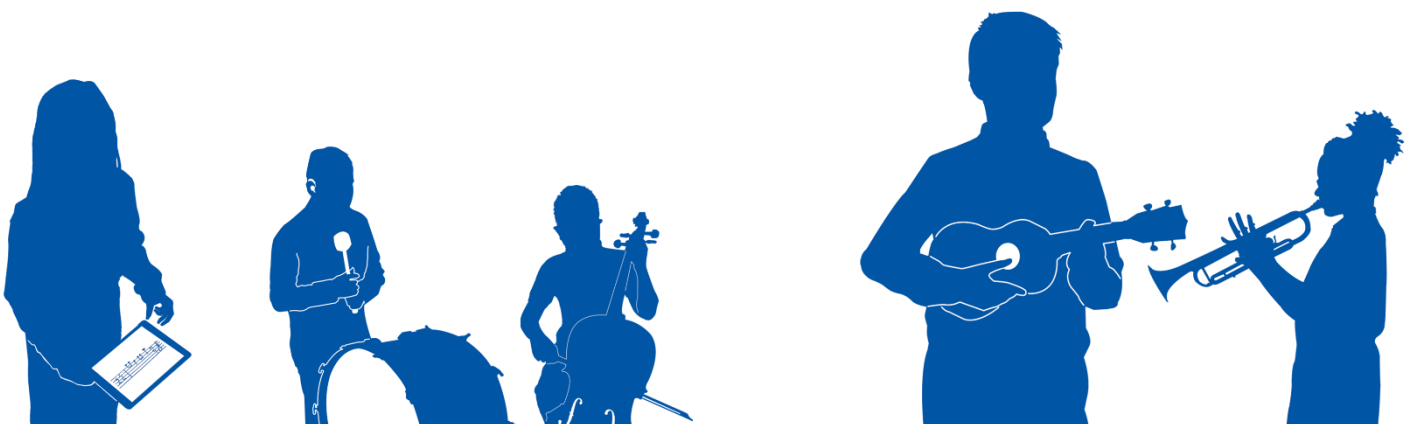
## Thumbjam

This beautiful app elevates the iPad to the status of “proper” instrument!

This screenshot shows a scale of notes - each stripe is a different note. It enables you to be very expressive and musical in your playing. In this example we’re playing a cello sound. The app comes with loads of different instrumental sounds and participants respond to the different sounds and adapt their playing accordingly, and demonstrating musical sophistication. So the way a participant will gently caress a flute sound might be radically different from what they will do with a screaming electric guitar sound.



All these apps do exactly what we need from Music Technology - they present a huge range of musical sounds to broaden the participants experience and give them new stimuli to react to. They also put musical expression and the control of sound at your fingertips - literally! (Musical Example 18)



## Section 4 - Extras

### 4a. Acknowledgements

#### About Yorkshire Youth & Music

Yorkshire Youth & Music is a community education company working across the whole of Yorkshire. We have more than 25 years of experience in delivering fantastic, music-based projects to young people across the region.

YY&M projects reach a wide range of children and young people in challenging circumstances, working in partnership with schools, music services, community groups and other organisations and institutions who provide support and services to young people. YY&M follows young people's own musical aspirations and we employ the very best, multi-skilled music practitioners on our projects. We also offer training and support to adults who work with children and young people.

#### About Andrew Cleaton

Andrew Cleaton is an accomplished composer, producer and workshop leader. Having studied Music at Bretton Hall College he went on to gain an MSc in Music Technology from York University. During his time at York, Andrew developed an interest in accessible instruments.

Andrew has worked extensively in community music and formal education settings, often with an emphasis on the use of Music Technology as an enabling tool for people with Special Educational Needs and Disabilities. This work has led him to travel extensively, leading projects and training in Iceland, Spain, Belgium and the USA.

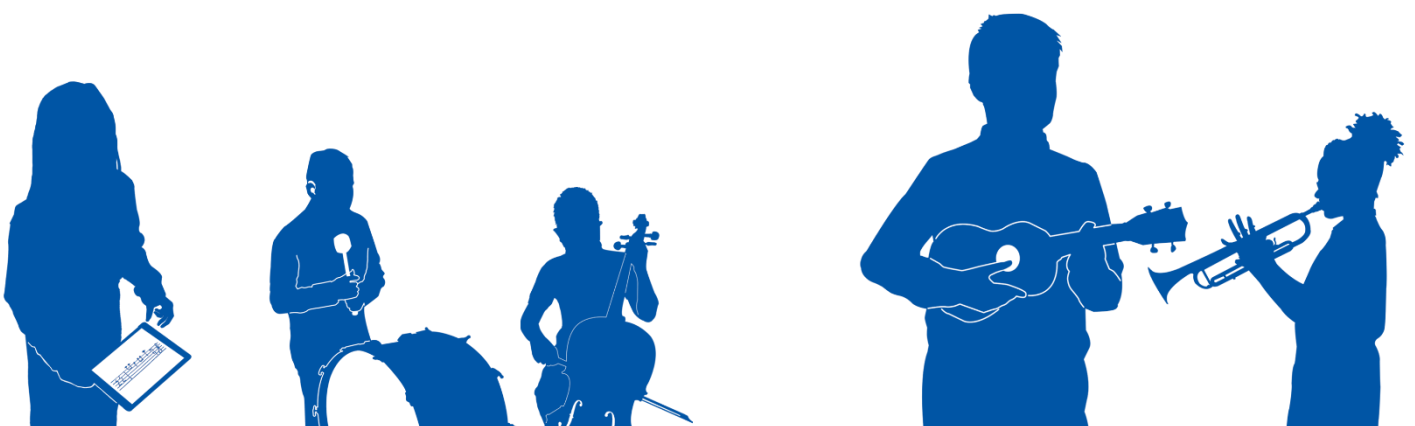
Having spent some time in arts development, both as Music Officer for Arts Council England, Yorkshire and Regional Coordinator for Youth Music, Andrew returned to freelance work in 2005, a move which saw him consolidate a long relationship with Yorkshire Youth & Music, delivering the ambitious *Amazing Music Technology* project across the region as well as many training courses.

### 4b. Publications

*The Illustrated Musical Instruments Handbook* (Electric and Electronic chapter) - Flame Tree Publishing - General Editor: Lucien Jenkins

*SEN Magazine* (April 2014) – Close Encounters of the Musical Kind

*Special Children* (April 2015) – Reuse & Recycle: Bringing Discarded Music Technology Back to Life!





## Musical Examples

There are 18 examples of musical exercises you can do with your students featured throughout this guide. The examples are there to give you some ideas on what to do or try in your classroom / setting.

You can listen to and / or download all of the examples as sound files via SoundCloud:

<https://soundcloud.com/yorkshireyouthandmusic/sets/the-yorkshire-youth-and-music-send-resource-pack>

You'll need to create a SoundCloud account to access the files (if you don't already have one), or you'll need to login to your account to open the link. The following link tells you how to create an account and how to get started using SoundCloud (from WikiHow):

<https://www.wikihow.com/Create-an-Account-on-Soundcloud>

It is free to create an account and free to download our musical examples.

**Please don't use these files directly in your teaching sessions** – they are a guideline for what kinds of musical activities YOU can do with the young people you work with.

