Visual content for musical understanding

KS3

Jane Werry

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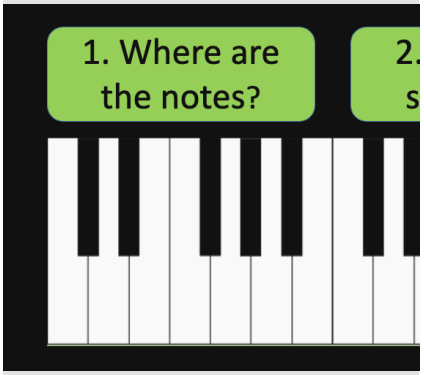


Introduction

One of the things that makes music a difficult subject to teach is its very nature. It's ephemeral and invisible, and it exists only as movements of the air at a particular place and time. A score of an orchestral piece is no more music than a script is a play. It takes musicians or actors to make a score or a script into a work of art.

But what's in a musician's head when they think of music? If someone said 'Think of a D7 chord' or 'Think of the opening bars of Beethoven's Fifth', what do you think of? You might imagine playing a D7 chord on your instrument. If you have been brought up as a very notation-based musician, you might think of the notation of the chord or even of the Beethoven symphony. Whatever you audiate, or hear in your head, you are likely to 'see' *something.*

The problem for our students is that nearly all of them are novices. They will not yet have had a chance to make these deep connections in their own heads. As experts ourselves, a big part of our job as music teachers is to shape our students' thinking about music.

Because music is invisible, visual content can be extremely useful for helping students to make musical concepts concrete and therefore understand them. We are not just talking about conventional notation here – students are unlikely to achieve fluency in music reading from a standing start in Year 7. But there are many other ways that we can harness the power of visual stimuli.

Dual coding in music

What this boils down to is essentially dual coding. Although dual coding theory has been around for 50 years now, it has recently become fashionable in teaching because it ties in neatly with the current interest in cognitive science. However, like most things that have become edu-trendy, it has become diluted and distorted, and in the worst cases reduced to just slapping a bit of clip art onto your slides.

The essence of dual coding is that both verbal and visual stimuli contribute to understanding. A verbal explanation will be strengthened by an effective visual: 'a picture tells a thousand words.' It would not be effective, for example, to describe the relative locations of Delhi and Kolkata without looking at (or at least imagining) a map.

In music, of course, we have the sound of the music itself, and words to describe the music, together with visual representations of it. How we use these three stimuli for building musical understanding is at the heart of the art, or even the magic, of the music teacher.

Your visual stimuli are likely to take the form of slides for your projector, or some sort of handout that students have in front of them as they work. What you put on your slides or handouts needs to be finely attuned to what your students are thinking about as they work, and carefully designed to be as clear as possible.

Design principles

The worst PowerPoint slides – and we've all been subjected to these – suffer from three main problems:

- Too much text – possibly too small to be legible.
- Cluttered layout making the information confusing.
- Unnecessary pictures or animations that do not add anything to understanding.

There are plenty of videos on YouTube that give some great tips on slide design, such as this one (**https://youtu.be/6OlNF2iNfHU**). However, the 'rules' of slide and handout design can be summarised like this:

- Keep words to a minimum: chunk information down.
- Minimum font size for slides should be 18pt.
- No more than two fonts per slide/handout.
- Stick to a colour scheme with just two or three colours.
- Highlight key words using colour and bold – underlining looks messy.
- Use boxes, arrows and so on to highlight information or create a 'flow' of thinking.
- Make sure everything is aligned.

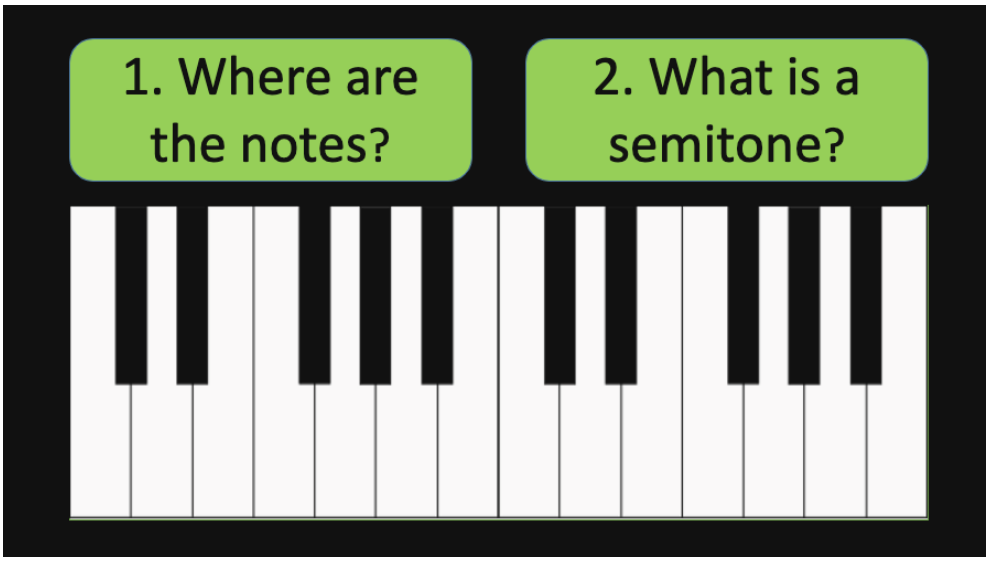
Bearing these principles in mind, the rest comes down to detailed planning of the thinking you want your students to do. In this respect, lesson planning and resource design are inextricably entwined. You also need to build in, of course, what you, as the teacher, will be saying, singing, or playing along the way, as this adds the essential musical element.

Let's look at some examples.

Major and minor triads

This is a good example to look at because it's a simple bit of music theory, but actually involves the confluence of several threshold concepts – concepts that, if misunderstood, will impede future learning.

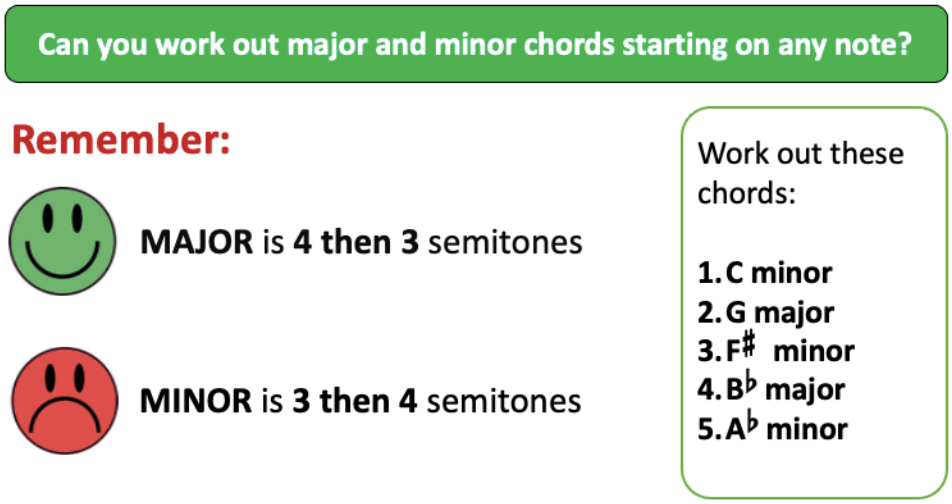
The aim is for students to be able to create major and minor triads on the keyboard, using any note as the root. They have previously learnt where there notes are on the keyboard (using the uber-earworm 'C is to the Left of the Two Black Keys', **https://youtu.be/aovVKPo2noU**), including the sharps and flats, which way is 'up' and 'down', and that a chord is two or more notes played simultaneously.



This slide has a big enough unlabelled keyboard for the teacher to be able to stand in front of it and do a good amount of recap work that involves pointing at notes. The ideas to be covered are numbered: the first is revision, and the second is a new piece of information that will be crucial to the working out of chords later. This makes the sequence of learning explicit. While revising where the notes are, it's possible to go over sharps and flats (which always needs a bit of practice), and which way is 'up'. The explanation of semitones follows.

At this point, it's helpful for students to have keyboards in front of them so that they can follow along with the teacher on an actual keyboard. I always do this part with student keyboards switched off, as it's all about the counting at this point – we'll cover the sound of the chords shortly. This is where a visualiser comes in really handy – either one such as a Hue HD Pro camera, or any webcam or even a phone camera rigged up on a clamp and linked to your computer so that what is captured by the camera can be relayed to your projector. I use mine constantly for modelling in closeup what students need to be doing on their instrument. It enables them all to have a great view, and they are very used to taking in information through a screen. It has become a crucial addition to the visual stimuli that I can provide.

Together we find notes and use these as roots for major and minor triads, counting the semitones and organising the fingers of our right hands to play the chords with the correct hand position. Once we're pretty confident about doing all of this, we can switch on the keyboards and explore the sound of the major and minor triads, identifying the happy/sad feeling of each. Following this highly scaffolded part of the learning, the students are at the point in their understanding where they need to practise more independently.



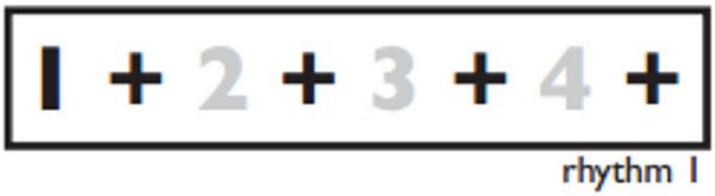
This slide gives the students a reminder of their most recent 'new' piece of learning; namely, the construction of the triads and their mood. It also gives five triads for them to practise finding, and which I can use to assess their understanding. The learning objective is shown at the top, phrased as a question, which happens to be our school policy. Clutter is kept to a minimum, as is word count.

Diagrammatic notation

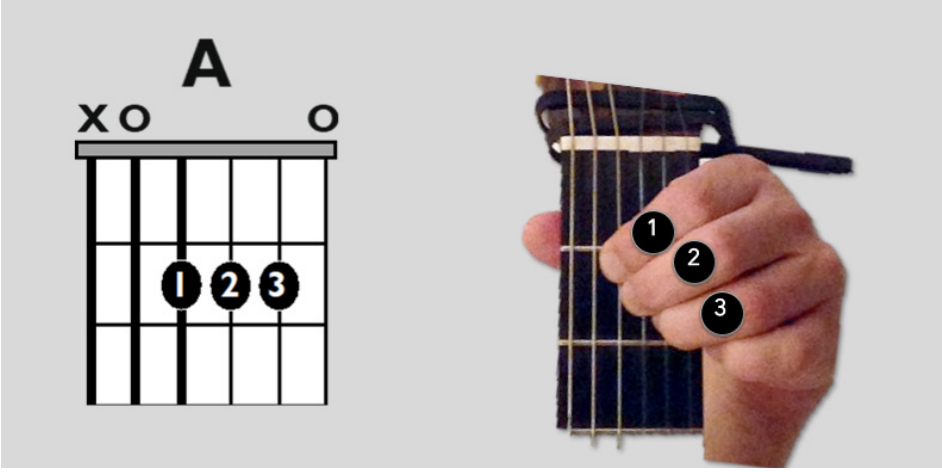
The ideas here are mainly gleaned from the excellent Little Kids Rock (**www.littlekidsrock.org/free/for-teachers/**) and Musical Futures (**www.musicalfuturesonline.org/sample-resources/**) websites.

Beats in a bar and simple rhythms can be communicated very directly using numbers:

Sightreading these, especially when the rhythms get more complex, is a very valuable activity, and this way of representing the rhythms gives a beautifully simple visual scaffold for students' thinking about musical time:

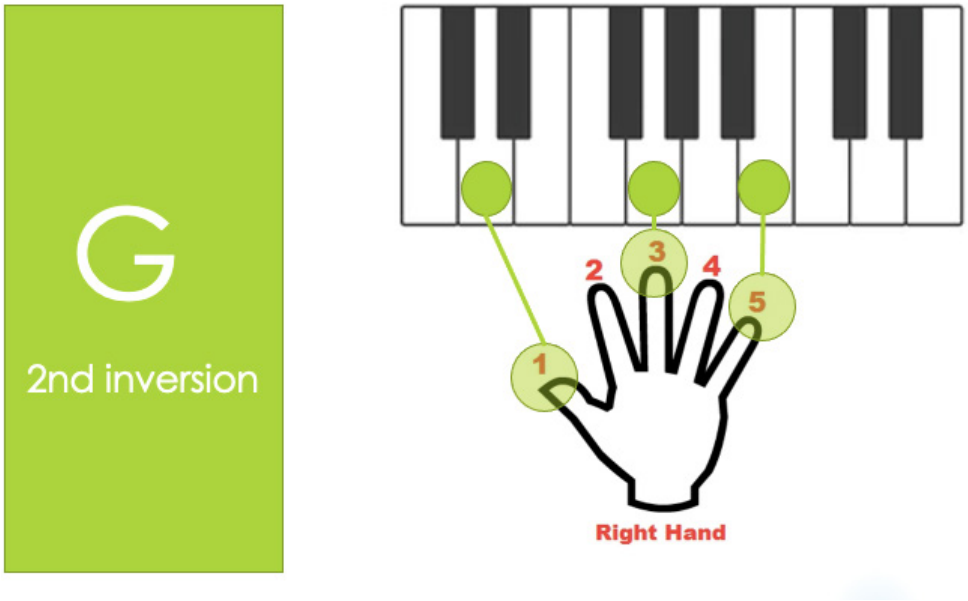


You can even divide your class in two and practise holding independent parts. If you are using guitars or ukuleles in your lessons, this is also a great way for practising strumming patterns, with the downstroke on the numbers and the upstrokes on the 'ands'. A collection of rhythms notated in this way, next to a chord diagram and combined with a backing track, gives a tremendous way to practise a new chord.



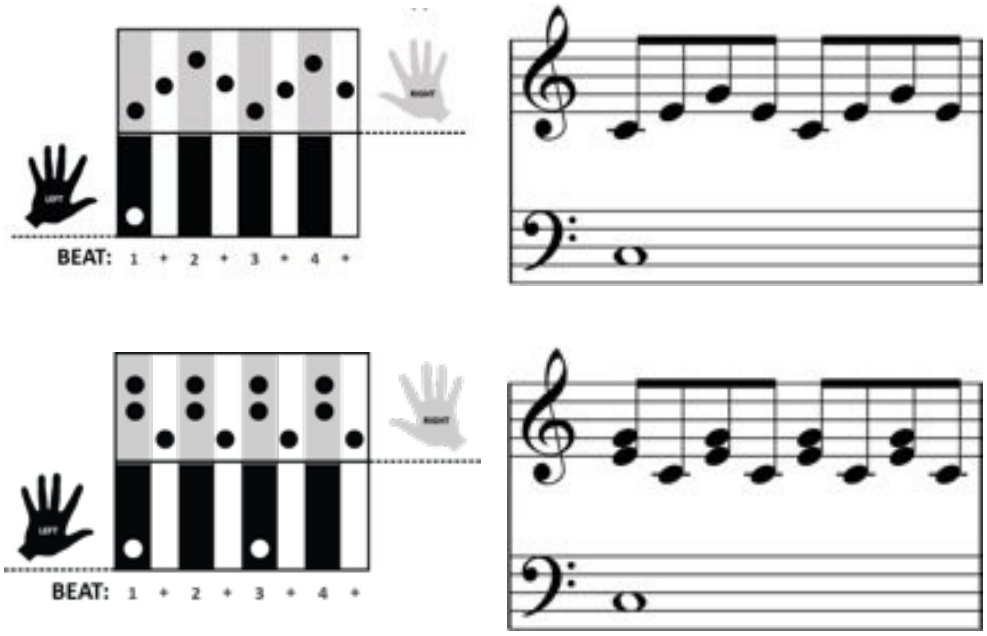
Sometimes what you want students to understand is the relationship between a diagram and what actually happens on an instrument – in this case, reading chord diagrams. A slide like the one pictured above can be very helpful, as it shows how the numbers relate to fingers, and how the black dots relate to fingers on strings and frets.

The same idea can be applied to the keyboard:



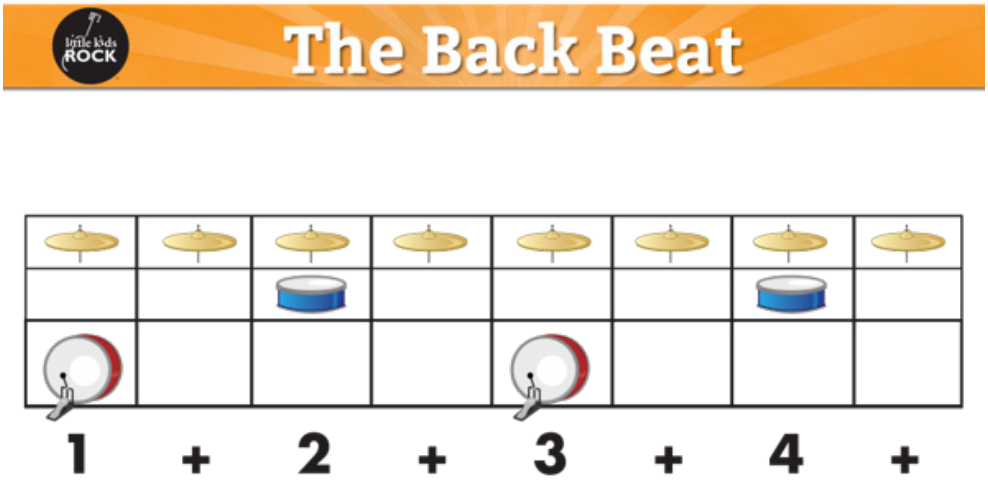
This kind of slide is great for showing exactly where fingers should go for playing inverted chords. For explaining the concept of inversions itself, however, animations can come in very handy. In general, too many animations can just add to the confusion, and it's best to stick to things appearing or disappearing to lend clarity to an explanation. For inversions, though, what students need to understand is the way that the notes can flip position within the chord voicing, and that EGC is still a C chord, for example. An animation involving the blob on the C key floating up an octave to make a first inversion is a great and simple way to illustrate this, and is easy to do in PowerPoint.

Just as diagrammatic rhythmic notation can indicate strumming patterns, it's also possible to represent keyboard chord patterns diagrammatically (these examples are from Little Kids Rock):



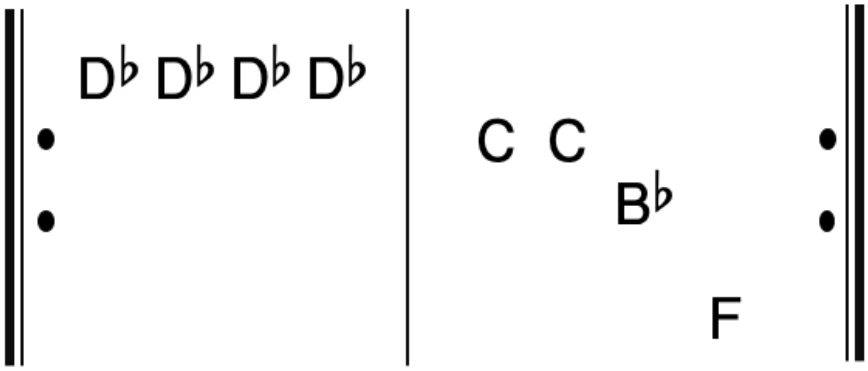
In terms of communicating how the notes of the chords are made into a pattern, these are the ideal way of giving students a mental schema of how everything fits together.

Drum rhythms work brilliantly when represented diagrammatically:

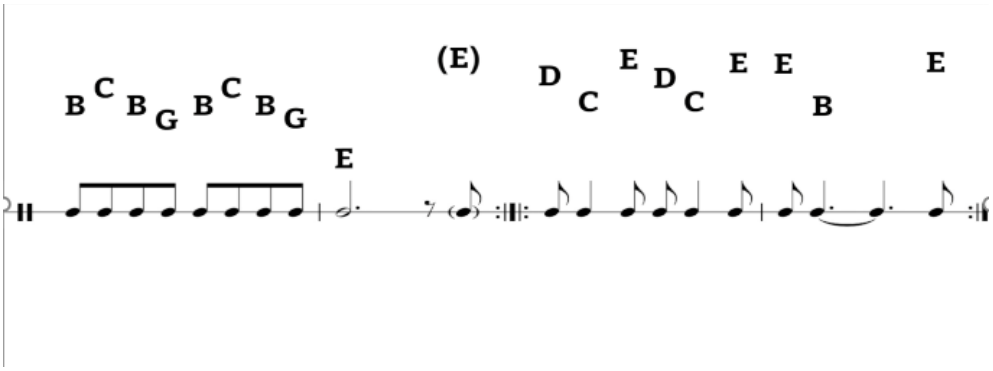


If students have prior experience of rhythms written using numbers and 'ands', then the only new piece of information to learn here is the parts of the drum kit. This diagram could be used in chair drumming, drumming on a real drumkit, or even with different sections of the class performing each part with vocal sounds or body percussion.

Pitch and melody can also be approached diagrammatically:



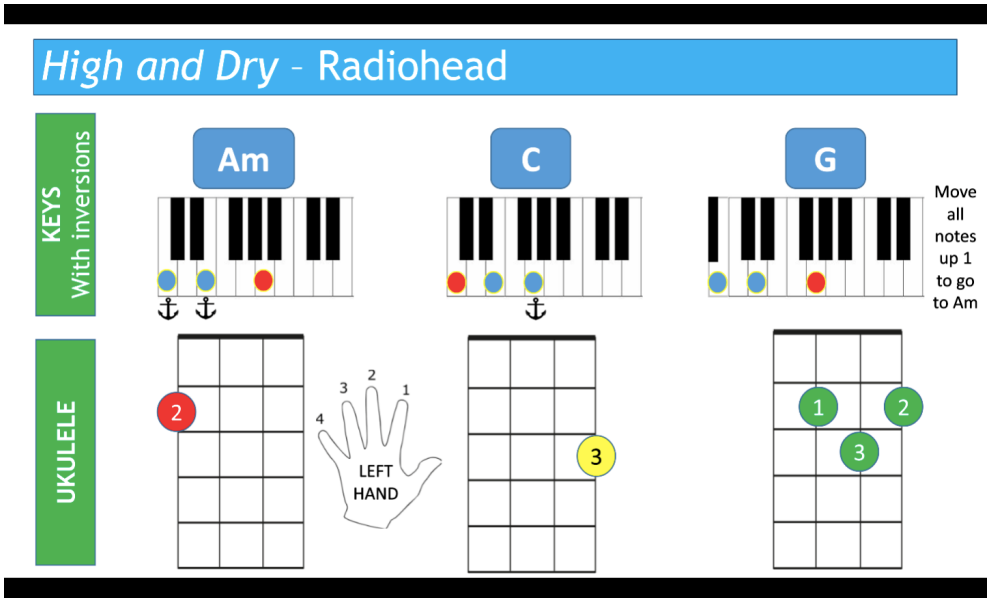
This is the riff from 'Dark Horse' by Katy Perry. The advantage of notating it like this is that it makes the direction of the melody clear, particularly where there is a leap – for example between the B flat and the F. However, this riff is easy because all the notes are of equal length. Where there are more complex rhythms, it might be a good idea to bring in a little bit of notation to add clarity:



This example is from Little Kids Rock, and shows the melody from 'Heathens' by 21 Pilots. The rhythm is shown underneath pitch note names with melodic direction. You could argue for notating the whole thing, perhaps with note names underneath, but I have found that students ignore notation if note names are given. Fluency in reading pitch notation is unlikely to be achieved through KS3 music alone, although reading rhythms is much more possible. Having the information laid out as in this example presents the pitches as the main thing to look at, with the rhythm underneath as an aide-mémoire should it be required. Even an understanding of which the long notes and short notes are would be enough for it to be helpful.

Slides and handouts for group work

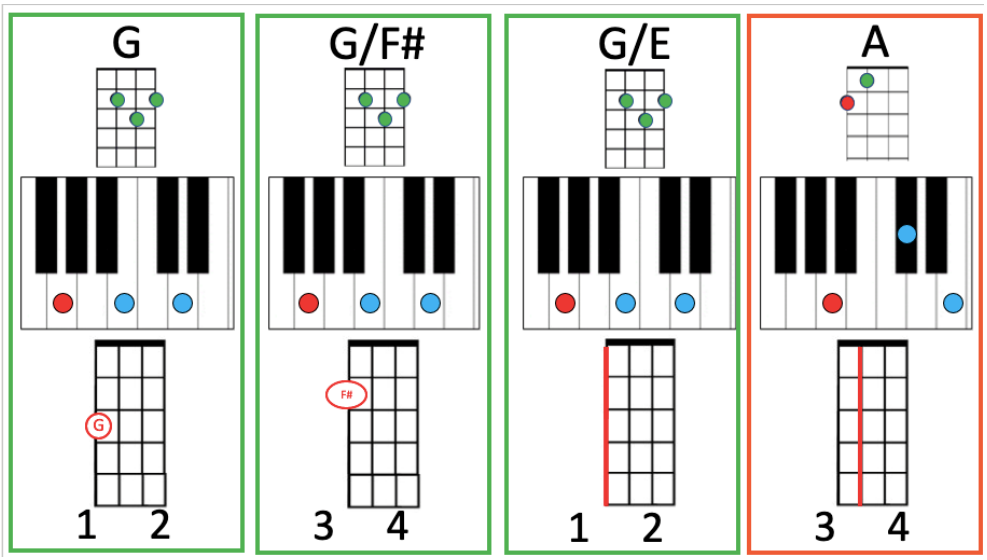
When students are going to be performing as a whole class or in small groups, the necessity is to give them the information that they need in as simple a format as possible to ensure that they can play the music correctly. Combining a lot of information on one slide or a single sheet requires a little ingenuity.



This slide shows the chords needed for the song, in the order in which they appear. Keyboard players will be practising using inversions. The red blobs indicate the root notes of the chords, while the anchors show which notes stay in the same place from one chord to the next. For the ukulele players, the colours fit with the stickers on the ukuleles in the classroom (yellow for C, red for F, green for G), while the hand diagram reminds them how the fingers are numbered.

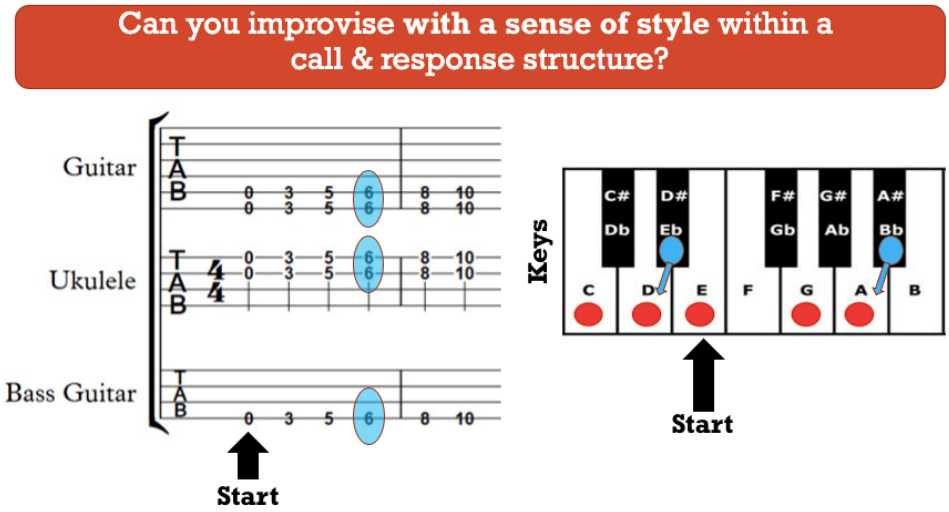
What this slide does not show is how long each chord goes on for. This is best communicated in real time, and is where a backing track comes in. Of course, the tightest way to combine visual and aural information is through a video, such as in the Musical Futures *Just Play* resources (you can see an example here: **www.musicalfuturesonline.org/sample-resources/justplay-three-little-birds-sample-19358/**). It's possible to create your own playalong videos, but this is time-consuming, and you might prefer to rehearse the timings of the chords in a more basic way, by playing along with the track and calling out the chord changes (or pointing at them on the board) until students have got the hang of it.

If you want to include a rhythmic element to a group performance handout, it might include something like this:



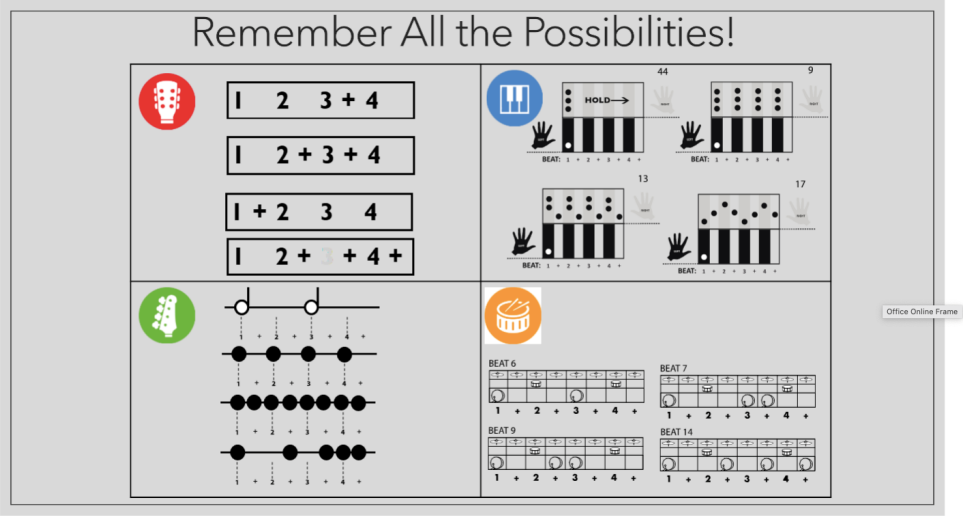
This is from 'Three Lions', and includes bass guitar as well as ukulele and keyboard. The counting is shown at the bottom. The bass guitar diagrams show whether the note is fretted or an open string. The chord labels at the top would enable students to add in the bassline on keyboards as well. It could be argued that instead of showing the root note of the keyboard chords in red, it would be more relevant in this case to show the bass note. The outline boxes for each chord are colour-coded with Boomwhacker colours – if you ever use Boomwhackers it's worth thinking about whether you want to colour-code absolutely everything, to create a cohesive pitch=colour scheme. This may enhance the building of mental schemata for some students.

This is a different kind of all-info-on-the-board slide:



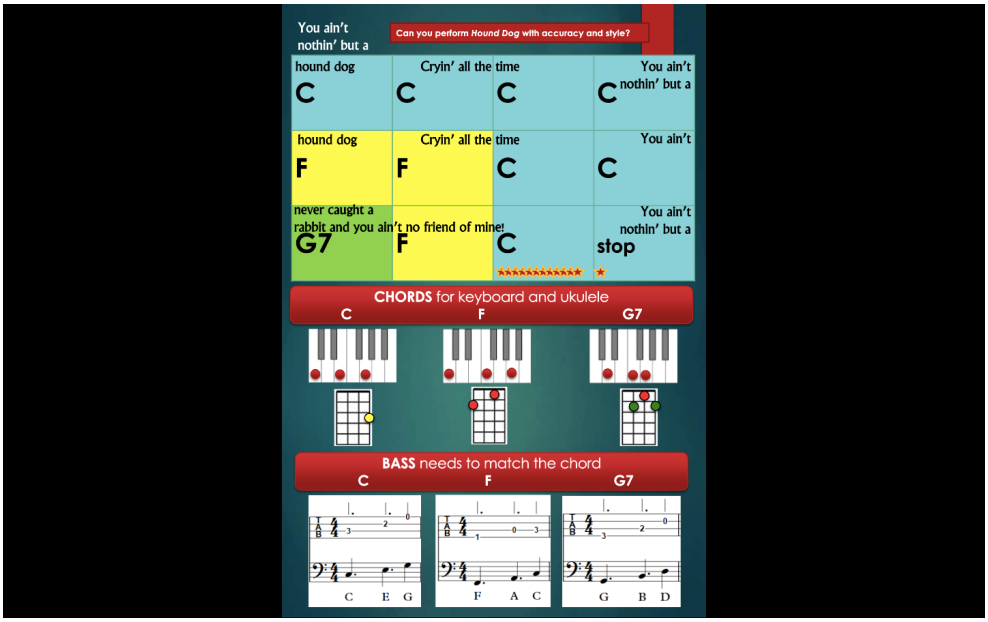
This is for improvising in a blues-rock style, inspired by 'Smoke on the Water'. It requires some explanation, which would be provided by the teacher along with some modelling. Students have previously learnt the 'Smoke on the Water' riff and understand tab. The slide shows where to find the notes they should use for their improvisations, and marks in blue the 'blue' notes that will give their improvisations the required style. The arrows on the keyboard diagram show how the 'blue' notes lean to the note a semitone below. The starting note is also indicated.

Sometimes you'll want students to have a handout in front of them with information for the piece they're performing, while you keep other reference information on the board. Sometimes this might be a reminder of different choices available to them. Here, they are working in mixed groups including guitar, bass, keyboard and drums. They would have a handout with the chords and lyrics for the song, and the information on the board reminds them that they have choices to make regarding strumming/chord patterns and drum grooves (again, this graphic comes from Little Kids Rock):



In this case, students would need to have prior experience of working with these types of diagrammatic notation, and have practised putting them into practice on their instruments.

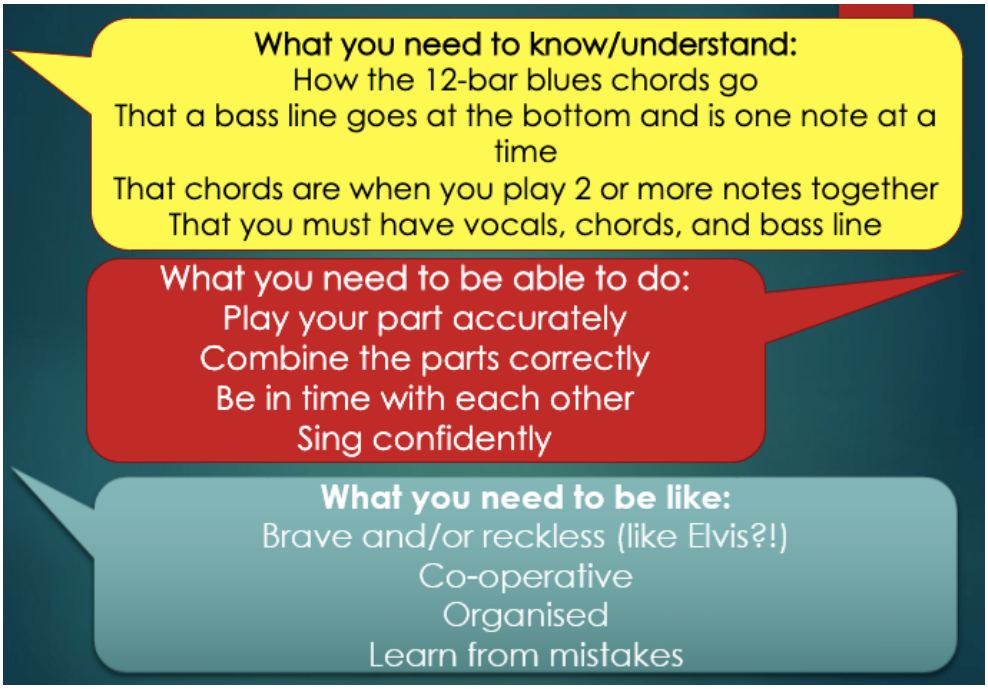
Here's an example of a handout sheet for mixed keyboard/ukulele/bass/vocals groups performing 'Hound Dog':



Again, this assumes a fair amount of prior knowledge: they will have learnt the 12-bar blues chords on keyboards and ukuleles, and will have practised making a bassline out of the chord notes. They have learnt about chord inversions on the keyboard and about 7th chords. They have listened to Elvis Presley singing the song and discussed his performing style and the instruments involved. They have had a go at performing the song as a whole class before moving into groups.

On the handout, the lyrics are carefully overlaid over the chords to show exactly where they fall. If the backing starts before the singer gets to the word 'hound' then everything will be out of kilter. The chords themselves are colour-coded (not with Boomwhacker colours this time) and the red stars in the last two bars show the rhythm that should be played in at that point. The keyboard chords show the necessary inversions, and the ukulele chords use the colour system of the stickers on the instruments. Hopefully by this stage in the project, students are aware that the notes of the bassline need to match the notes of the chords, but there's a reminder of this. The bass is notated in tab for the bass guitar players, and in notation with note names for keyboard players. The note names are there partly because the notation is in bass clef but mainly as a reminder of the notes in root position, as some more able players will be playing the chord inversions with their right hand, with the bassline pattern in root position with their left hand. The notation serves as a reminder of the rhythm and direction of the pattern. It seemed wrong to notate it in treble clef.

While students have this sheet – laminated – in front of them as they work, a different slide is on the board:



Essentially these are success criteria. Chunking them like this separates what you need to understand from what you need to do, which allows you to be more specific when students might not be working well. You can pinpoint more easily whether it's because there is something they don't understand, or just something they hadn't realised they needed to do. Including the third box enables you to include some personal characteristics, which you can align with school priorities if necessary. Moving into small groups for a performance that requires vocals can cause some anxiety and reticence among students. Some students find it helpful to pretend to be Elvis singing, rather than be themselves, hence the encouragement to throw caution to the wind here.