Teaching Music with Soundbeam

Contents

Chapter One – Movement and Rhythm

Introduction

This booklet is one in a series which comprise a compendium of approaches to working with Soundbeam in a range of educational and other settings. The aim is to encourage thinking of Soundbeam as a versatile musical device which can be used to support music making and musical thinking.

Having this powerful music technology available in a classroom, day centre or other setting provides a potential for much wider use to support musical experience and performance, teaching and learning. If we can use Soundbeam across a much wider range of music teaching activities, then more teachers and other facilitators will become more familiar with it and get more use out of it.

Soundbeam can and should be used to complement existing music resources. Many special schools, day centres and other projects struggle with limited budgets to buy and/or maintain quality musical equipment required to adequately support curriculum activity. Classroom percussion can often be of poor quality or is poorly maintained and is therefore not capable of producing quality sounds – an essential requirement if students are to become engaged and stand any chance of producing quality work. Today's students are used to hearing high quality musical sound and will often feel frustrated, and consequently unengaged, if they are denied access to quality sound sources. Soundbeam not only provides a large range of quality sounds – it provides an interface which enables less experienced students and teachers to use them *musically*.

By creating a set of resources which offer clear, easy to follow guidance on working with music and technology for non-specialists, we address two important issues. It is well known that two areas of concern for generalist teachers in primary and special schools are around teaching music and using technology. We can address these challenges in two ways. Firstly, by making the technology easy to set up and use. Secondly, by designing curriculum music activities which generalist teachers will find easy to understand and implement.

Many Soundbeams are in use in locations other than schools. Day centres, community music projects and other charities, arts centres, private homes, hospices, care facilities and homes for the elderly are just some examples. All the activities and approaches described in these modules can be applied or adapted effectively for individuals and groups across a wide spectrum of age and ability/disability to enjoy and learn through using Soundbeam.

Soundbeam in the Classroom – key features

- Enabling non-specialist teachers to deliver music lessons. The sessions are free of technical jargon and do not assume any prior musical knowledge. Much use is made of movement and graphics to help explain and reinforce musical activity.

- Enabling SEN student to participate with others. These sessions are designed to allow MLD students to participate fully in music making with their peers in SEN and mainstream settings. Teachers will also find that many of these lessons can be adapted to make them suitable for students with more severe learning difficulties. Think carefully about the student's particular strengths and weaknesses and adapt accordingly. This will include thinking about the ways in which the student can usefully interact with Soundbeam, how they might use communication devices to respond to musical stimuli and appropriate ways in which they might work with others. At the same time, think about how these activities might be used to stretch them in to being able to access new skills and areas of musical understanding.

- Keeping the technology simple. Soundbeam is a powerful and highly sophisticated music technology platform. However many of the most important features can be accessed quickly and easily. By making considerable use of the presets and the built in sound library, teachers will be able to easily access functions with a minimum of technical knowledge. All activities can be accessed with just one beam and a few switches. Video tutorials and annotated step-by-step 'walkthroughs' provide clear guidance on using the technology. Exemplar sound files give some idea of possible musical outcomes.

- Broad and balanced ranges of activities ensure that teachers will be helping their students cover most curriculum requirements. Differentiation and extension activities are also suggested where appropriate. Assessment criteria are also provided for teachers who may require this.

- The activities are led by the music – not the technology. In addition, the use of Soundbeam can often be supported by use of conventional musical instruments in these activities. Extensive use should also be made of the voice as instrument, where appropriate.

- Any suitable person can lead these activities from the school community. In addition to classroom teachers, it may be appropriate for teaching assistants, parents, senior pupils, visiting staff and others to get involved in working with this user friendly technology.

In this Unit, we explore using movement as a way into more expressive music making and understanding how music is made. We also begin the process of building skills required for playing and layering rhythmic patterns to a steady beat, sometimes using rhythm grids which are used more extensively in later booklets in this series.

1. Learning to hold a steady beat

Students can learn to hold a steady beat by listening to a piece of recorded music. Initially, they can mark the beat in a variety of ways: by clapping, using body percussion or vocal sounds, etc. They can then start working with Soundbeam in a similar manner. Developing the skill to play 'in time' with Soundbeam will lay the foundations for a more *musical* use of Soundbeam as a performing instrument.

Activity

Find some suitable slow tempo backing music and help the students find a steady beat. Assuming four beats to the bar, they should tap a switch or cut the beam on the first beat of the bar only, as indicated in this diagram:

○	•	•	•	○	•	•	•
sound	2	3	4	sound	2	3	4

Play a sound on the first beat and follow this with counting or gently clapping the remaining three beats. Set the Soundbeam to play sounds of short duration. Percussion sounds are ideal. Listen to this audio example in which a woodblock taps the first beat of each bar over a drum backing

Extension

Try using music with different tempos and time signatures, and ask students to respond accordingly.

A movement routine can be 'choreographed', where on Step I the student taps the switch or cuts the beam. The remaining three steps could be in a tight circle or backwards/forwards movement to complete the sequence.

Try adding another note on one of the remaining beats.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity

P.2 makes or controls sound intentionally

2. Pitch through movement

Students develop a sense of relative pitch by responding to high and low sounds through movement. The Soundbeam is ideal for this type of activity as we can set the beam more or less 'vertically' so that higher and lower movement will trigger corresponding changes in pitch.

Activity

The teacher sings or plays a series of notes that include high and low pitches. Students respond to the changes in pitch through movement (e.g. by standing up for a high note or crouching for a low note).

Then reverse the roles: the teacher indicates high or low by moving their hand up or down in the air. Students follow the changes with corresponding movement in Soundbeam (e.g. by gliding from a low note to a high one as the teacher's hand rises).

Extension

- The beam can now be set horizontally. Can the students still match pitch changes indicated by teacher hand movements?
- Set up some Soundbeam switches to a series of notes rising in pitch. Students have to move up and down the switches, as directed by arm movements from the teacher. [a student could replace the teacher in directing this activity]
- Use a simple graphic score as an alternative to movement controlling pitch changes.
- Organise an ensemble of conductors and Soundbeam players. Each player is assigned to a 'dancer' whose up and down movements determine the [approximate] pitches they should play. Structure the piece to encourage a musically interesting outcome. For example, the dancers and players could come in gradually over time; there can be sections where their movements are over a small pitch range….and so on.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

P.2 makes or controls sound intentionally

P.3 makes simple patterns into sound intentionally, through repetition or regularity

I.2 interacts with others using sound

3. Expressive movement and music

Students move in such a way as to capture something of the quality of a sound. This is done initially to an appropriate piece of recorded music, before being transferred to Soundbeam. The aim is that expressive movement should hopefully lead towards more expressive playing when the physical gestures are used to trigger musical sounds in the beam. Teachers who want to explore these ideas further might want to look at this short video on introducing Eurhythmics: https://www.youtube.com/watch?v=gMMn3HoTlHc

Activity

The first thing to do is to find suitable extracts of expressive music, which showcase particular instruments. Suggestions might include:

- a bold brass fanfare such as Aaron Copland's *Fanfare for the Common Man*
- a gently floating violin melody, such as Vaughan William's *The Lark Ascending*
- the simple lyricism of the flute in Prokofiev's *Flute Sonata in D*
- the energetic rhythms of the xylophone from Saint-Saens *Carnival of the Animals: Fossils*

but of course, there are many more examples you may wish to work with. The idea is to have the pupils move expressively to the sounds they hear – and then transfer this type of movement into the beam. Hopefully, this will lead to a more considered and expressive approach to triggering sounds, as opposed to just flapping at random in the path of the beam.

Make sure that the beam is set up appropriately. Think carefully about choice of instrument sound, scale, register and number of divisions. So if a student is hoping to do something in the style of Vaughan William's *The Lark Ascending,* they will want a violin sound, where the notes are closely spaced so that students can emulate the various trilling passages.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.2 makes or controls sound intentionally

I.3 interacts through imitating others' sounds or through recognising self being imitated

4. Music and mime

In groups, students devise a mime and compose music to accompany it. Here are some possibilities:

- a mime about being on a rollercoaster could be accompanied by a swooping melody
- a mime about being chased by a monster, accompanied by scary, tense music
- a mime about having a picnic in the park could be accompanied by happy music and sounds which capture the various picnicking activities

Activity

Audition a few of the Soundbeam Soundsets or Themes to find an appropriate set of sounds, which can be tweaked slightly if necessary. These sounds can be used to create the prevailing mood for the mimed activity and also as 'sound effects' some of the specific actions in the scenario.

For example, if we take the mime about being chased by a monster:

- A beam set to a low swirling synthesiser sound and another set to play vocal sounds can create a scary mood. Choose a suitable scale [whole tone?] or chord pattern [diminished 7^{th}?]
- Heavy reverberant percussive sounds to indicate the plodding footsteps of the giant monster, contrasting with the lighter, delicate footsteps of the students being chased
- A growling monster sound – perhaps a cluster of low brass sounds?
- And so on….

A group of students act out the mime, while the Soundbeam players add the musical 'commentary'. Listen to this audio example for a soundtrack based on the suggestion above.

Extension

A narrator can read the story or describe the action, which provides helpful cues for musicians and mime artists.

Encourage the students doing the mime to make their movement and facial gestures as expressive as possible. This, in turn, should encourage a more musically expressive response from the band.

You may wish to add conventional instruments, or other sound sources, to the mix in order to bring together the various sounds you will need. For example a gong or a crash cymbal might be just the sound you need for a given effect.

Assessment criteria

P.2 makes or controls sound intentionally

P.2 makes or controls sound intentionally

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

5. Beats and dance sequences – machine music

In this activity, students explore the workday routines which might take place in a factory or any workplace setting – through movement and music. This encourages them to work with repeated sequences, extended over 8 or more beats, and to work together collaboratively in an ensemble performance.

Activity

Take an everyday working context, for example working in a supermarket. Make a list of some of the typical tasks:

- Stacking shelves
- Cashier scanning items
- Shoppers filling shopping bags at the till
- Taking items down from shelves
- Ticking items on a shopping list

Students should choose one of these tasks and then work in groups to come up with a suggested sequence of stylised movements. For example the students who are taking on the cashier role might come up with the following sequence of actions:

1. pick up item
2. pass it over the scanner
3. place on the other side of the till
4. tap two numbers in the till

Work with the students to make these actions fit exactly over a count of 8 beats:

Activity	Pick up items	Pass over scanner	Place on other side	Tap till twice
Count beats	1 2	3 4	1 2	3 4
Cue words	Pick up	Scan now	Put down	Tap tap

Next, we need to find some musical sounds for each of these actions. For example:

- pick up item – upward sweep on Soundbeam
- pass it over the scanner – single high note
- place on the other side of the till – downward sweep on Soundbeam
- tap two numbers in the till – two taps on a triangle

The movers and musicians should practise doing these actions, and repeating them over a steady beat. Find some suitable background music [the sort you hear playing in the background in some supermarkets?] which might help with fixing a steady beat.

Each group should work on their activities independently, before bringing together for a whole class performance. The activities can be performed simultaneously, or in a sequence if resources are limited.

Extension

Here are some further scenarios you might want to consider:

- a car assembly plant – great opportunities for robotic mechanical sounds
- working in a tea or coffee shop – gurgling coffee machines and tinkling teacups
- working on a building site – hammers, spades, drills and cranes….
- a day on the farm – mending walls and fences, herding sheep, ploughing

Listen to some of the soundsets in Soundbeam and see if they suggest any possible scenarios – a day at the seaside, a haunted house….?

Assessment criteria

P.3 makes simple patterns into sound intentionally, through repetition or regularity

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.2 interacts with others using sound

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

6. Working with contrasts

Choose two Soundbeam soundsets with contrasting moods. For example, something highly rhythmic and funky and a contrasting more ambient soundscape. Performances of the pieces are juxtaposed to highlight the musical differences.

Comparing and contrasting is one of the most important ways in which we learn, and begins at a very early age. For example young babies need to be able to differentiate between their mothers and other humans!

Activity

The students should work in two groups, each with a contrasting set of sounds. This can be a mix of any Soundbeam sounds with some acoustic sounds. They should each create a piece which accentuates the musical characteristics associated with the task. So for example, the first group might be working on something which is fast, rhythmic and loud, using lots of different sounds. The second group, by contrast will produce something slow moving and gentle. These pieces can be performed in any sequence and recorded for use with the extension activity which follows.

Extension

Split the class into two groups, and have each group work with either of the pieces created above. Students discuss and rehearse appropriate movements for their piece of music, subsequently adding their movements to the music as they listen again.

Instead of moving spontaneously to music in a free and improvised way, the students have to imagine and plan the movements in advance. They need to find ways of describing or demonstrating those movements to others in their group. The second part of the task involves memorising and recalling the movements as the music is replayed.

Order repetitions of these musical extracts into a structure to create a whole piece, where each group has to perform their pattern at the correct time.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

7. Working with 'human scores'

The class is divided into groups of movers and musicians. The movers line up in rows and their predetermined sequence of actions dictates what the musicians will play on their Soundbeam switches and beams.

Activity

Four students line up in a row and are seated on chairs. On a cue from the teacher, some students stand up and the rest remain seated. The Soundbeam players face this line up and use them as a graphic score as follows. If the order of 'movers' is:

standing-standing-seated-seated

then the musicians would:

play-play-rest-rest

In other words a standing student indicates play a note: a seated player indicates a rest. The musicians keep on repeating this four beat pattern, aided by the teacher who provides a steady beat throughout.

<u>All change!</u>

The teacher raises an arm and counts aloud '1 2 3 4'. This is a cue for the musicians to rest for a bar and for the movers to either change position or remain as they are – so creating a new rhythm pattern. The musicians start playing this new pattern as soon as the teacher has completed the changeover count.

Extension

- Longer sequences of movers can be used to create longer rhythm patterns
- Two groups of movers and musicians can be performing simultaneously.
- instead of sitting/standing, students could use other gestures to indicate play/rest. This is an approach to consider when working with students with limited mobility.
- Consider adding other gestures to indicate other aspects of performance. For example instructions to play louder/quieter, long sustained notes, improvised sections etc.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

P.3 makes simple patterns into sound intentionally, through repetition or regularity

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

8. Words into rhythms

Students use the natural rhythms of words to improvise rhythmic ostinatos. Rhythm patterns that might be quite hard to learn from standard musical notation can be picked up quite easily from the often more familiar patterns of spoken words.

Activity

Decide on a theme for your piece. For example:

- Weather: *clouds, sunshine, hurricane, condensation*
- Colours: *blue, yellow, tangerine, ultra violet*
- Animals: *deer, tiger, antelope, alligator*

Next choose a sound to go with each of these words. If you are working with the colours, for example, you might choose a light airy flute sound for blue, a sparkling saxophone sound for yellow…and so on. Involve the students in making these decisions as to which sounds they think might go with which colours.

Label and arrange the Soundbeam switches accordingly and set up for one player per switch. Produce some cards showing the various colours. You will need several copies for each colour. Now arrange the cards in a sequence. For example:

1	*2*	*3*	*4*
blue	*blue*	*blue*	*tangerine*
x	**x**	**x**	**x x x**

Use a suitable backing track to set up a steady pulse. After a count of 1 2 3 4, students begin playing the ostinato pattern. They should keep playing this while you [or a group of students] assemble a new pattern:

1	*2*	*3*	*4*
tangerine	*blue*	*tangerine*	*ultra violet*
x x x	**x**	**x x x**	**x x x x**

On a further count of 1 2 3 4, students switch to the new pattern. Alternatively recite the new colour sequence to a steady beat as a means of introducing the new pattern.

Extension

- Set one ostinato pattern going, as outlined above and then add another one to play over the top so that there are two patterns going at once. Use a mix of switches, beams and conventional instruments if necessary. Listen to an audio example here.
- Once the patterns have been established, remove or cover the cards so that students are playing from memory.
- Increase the tempo or use faster backing tracks!
- Use longer sequences of cards for some performing groups.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns into sound intentionally, through repetition or regularity

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

9. Following movement through sound

In this activity, students work in pairs. One student provides a set of prescribed movements. The second student 'translates' these movements into sound. In a sense, this is a mobile graphic score where the symbols are provided by students moving through a series of improvised movements.

Activity

Instruct the 'dancers' to move freely around the performance space as follows:

- Raise arms high in the air for high notes
- Hands on waist for middle register notes
- Hands down by sides for low notes
- Move quickly around the space for faster music
- Move slowly round the space for slower music
- Stand still with hand over mouth for silent sections.

Each musician is assigned a dancer and they interpret the movements indicated above - using sound. Sound sources can be any mix of beams, switches and conventional instruments.

Extension

- The performance can be structured by having different numbers of dancers in the space for each section of the piece. For example, start with one dancer then gradually add others.
- Dancers and musicians can swap with each other during the performers or musicians can swap each other's dancers.
- A backing track or drone/ostinato might help give the piece more cohesion.
- The dance can have a dramatic theme. For example exploring a haunted building or a day at the seaside.

Assessment criteria

P.3 makes simple patterns into sound intentionally, through repetition or regularity

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

10. Adding Rhythmic accompaniments to a song

In this unit, we begin by tapping simple rhythmic patterns in time with a song as a means of generating some ideas for a percussive accompaniment for a song. The song may be a recording or may be sung live by some of the students in the group.

Activity

Use a song that the class knows well. Start by adding simple rhythmic actions (e.g. clapping or stamping on the beat). Then try combining different actions (e.g. stamping feet on beat 1 and clapping hands on beat 3). You may need to find alternative actions which are more appropriate for your students.

Now transfer these actions to beams and switches set to play different percussion sounds. The students might want to try a few sounds out until they find the most pleasing combination.

Extension

Students could try to emulate the sound of a standard drum kit, by concentrating on playing the main parts of the kit. These are:

- Bass or kick drum – often on beats 1 and 3
- Snare drum – often on beats 2 and 4
- Hi hat – playing a steady pattern throughout

Alternatively students could explore working with percussion sounds and rhythm patterns associated with other styles, such as Samba or African drumming.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.3 makes simple patterns into sound intentionally, through repetition or regularity

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

11. Ensembles with number rows

Students develop rhythmic ostinatos using number lines (e.g. numbers 1 up to 8 in a row where certain numbers are circled to indicate the beats that students should play). Some of the ostinatos can be regular (e.g. numbers 1 and 5 are circled) and others irregular (e.g. numbers 2, 6 and 8 are circled). This can be done on a series of switches, a single Soundbeam or a combination of these.

Activity

Use the chart below as the basis for an activity for four switch players. They can be set to a range of pitched notes or percussion sounds.

Player 1	**1**	2	**3**	4	**5**	6	**7**	8
Player 2	**1**	2	3	**4**	5	**6**	7	8
Player 3	**1**	2	**3**	4	**5**	6	7	8
Player 4	1	**2**	3	**4**	5	**6**	7	**8**

Each player counts through 1 to 8, tapping his or her switches on the bold, underlined numbers. Practise separately first before bringing together. Count aloud a slow, steady tempo to begin with.

These parts can be doubled with other students playing 'body percussion'. Stamp foot on red numbers – clap hand on black numbers.

The activity can also be played using a beam, with two or more students standing on each side of the beam. They place a hand in the beam on the red numbers and clap quietly on the black numbers.

Extension

- A backing track could be used to help the players keep to a steady pulse.
- Bring together two groups – one playing a beam, the other playing switches – overlay the ostinato patterns by having two groups playing at once
- When students are confident with this activity, increase the tempo.

Some guidance on assessment

Each project in this Unit has criteria you might find useful, if working in a context where formal assessment and reporting is required. The criteria can be used more informally when you may want to reflect on the progress being made and consider some pointers for improving the quality of work further. Users should feel free to adapt and edit these lists of statements to suit their particular requirements.

The criteria statements we provide are taken from the *Sounds of Intent* framework and the complete list is provided below for reference. These statements are grouped into three sections:

- R = reactive [how we respond to music]
- P = proactive [how we make music]
- I = interactive how we work musically with others]

More information and resources can be found on the *Sounds of Intent* website: http://soundsofintent.org

Here is a complete list of statements:

R.2 shows an emerging awareness of sound

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.2 makes or controls sound intentionally

P.3 makes simple patterns in sound intentionally, through repetition or regularity

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Glossary

Tempo - The speed of a piece of music

Time signature – specifies how many beats are contained in each bar

Pitch - A measure of the frequency or how high or low notes are

Graphic score - The use of visual symbols to represent music

Reverberation - Adding multiple echoes to make a sound appear to be coming from a larger space

Ambient - music that puts an emphasis on tone and atmosphere over traditional musical structure or rhythm

Ostinato - A musical phrase which repeats

Drone - A continuous note or chord

Backing track – a recording of an accompaniment for playing along to

A note on assessment

The assessment criteria have been taken from the Sounds of Intent framework and it is highly recommended that you engage and make use of the freely available resources from their website at www.soundsofintent.org

The statements are divided into three categories:

- **reactive[R]** – how students respond to sound
- **proactive [P]** – relate to students making music
- **interactive [I]** – how students make music with others

Use these as a basis for recording progress and providing helpful and constructive feedback for your students.

Teachers might also wish to consider making use of the ISM framework, which can be accessed here:
http://www.ism.org/images/files/An_Assessment_and_Progression_Framework_Primary_Music.pdf

Chapter Two – Musical Moods and feelings

Introduction

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Many Soundbeams are in use in locations other than schools. Day centres, community music projects and other charities, arts centres, private homes, hospices, care facilities and homes for the elderly are just some examples. All the activities and approaches described in these modules can be applied or adapted effectively for individuals and groups across a wide spectrum of age and ability/disability to enjoy and learn through using Soundbeam.

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- Enabling SEN student to participate with others. These sessions are designed to allow MLD students to participate fully in music making with their peers in SEN and mainstream settings. Teachers will also find that many of these lessons can be adapted to make them suitable for students with more severe learning difficulties. Think carefully about the student's particular strengths and weaknesses and adapt accordingly. This will include thinking about the ways in which the student can usefully interact with Soundbeam, how they might use communication devices to respond to musical stimuli and appropriate ways in which they might work with others. At the same time, think about how these activities might be used to stretch them in to being able to access new skills and areas of musical understanding.

- Keeping the technology simple. Soundbeam is a powerful and highly sophisticated music technology platform. However many of the most important features can be accessed quickly and easily. By making considerable use of the presets and the built in sound library, teachers will be able to easily access functions with a minimum of technical knowledge. All activities can be accessed with just one beam and a few switches. Video tutorials and annotated step-by-step 'walkthroughs' provide clear guidance on using the technology. Exemplar sound files give some idea of possible musical outcomes.

- Broad and balanced ranges of activities ensure that teachers will be helping their students cover most curriculum requirements. Differentiation and extension activities are also suggested where appropriate. Assessment criteria are also provided for teachers who may require this.

- The activities are led by the music – not the technology. In addition, the use of Soundbeam can often be supported by use of conventional musical instruments in these activities. Extensive use should also be made of the voice as instrument, where appropriate.

- Any suitable person can lead these activities from the school community. In addition to classroom teachers, it may be appropriate for teaching assistants, parents, senior pupils, visiting staff and others to get involved in working with this user friendly technology.

In this Unit, we invite students to explore moods and express feelings through the medium of music making. This is done by using the stimulus of the student's 'world' - their environment and culture - as starting points for making and playing music.

1. Students respond to music through movement

Movements can range from small gestures, such as tapping a foot up and down, to whole body movement across a large space. Encourage students to make their movements match the mood or pulse of the music. This could include discussion as to why certain movements are better than others.

There are a few things to think about when making music to evoke a mood. These include:

- What sound should I choose?
- What would be an appropriate scale and how many notes?
- Should these notes be spread over a wide area or bunched more closely?
- What sort or movement and trigger mode would be best?

Here are some suggestions for moods. Experiment with different Soundbeam sounds, scales and trigger settings and fill in as appropriate:

Mood	**Sound/scale**	**trigger mode/movement**
Excited/adventurous		
Stressed/ nervous/ tense		
Calm, relaxed		
Unsettled		
Fear/anxiety		
Restless		
Normal/average		

Listen to this musical extract, which contains two contrasting moods. Which moods do you think we might be suggesting…?

Remember, these are only suggestions - always somewhat subjective! There are no absolutes here. A sound which one person might find calm and soothing might be interpreted as irritating or unsettling by someone else!

Activity

- The teacher plays one of the moods and observes how the students react. It can be difficult to play and assess at the same time, so use either video or teaching assistants.
- The teacher chooses one student who seems to be capturing the mood successfully – other students copy
- Students do their original movement, then slowly move on to copying someone else in the room.

Extension

- Involve the students in making decisions about which Soundbeam sounds to use to describe a mood – perhaps give them a selection of sounds to choose from
- Student controls the Soundbeam beams and switches to describe a chosen mood

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound

2. Finding sounds to represent the characters, events or moods in a story or poem.

Music, by its very nature, is abstract. It does not mean or represent anything – certainly not in the way that words or pictures will often provide more literal descriptions. It can be helpful for students, who have limited experience of exploring ideas and feelings through sound, to have some clear starting points or stimuli. Here are some possibilities to get you and your students started:

Characters

Students will be familiar with characters from a range of media contexts and will undoubtedly have their favourites. Here are a few possible choices:

- Star Wars - Darth Vader, Yoda, Luke Skywalker, Boba Fett, Princess Leia
- Charlie and the Chocolate Factory – a book/film with many well defined and varied characters including Willie Wonka, the students with strong, contrasting personalities and the oompah-loompahs
- The Wind in the Willows, whose characters include Mole (quiet, reflective, timid), Toad (loud, opinionated, boastful), Weasels (snide, cunning and nasty)

Events

Popular choices include:

- **Seasonal** events such as Halloween
- **Locations** such as the seaside – waves, gulls, sunshine sparkling on the water, rockpools, crunching through shingle…
- **Activities** such as a train journey – rhythmic undercurrent, bells, whistles, speeding up slowing down
- **Fictional** events such as Maurice Sendak's book "Where the Wild Things Are" – contains a variety of scenes which can be captured through music: dream/sea scene/rumpus…

Moods/feelings:

These range from the obvious to more subtle ones. This can build on the work covered in the first project, but this time the students are creating the music. Here are some possible 'moods' to consider:

- Sadness
- Hopeful, optimistic
- Happy, energetic
- Tired/exhausted
- Scared/uneasy

Activity

These activities can be structured for work with individual students, small groups and whole class. Here are three example activities, based on the above starting points (Characters, Events, Moods/feelings) which can be adapted and extended for work in different contexts.

Characters

Take a poem or extract from a story which contains some interaction between different characters. For example the section towards the end of *The Wind in The Willows*, where Badger leads Toad, Mole and Ratty into battle with the weasels in Toad Hall.

Assign each of the characters to a student or group of students. Work with them on developing some appropriate sounds for their chosen character. To help develop some musical ideas, ask yourself these questions:

- What instrument?
- What scale?
- How many notes?
- Fast or slow?
- Loud or quiet?

The answers to these questions will inform your choice of Soundbeam settings

For example, Toad might well have loud, brassy sounds. Since he is a great talker who loves the sound of his own voice, his musical phrases would tend to go on and on until brought to a halt by one of the others. [put in Soundbeam settings]

Listen to this audio example describing Mole, then Toad and finally Weasels!

Events

The seaside is a wonderful place for sounds. Here are some possibilities, but students will want to explore even more:

- Waves – smooth sounds such a low cello or synthesiser pad, played by slowly waving the arms back and forth in the beam. Dark, deep and mysterious - so perhaps choose a low register and a minor scale.
- Sunshine sparkling on water. Rapid trills of high notes played on something bright such as flute sound

Moods

This builds on Project 1, with the students now devising the music. Help the students decide on a mood and then work through the decision processes (outlined in Project 1) to explore musical interpretations of moods.

Record the music for assessment purposes and for use in the next session.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

3. Responding through movement to music with contrasting moods

Initially, students' responses will be similar to Project 1 - spontaneous, free and improvised. This time, they should go on to review and refine their movements for both sections, discussing with others if appropriate. They repeat the exercise several times aiming for something more structured and 'choreographed'.

Activity

For this activity, we need two sets of sounds which have the potential to provide elements of contrast. You might start by looking at some of the Soundsets or Themes that are available on your version of Soundbeam. Can you find a set of gentle, floating ambient sounds – to contrast with something more rhythmic and jazzy? What other contrasts might you consider – tempo, timbre, pitch, volume…? Involve students in this discussion.

Music evoking contrasting moods can be drawn from the previous project. For example:

- the quiet, timid mole contrasting with the loud, brash toad.
- happy, energetic contrasting with tired/exhausted
- Seaside on a calm, sunny day contrasting with storm at sea

Extension

Instead of a sudden change of mood, how about gradual change? Devise some calm relaxed music, then some scared/uneasy music. Work out how to change from one mood to the other [select someone to change Soundbeam settings, using other instruments to provide continuity.]

This then becomes an activity for a group of students: some making the music and others responding through movement.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

4. Planning movement to music

In previous lessons, the movement has been devised in real time to the music. This time we are working on developing aural memory, by asking students to work on ideas when *the music is not being played*.

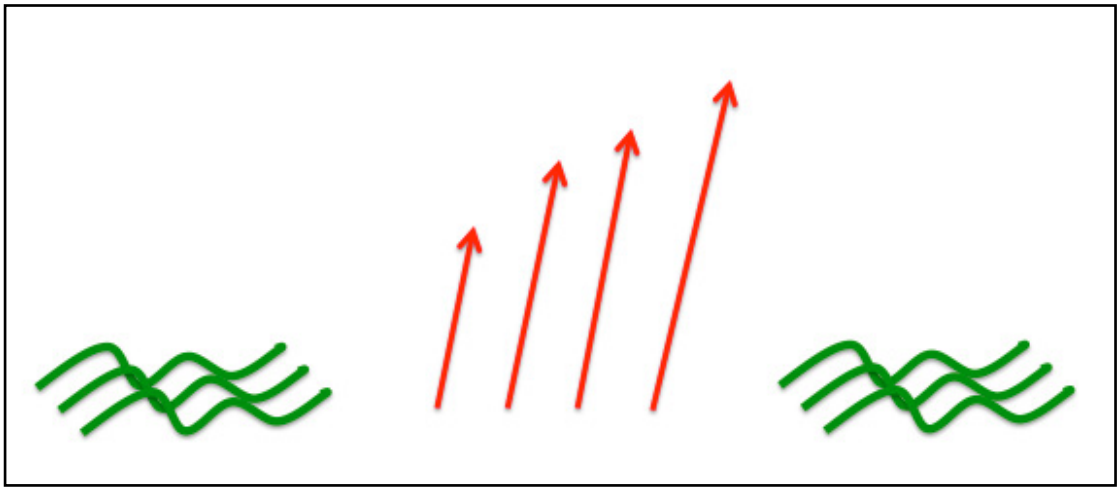
Activity

Devise a short piece of music using Soundbeam. Using Soundbeam live [as opposed to pre recorded music] gives the accompanist a little flexibility to allow for speed variations.

Make sure that you and/or some of your students can replicate the music easily. Play it through a few times. Listen to this audio example, which was performed live using Soundbeam – what sort of movement might it suggest?

Now ask your students to suggest sequences of movement for the music. Does the movement want to be fast or slow? When and how might it change to something else? Ask the students to imagine the music in their heads [or play sections, if this suggestion is not appropriate]. Use visual charts and diagrams to plan and map out a sequence of movements. Rehearse the movement without the music at first. This can be done slowly, with verbal instruction if necessary, avoiding the pressure of having to 'synchronise' to the music. Move on to working with the music when ready.

In the extract shown below, we have three students slithering on the ground, followed by four jumps of increasing height, followed by more slithering.



Extension

Devise some music for more than one instrument. This may involve the instruments playing in sequence, at the same time or a mix of these. Then have the students doing the movement respond by moving when their particular instrumental sound is playing.

As the students become more confident at doing this, devise longer and possibly more complex sequences.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

5. Describing a piece of music in words and/or pictures

Describing music can be difficult for some students. Many who happily express themselves through music or movement can become tongue tied when asked to provide verbal or written descriptions. Others, of course, will have speech and language challenges, so make use of appropriate assistive technologies communication devices where possible, and writing and drawing tools.

One of the great strengths of Soundbeam is that it is an instrument which can be set up to provide wonderfully musical responses to a whole range of expressive gestures. Slow, graceful, expansive movements can be used to control string sounds; fast, nervous jittery movements could be mapped onto marimba sounds – the possibilities are endless and exciting!

Activities

The choice of activities below will be determined by the capabilities and enthusiasms of your students. Some approaches will be more appropriate than others and some might not be possible. The important thing is to recognise that we are using this activity to encourage deeper listening and reflection on the music and sounds we hear when we play Soundbeam.

Movement - words describing the movement can be used to describe the music. Think about how you would move to the music. Would you move quickly or slowly? Large sweeping movements or short jerky stabs?

Characters -words and phrases used to describe characters. From example, from *Where the Wild Things Are* in a previous project, we might have sulky, angry, fierce, wild, friendly, contented. Words describing events and moods can also be used to describe music.

Pictures - we can use similar processes for describing music in pictures. The music might lead us to drawing gentle curves, jagged lines, tiny patterns…

Colours - music may often lead students in their choices of colour. There are no 'right or wrong' answers here, but red might suggest anger or danger, pale blue or green calmness, dark brown or black sadness and so on.

It is probably better to encourage students to draw 'abstract' pictures rather than going for more literal interpretations. For example, drawing weasels is unlikely to capture the essence of the mood in the section of *The Wind in the Willows,* unless the artist is particularly skilled.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

6. Composing sounds and musical phrases to represent characters, moods or events in a story or poem

Once again we are taking some of the work covered in previous projects and developing it further. This time we are using the *structure* of a story or poem to help provide a structure for our music, which we will use to help put together a *sequence* of musical activity.

Soundbeam is ideal for this sort of activity, because it is well suited for setting up a range of sounds for use in group and ensemble playing situations.

Activity

For example, consider the poem *The Migration of the Grey Squirrels* by William Howitt. This well known poem is in the public domain and is widely available to download from the internet, including here:

http://www.storyit.com/Classics/JustPoems/greysquirrel.htm

First, discuss with students the main sequence of events on this story:

- Busy squirrels, gathering nuts for the Autumn
- Wild Swine digging up the nuts
- Squirrels fleeing over hills and dales
- Chased by hawks, eagles and owls
- The dangerous river crossing

Now think about how you might use Soundbeam (and other instruments) to tell this story. Here are some suggestions:

Squirrels – fast, darting movements – perhaps a clarinet sound would be good for this?

Wild swine – slower, repetitive action – perhaps a bassoon or trombone sound?

Hawks, eagles and owls – wind instruments or shrieking string sounds

The river – a low swirling synthesiser sound

Timbre of the associated sound is only one consideration. Think about choice of scales, registers, use of switches or beams.

Each student should work at producing something *musical* with their sounds, for their chosen element of the story. We are looking for more than sound effects here!

Initially rehearse the music by having the musicians play their parts as the story is read. Once they have become familiar with this, take out the narration so that the music is performed on its own. A basic graphic score might help with this.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

7. Creating and recording solo/group compositions

Performances using Soundbeam are often ephemeral – we make the music, and then it is gone, forever. Yet there are several reasons why we might want to make recordings of our students' work:

- we might want to use Soundbeam to produce some backing layers of sound for accompaniment purposes – so that we can add further sounds over the top during live performance.
- another important consideration is so that students have the opportunity to listen back to their work, so that they can reflect on and review their efforts, with a view to further refining their work and/or self assessment.
- useful to have for showcasing student work, and for teacher or external assessment

Technical note: If all the sounds in a performance are being produced within Soundbeam, take a cable directly from the line out socket to your recording device, computer etc. This should ensure good quality recording, with no extraneous noise. If using Soundbeam 5, you can record directly onto the SD card (Watch the short film tutorial here) If voices or other instruments are used then a microphone will be necessary. Use an mp3 with a good internal microphone or a good quality external microphone for best results. USB condenser microphones are recommended for use with computers.

If you are using recordings for purposes of evaluation/assessment, you might want to take *some* of the criteria from this list below. A confident performance or a good improvisation/composition should have a sense of expression, musicality and flow, and perhaps allow the performer to show off some of their technical ability:

Display a sense of rhythm and flow: keeping in time and maintaining a sense of rhythm is often more important than playing the right notes (whatever they might be!). Encourage your students to focus on maintaining a strong sense of rhythm in their improvisations, even if their choice of notes suffers slightly as a result.

Have a sense of development: in general, a good improvisation should not just sound like a bunch of random notes, and you should encourage students to try to develop their motifs and melodies using the same techniques as they would for a composition. An improvised melody should feel like it is developing and flowing organically from one section to the next.

Fit within the given style or genre: this is unlikely to apply to all of the activities covered here but, where appropriate, a good improvisation should be stylistic. For example, if your students are improvising in a jazz idiom, they should be using appropriate scales/instruments and playing the types of musical phrases typically associated with this style

Adhere to the given framework or stimulus: most of these activities have some sort of framework and you can assess how well students have responded to that framework. For example, if they are making music to evoke the mood of calmness, does the musical output achieve this aim?

Display a sense of creativity: within any given framework, can your students show a sense of creativity and inventiveness? Try to help them see that 'right' and 'wrong' notes are not black-and-white concepts, and that the more creative and exciting improvisations often veer off into the 'wrong' side of things.

Show an awareness of the other musicians in the ensemble: Within any group performance you could encourage your students to respond to each other, through engaging in call and response, developing each other's ideas, following each other's leads and so on.

This list can be used to help develop a set of criteria for assessing improvisation, and for helping your students to improve. You could play recordings back to your students and ask them which bits of the piece they think worked best, and which bits didn't work so well. The resulting discussion will help your students to develop a better idea of what a good music should sound like – and the best bits could perhaps be taken forwards and used by your students in further improving their own work.

8. Creating musical motifs for characters in a story or poem

In previous projects, we considered looking at ways in which music could be used to explore and describe key features of a character. In this project, we develop the idea further, by creating a 'signature' melody or motif for a character. This is an easily identifiable short melody which students create and assign to a particular character.

So for example, take Luke Skywalker from Star Wars. This is an idealistic character, highly creative, willing to help others, laid back but stands firm against wrongdoers. Students can devise a melodic theme which becomes the motif for this character. Help them identify appropriate sounds and settings within Soundbeam. Now consider how this tune might become *transformed* (but still recognisable) in different contexts. Ask these questions:

- How would it be modified to show Luke is relaxing and daydreaming?
- How would it change in moments of danger?
- How would it change when he is being busy, energetic and creative?

Listen to this audio example which shows some possible interpretations.

Here is another suggestion for developing a motif for Max in *Where the Wild Things Are,* which we modify when the character changes mood or activity. In the story he moves through these changes:

- grumpy and sulky at the beginning of the story
- excited, then fearful during the journey and meeting the *Wild Things*
- happy and joyful in the 'rumpus' scene
- sadness at leaving the island
- contented and restful arriving 'home'

Think about how you might change the way you play the melody to indicate the character in a change of context. For example, would you play the melodic motif:

- faster or slower?
- Louder or quieter?
- More confidently – or more hesitant?
- Would you change any of the notes?
- Would you play the melody higher or lower – in a different register?
- Would you change the tone of the instrument?

Assessment criteria

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.2 makes or controls sound intentionally

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

9. Creating a soundtrack with awareness of use of inter-related dimensions of music

This project follows on from the previous one. We are now starting to think more consciously about the 'inter-related dimensions' (sometimes referred to as elements or features) of music. These include pitch, duration, dynamics, tempo, timbre, texture and structure. It can be useful to think about some of these when planning a piece of music.

Let's take an example. Say we are creating an imaginary soundtrack for a tranquil Lakeland scene. We could put together a 'checklist', where we consider some of the musical components:

Musical Dimension	**Notes**	**Soundbeam**
Pitch	*Wide ranging*	*Set a large number of divisions*
Duration	*Long sounds, suggesting tranquillity*	*Use a 'sustain' trigger mode* *Synthesiser pads or strings?*
Dynamics	*Soft sounds, peaceful*	*Turn volume down on amplifier*
Tempo	*slow*	*Slow movements in the beam*
Timbre	*Varied:* *Sky – light, airy* *lake – fluid, lapping* *mountains – solid, dark, brooding*	***BEAM 1*** *–Violin/flute – gentle, 'feathery' hand movements [lark ascending]* ***BEAM 2*** ***–****Wave like hand movements – deeper sounds* ***SWITCHES*** *Deep, heavy static sounds – low brass*
Texture	*Changing from one layer to many layers…and back again*	*Begin and end with BEAM 1* *Some switches set to play chords*

You may well find that Soundsets and Themes [or Setups on earlier versions of Soundbeam] will be suitable for your project. Preview some to find possibilities. Of course, traditional instruments can also be used along side Soundbeam in an ensemble performance.

Soundtracks are usually written to accompany a film, but they can work just as well with a series of still images, which can be projected during the performance. The advantage of a slideshow is that you can control the rate at which images change, so that performers don't have to worry too much about synchronising with a moving image.

Use the table you have created to explore and develop musical ideas. Build a musical structure, by creating a graphic score for performance.

Assessment criteria

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

10. Making music for adverts

A good place to start when considering making music for film is to use footage of TV commercials. They are usually short, with a simple single focus and our students will be very familiar with the more popular ones. A search, using the term “TV adverts”, into YouTube or similar will produce a good range of options.

Activity

1. Begin by watching and, more importantly, *listening* to some adverts. Ask your students to describe the type of music that is being used in the background. Some adverts will use highly rhythmic percussive music, others more gentle and ‘pastoral’ depending on the mood the advertisers are trying to evoke and the messages they want to get across.
2. Students now select an advert(s) they want to work with. First of all, they need to think about the mood or atmosphere the advert is trying to convey. Does this want to be something upbeat and optimistic (perhaps promoting an ‘energy’ drink?) or something quieter and more sophisticated (possibly for a perfume advert …)
3. Then they can begin to think about background music. This, of course, builds on the work covered in several of the earlier projects in this book. They may want to go with a pastiche of the original or may opt for something completely different. For example, a car advert, which used dreamy orchestral soundtrack in the original, might now be reworked as something more funky.
4. A good place to start with finding some music and sounds to use for the advert is to browse through some of the Soundbeam Soundsets or Setups (on earlier versions). Can any of these be used or adapted? For example the Soundset “April Blues” might make a good choice for a coffee advert in a Parisian café location.
5. The music for the advert is going to require two distinct layers:
    a. The background music that runs through the entire track, setting the overall mood. e.g. the piano, vibraphone and drum sample from the “April Blues” Soundset would make a good laid back jazzy backing
    b. Foreground sounds – capturing specific detail in the action for example the harmonica and flute from the “April Blues” soundset could be used to describe the coffee being poured and the steam rising from the cup.

    Take care to balance the volumes outputs of these respective layers of sound.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Some guidance on assessment

Each project in this Unit has criteria you might find useful, if working in a context where formal assessment and reporting is required. The criteria can be used more informally when you may want to reflect on the progress being made and consider some pointers for improving the quality of work further. Users should feel free to adapt and edit these lists of statements to suit their particular requirements.

The criteria statements we provide are taken from the *Sounds of Intent* framework and the complete list is provided below for reference. These statements are grouped into three sections:

- R = reactive [how we respond to music]
- P = proactive [how we make music]
- I = interactive how we work musically with others]

More information and resources can be found on the *Sounds of Intent* website: http://soundsofintent.org

Here is a complete list of statements:

R.2 shows an emerging awareness of sound

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.2 makes or controls sound intentionally

P.3 makes simple patterns in sound intentionally, through repetition or regularity

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Glossary

Pulse - The repeating steady beat, underpinning a piece of music

Scale – a set of notes arranged in order of pitch

Register – the range of a set of pitches

Beat - The repeating steady beat, underpinning a piece of music

Minor scale – a seven note scale with a semitone interval between the second and third notes

Trills – rapid alternation between two notes

Graphic score - representation of music through the use of visual symbols

Improvisation - Creating music on the spot

Motif - A short musical idea

Pitch - A measure of the frequency or how high or low notes are

Duration - How long or short notes are

Dynamics - Refers to the softness or loudness of a piece of music

Tempo - The speed of a piece of music

Timbre - The tonal quality or sound of an instrument that distinguishes it from others

Texture - The number of layers in a piece of music

Structure – the overall plan or layout of a piece of music

Chords – two or more notes sounded together

Chapter Three -Working with graphic scores/notation

Introduction

This booklet is one in a series which comprise a compendium of approaches to working with Soundbeam in a range of educational and other settings. The aim is to encourage thinking of Soundbeam as a versatile musical device which can be used to support music making and musical thinking.

Having this powerful music technology available in a classroom, day centre or other setting provides a potential for much wider use to support musical experience and performance, teaching and learning. If we can use Soundbeam across a much wider range of music teaching activities, then more teachers and other facilitators will become more familiar with it and get more use out of it.

Soundbeam can and should be used to complement existing music resources. Many special schools, day centres and other projects struggle with limited budgets to buy and/or maintain quality musical equipment required to adequately support curriculum activity. Classroom percussion can often be of poor quality or is poorly maintained and is therefore not capable of producing quality sounds – an essential requirement if students are to become engaged and stand any chance of producing quality work. Today's students are used to hearing high quality musical sound and will often feel frustrated, and consequently unengaged, if they are denied access to quality sound sources. Soundbeam not only provides a large range of quality sounds – it provides an interface which enables less experienced students and teachers to use them *musically*.

By creating a set of resources which offer clear, easy to follow guidance on working with music and technology for non-specialists, we address two important issues. It is well known that two areas of concern for generalist teachers in primary and special schools are around teaching music and using technology. We can address these challenges in two ways. Firstly, by making the technology easy to set up and use. Secondly, by designing curriculum music activities which generalist teachers will find easy to understand and implement.

Many Soundbeams are in use in locations other than schools. Day centres, community music projects and other charities, arts centres, private homes, hospices, care facilities and homes for the elderly are just some examples. All the activities and approaches described in these modules can be applied or adapted effectively for individuals and groups across a wide spectrum of age and ability/disability to enjoy and learn through using Soundbeam.

Soundbeam in the Classroom – key features

- Enabling non-specialist teachers to deliver music lessons. The sessions are free of technical jargon and do not assume any prior musical knowledge. Much use is made of movement and graphics to help explain and reinforce musical activity.

- Enabling SEN student to participate with others. These sessions are designed to allow MLD students to participate fully in music making with their peers in SEN and mainstream settings. Teachers will also find that many of these lessons can be adapted to make them suitable for students with more severe learning difficulties. Think carefully about the student's particular strengths and weaknesses and adapt accordingly. This will include thinking about the ways in which the student can usefully interact with Soundbeam, how they might use communication devices to respond to musical stimuli and appropriate ways in which they might work with others. At the same time, think about how these activities might be used to stretch them in to being able to access new skills and areas of musical understanding.

- Keeping the technology simple. Soundbeam is a powerful and highly sophisticated music technology platform. However many of the most important features can be accessed quickly and easily. By making considerable use of the presets and the built in sound library, teachers will be able to easily access functions with a minimum of technical knowledge. All activities can be accessed with just one beam and a few switches. Video tutorials and annotated step-by-step 'walkthroughs' provide clear guidance on using the technology. Exemplar sound files give some idea of possible musical outcomes.

- Broad and balanced ranges of activities ensure that teachers will be helping their students cover most curriculum requirements. Differentiation and extension activities are also suggested where appropriate. Assessment criteria are also provided for teachers who may require this.

- The activities are led by the music – not the technology. In addition, the use of Soundbeam can often be supported by use of conventional musical instruments in these activities. Extensive use should also be made of the voice as instrument, where appropriate.

- Any suitable person can lead these activities from the school community. In addition to classroom teachers, it may be appropriate for teaching assistants, parents, senior pupils, visiting staff and others to get involved in working with this user friendly technology.

In this Unit, we provide opportunities for students to compose and perform using simple 'standard' and graphic notation. No prior knowledge of reading music is assumed and most of the activities can easily be adapted to suit a range of needs and circumstances. These approaches will help students use Soundbeam to develop and extend melodies, learn how to structure their work and add layered textures. Some activities will be useful for helping students to learn to play to a steady beat.

Note: If you cannot access the audio/video links from your Kindle, Download a free Kindle Reader onto your computer/tablet and access from there.

1. Making music from a picture sequence

A ‘score’ is created from pictures of instruments ordered into a sequence. Each group of students plays their instrument at the right point in the sequence. This can be done using Soundbeam beams and switches assigned to different instrumental sounds. Traditional instruments can also be added to the mix.

The teacher will need to collect some images, digital or printed, for use with this activity. These maybe hand drawn, photographed or copied from books or internet sources. Try flickr.com for copyright free images such as these below:

Activity

Preview some of the soundsets in Soundbeam and choose one with a suitable range of sounds. Alternatively, assign a range of chosen sounds to switches and beams. Decide, with the students, who is going to play which sound.

Students also need to work out what they are going to play on their designated instrument. This could be improvised or worked out in advance. Give the students some time, and possibly some help, in working out something *musical* to play with their chosen sound, as opposed to just playing notes at random. One or two short phrases lasting 15-30 seconds would be ideal.

This activity involves making decisions about the order of the sequence. The ultimate aim is to make sure that the sequence of sounds develops in a musically satisfying way. Listen to each student in turn before deciding on a running order.

Extension

- Aim for more ambitious longer sequences involving some elements of repetition NB you will need duplicates of some cards for this activity.
- Stack one card above another to indicate two instruments playing at the same time. Experiment to find out which combinations of instruments work well.
- Record the performances and help your students follow the score [i.e. the sequence of cards] as the music plays

Assessment criteria

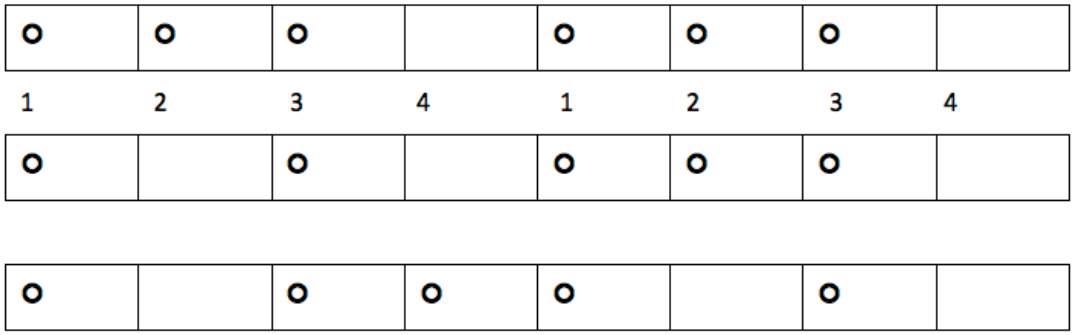
R.2 shows an emerging awareness of sound

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

2. Making Music from a Rhythm Grid

Students play from simple rhythm grids that incorporate silent beats, while maintaining a steady pulse. These could be done by clapping or tapping, before moving on to using Soundbeam and other instruments. Choose sounds which have a short duration.

Activity



Demonstrate each line before inviting the students to play. Count a steady 1 2 3 4 intro and tap a steady beat from thereon.

Listen to the example above being played using Soundbeam

Students go on to compose their own rhythm patterns, incorporating silent beats, and notate these using blank rhythm grids. They then play these patterns using Soundbeam switches, beams or suitable percussion instruments while a partner taps or counts a steady beat.

Note

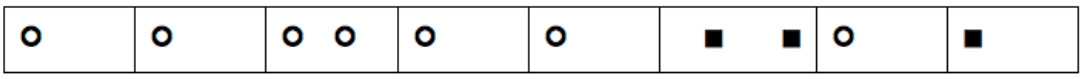
Keeping a steady pulse, and internalising that steady beat, is something that might need to be worked on. Get your students to tap a steady beat to some favourite pieces of music. Gradually turn the volume down – and see if they can still keep the beat going when the music fades completely. This is something to practise 'little and often' in any spare moment during the day. Encourage students to do this at home.

Choose instruments and Soundbeam sounds which have a good, clear attack as opposed to sounds which come in more gradually.

We need to acknowledge that the steady beat requirement may be too hard for some students. Therefore our steady beat may need to be more 'flexible' and supportive.

Extension

Increase the tempo, use longer sequences, introduce two notes per beat and use colours or shapes to denote two different pitches. Here is an example:



Listen to this audio example here

Assessment criteria

R.2 shows an emerging awareness of sound

P.2 makes or controls sound intentionally

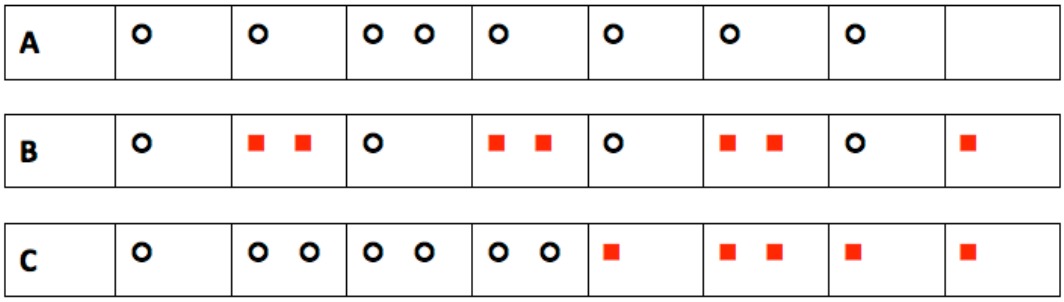
P.3 makes simple patterns in sound intentionally, through repetition or regularity

3. Building Musical Sequences from Rhythm Grids

In this unit, students swap their rhythm grids from the previous week and perform each other's patterns. Students also explore playing the patterns on different instruments. This is easy to achieve with Soundbeam and can be used as an opportunity to her different 'families' of instruments playing together. For example, beams and switches can all be set to woodwind or brass sounds.

Activity

In small groups, students order their patterns into an effective sequence to create an extended piece of music, lasting say one or two minutes. They rehearse this piece and perform it to the rest of the class. Here is an example:



Play in this order:

A B A C A B A

Listen to this audio example here

Extension

- Students should now aim to introduce more variety into their patterns, making good use of both beats and rests.
- Try performing rhythm grids at different tempos.
- Use a looped sample in Soundbeam to create an engaging steady beat at an appropriate tempo.
- Two groups could play their patterns at the same time

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns in sound intentionally, through repetition or regularity

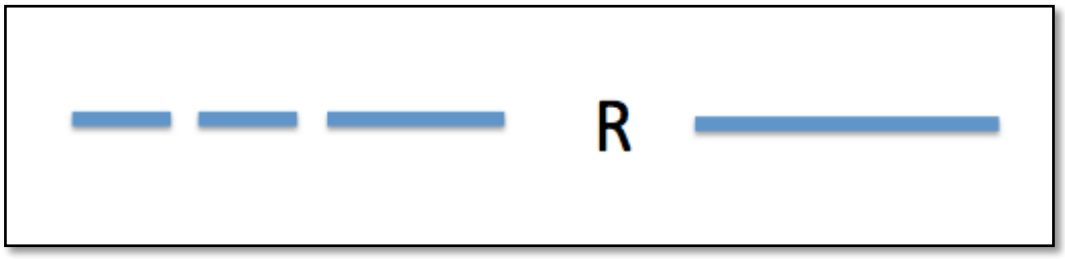
P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

4. Long notes… and short notes

Many of the instruments we use in schools can only make notes of short duration. Others such as triangles, cymbals, guitars and glockenspiels will produce more sustained sounds that will die away naturally [providing the instruments are maintained and played correctly!]. However, controlling the actual length of these notes can be problematic. Players of bowed and wind instruments do have this degree of control. The exact length of the note is determined by how long you bow or blow for. Players of Soundbeam can also control the length of their notes using appropriate instrument and trigger settings.

Activity

We can use symbols to represent long and short notes (e.g. a long line = long note, a short line = short note). The scores could also incorporate rests. We might use a system as follows:



Listen to this audio example here

This shows two short notes followed by a longer note, then a rest and finally a very long note. Initially, this can be done without reference to a steady beat.

Teachers and students should produce a collection of charts, similar to the one above, and join a few together to produce extended scores for performance, using Soundbeam.

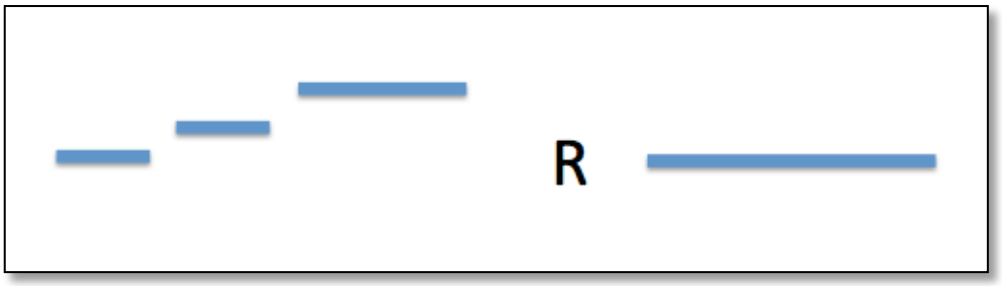
These cards can also be used for listening activities. Display a few cards in any random order and play one of the patterns using Soundbeam. Students then have to decide which of the cards you have just played.

Extension

Students could 'loop' the rhythm patterns to provide an ostinato style accompaniment for a piece of music. This would be the time to consider playing these patterns to a steady beat:

- Short note = 1 beat
- Longer note = two beats
- Longest note = 4 beats

When the above work is secure, consider incorporating pitch into the notation as well (eg high and low notes, which could be indicated by symbols that are placed higher or lower on the score). For example:



Note: you will need to decide how long the ‘rest ‘ lasts for – and perhaps put some counting numbers in here. Again, use of a rhythmic backing track or percussion instrument playing a steady beat would make sense.

Assessment criteria

P.2 makes or controls sound intentionally

P.3 makes simple patterns in sound intentionally, through repetition or regularity

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

5. Sampling & triggering sounds

Students should make a 'collection' of interesting sounds. These could include vocal sounds, body percussion and any 'found sounds' such as a creaky door, a doorbell chime, a running tap etc. Record these into a sampler for use with Soundbeam. If you do not have access to a sampler, you can still work through this unit, using some of the sound effects that are available within the Soundbeam's MIDI sounds. If using Soundbeam 5, use its internal sampler function.

Watch a video tutorial here

Also worth watching is this YouTube film from Mat Anderson

Activity

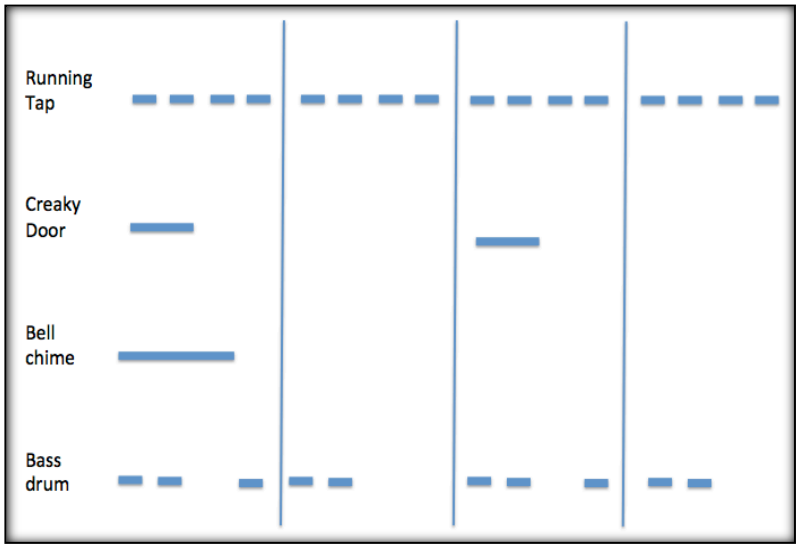
Record these sounds into Soundbeam (or use MIDI sounds) and distribute over a range of beams and switches. Now work on using these sounds *musically* with a view to creating an original piece of music for performance. So for example:

- The running tap sound could be looped continuously to provide a gentle background 'wash of sound.
- The doorbell could be used to cue the beginning of each section in a piece.
- The creaky door sound could be played as a short rhythmic riff….and so on

Use this layered musical 'accompaniment' as a backing for some improvised work using the beams in Soundbeam, set to play more conventional instruments. Which Soundbeam sounds would work best with this backing?

Extension

This provides an opportunity to build on earlier work using notation, but with a wider range of sounds. Scores similar to the one below could be devised [count a steady four beats per bar]:



Listen to an interpretation of this score here.

Assessment criteria

R.2 shows an emerging awareness of sound

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

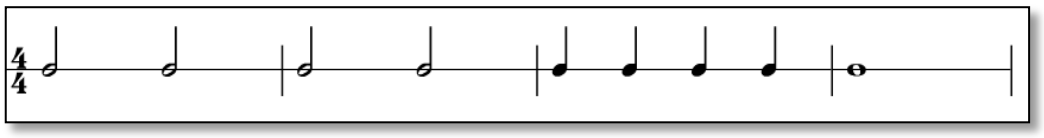
P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

6. Playing from rhythm grids

This is similar, in many ways, to previous activities, but now the the dots have been swapped for conventional note symbols e.g. crotchets [1 beat], minims [2 beats] and semibreves [4 beats]. They compose their own rhythm patterns and notate these with rhythm grids, using different note lengths.



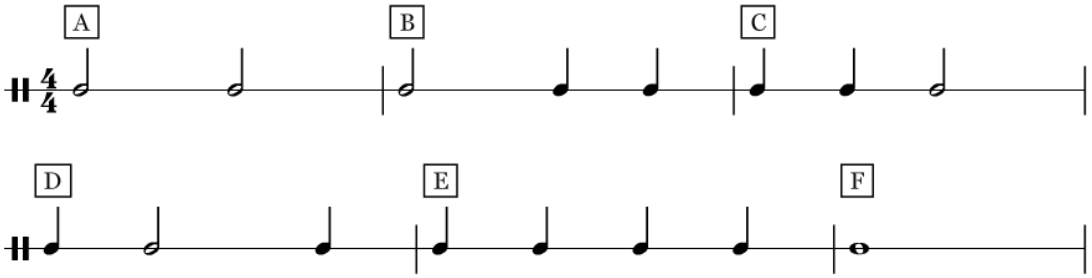
Notice that the notes have been placed on a single horizontal line and have been grouped so that the notes in each bar add up to 4 beats.

Listen to this audio example here

Activity

Students should be provided with a blank template, comprising a single horizontal line and evenly spaced barlines. They can then devise their own rhythm pattern and write it out on the line. Encourage them to tap a rhythm out before they write their rhythms down.

If students are struggling with this, use this chart and tell them to transfer some of the ideas from this 'rhythm bank':



Listen to this audio example here

Teachers and students can count a slow, steady 1, 2, 3, 4 throughout, playing the Soundbeam on the appropriate beats. As student gain in confidence, counting the beats aloud can be dropped – perhaps replacing this with just tapping a gentle steady beat.

A Soundbeam drum loop might help with this make sure that it is initially at a slow tempo. Set the beam or switch to any appropriate percussion sound.

Extension

- Students can use any well known song and add extra percussion parts as described above. It will be important to make sure that the song you choose does have 4 beats per bar. The vast majority of pop songs will!
- Once the above work is secure, practise playing with songs at a faster tempo.
- Have two or more students play their patterns at the same time. These patterns should be looped to give students more opportunity to settle into the framework of playing with others.
- Arrange several patterns in a row to build more extended pieces.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.2 interacts with others using sound

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

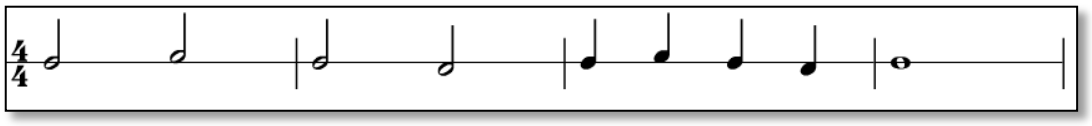
7. Creating and playing short melodies

In this activity, we are making use of simple pitch notation (one-line staves indicating low, middle and high notes).

Students compose their own melodies and use one-line staves to notate them.

Teachers of visually impaired students may find this advice and links from RNIB on Modified Staff Notation helpful:
http://www.rnib.org.uk/information-everyday-living-home-and-leisure-music-reading-music-accessible-formats/modified-stave-notation

Activity



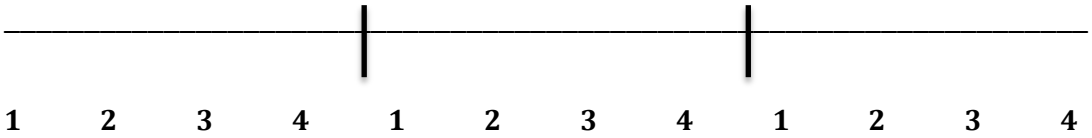
Students compose three-note melodies (high, middle and low notes) and notate them using one-line staves. These three notes may be consecutive [e.g. C D E] or more widely spaced [e.g. C E G]. We are not necessarily following the standard notation convention of notes necessarily being just a step apart, at this stage.

1. Set three Soundbeam switches to low, middle, high notes respectively and students play these in the correct sequence.
2. Use a beam on a wide range setting. Students trigger the three notes using the beam.
3. These sequences can be repeated to provide an ostinato sequence.

Listen to this audio example here

Extension

- Reverse the activity. Provide the students with some melody cards – and then ask students to play them. This may require some teacher assistance. Placing the 'counting numbers' below the stave may help:



- **Make a listening test from this activity. Spread out some 'melody cards'. Play one of them and ask students to spot the one you played. Students might be able to lead this activity.**
- **Construct longer melodies by placing some cards in a sequence.**

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

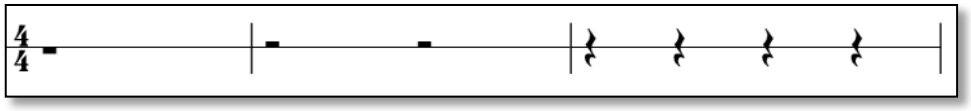
P.3 makes simple patterns in sound intentionally, through repetition or regularity

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

8. Sound… and silence

Students compose and notate melodies using a one-line stave, this time adding some rests. The notation for the various rests is shown below:

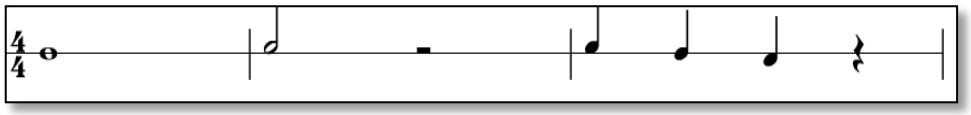


The four beat [semibreve] rest is a small box placed *underneath* the stave. The second bar shows a pair of two beat [minim] rests placed *on top* of the stave. The final bar shows four one beat [crotchet] rests.

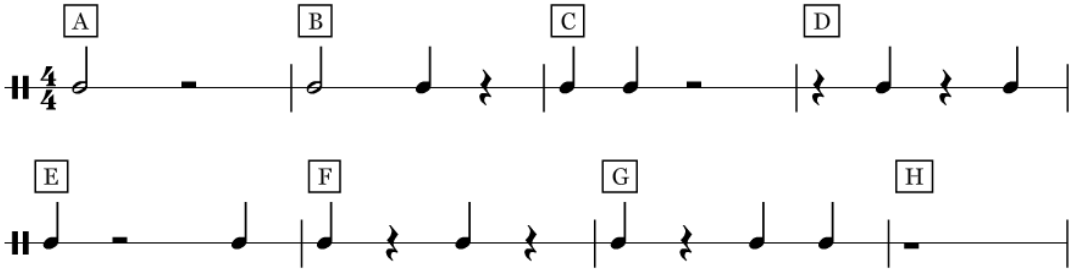
Listen to this audio example here

Activity

When combining notes and rests, still make sure that each bar adds up to the correct number of beats. For example:



Some students might find it helpful to use ideas from this 'rhythm bank':



Use these cards for composing, listening tests, reading music and creating extended sequences.

Working with rests does require some care. Keep a quiet count going throughout the piece, including the points where rests occur. Some students may find it helpful to make silent beat gestures [outside the beam or switch] at the points where rests occur.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns in sound intentionally, through repetition or regularity

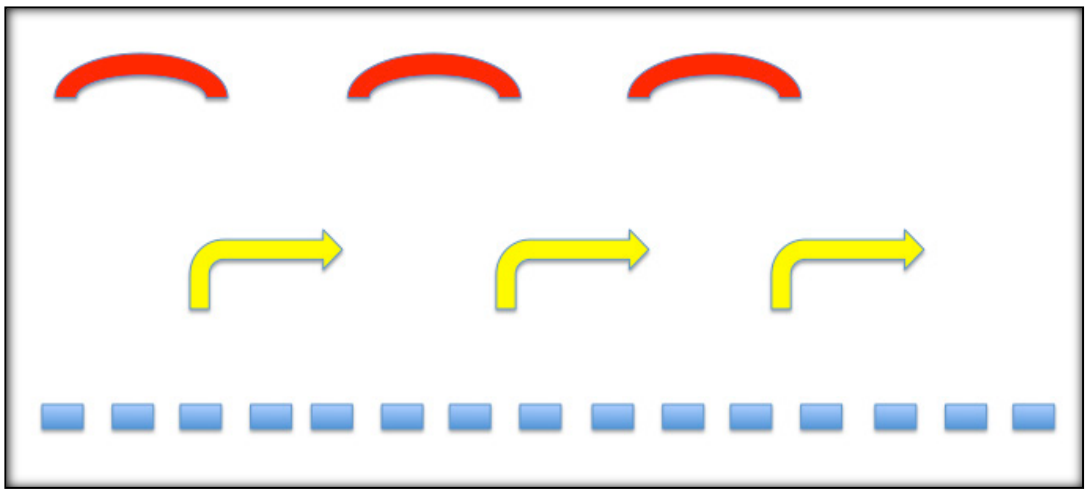
P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

9. Working with graphic notation

Using crotchets and minims isn't the only way to notate music. This method, known as 'standard' notation', is good for accurately representing the pitch and rhythm of notes. But, as with any notation system, it has its limitations. In instances when we want to provide the player with opportunities for improvisation and more creative freedom, a graphic score might be more appropriate.

Graphic scores can take many forms, including arrangements of pictures, shapes, symbols and colours and may often be more suitable for students who struggle with standard notation - for whatever reason.

Here is an extract from a simple graphic score for three players:



This could be interpreted in a number of ways:

- The red arch shapes could indicate phrases which rise and fall smoothly [beam 1]
- The yellow curved arrows 'respond' to the red shapes by rising swiftly and then holding a sustained note [beam 2]
- The blue blocks indicate a steady beat, playing throughout [switch]

The colours used might provide some guidance as to the sounds which might be used. The red might be a warm, vibrant sound such as *synthesiser pad* played on a beam. The yellow symbols, a brighter sound – perhaps a *trumpet?* The blue blocks could be a calm, gentle percussive sound played using a footswitch.

Listen to this audio example here

Activity

Students should work in small groups and begin by selecting a range of Soundbeam sounds they want to work with. These should then be allocated to various beams and switches as appropriate. It is, of course, possible to include some conventional instruments in this activity. Decide on the scale, range and trigger settings for each device. Try out some ideas for working with these sounds, separately and together, before notating on a score similar to the one above. These scores can be drawn freehand or using a simple graphic programme.

Displaying the score on a screen is an option worth considering.

Extension

- Graphic scores are an excellent way of representing music which ‘tells a story’. For example, a story on the theme of “A Storm at Sea” could include images and shapes which depict the skies getting darker, a strengthening wind, large crashing waves etc. Encourage students to devise appropriate symbols which really try to capture the musical intention.
- Some abstract paintings [such as those by Klee or Kandinsky, whose works often have strong musical connections] can be used as ready-made graphic scores which can be interpreted by the students.
- A photo collage made by students, or a photo slide show, could be used as an inspiration for a piece of music where the emphasis is on making a soundtrack reinforcing the moods and atmospheres suggested by the pictures.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects
I.2 interacts with others using sound

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

10. Working with published scores

Commercially available standard notation scores by professional composers are often beyond the ability range of many of our students. Graphic scores, however, can be much more accessible for players of all ages and abilities.

Take a look at some of the range of possibilities by following this link:

http://www.classicfm.com/discover/music/graphic-scores-art-music-pictures/slavek-kwi/

A Google search for "graphic score for classroom' will produce some suitable scores for viewing in Google's image search.

Try to get hold of education scores in books by John Paynter, Murray Schafer, George Self, David Bedford and Earle Brown. Some of these are now out of print, but second hand copies are often available from the usual online sources. They come with many practical suggestions for classroom use. Some use unusual sound sources such as bottles, or wineglasses partially filled with water, or reel to reel tape loops. Soundbeam, with its vast range of distinctive sounds, provides a highly practical 21st Century alternative to realising these scores effectively.

Assessment criteria

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

Some guidance on assessment

Each project in this Unit has criteria you might find useful, if working in a context where formal assessment and reporting is required. The criteria can be used more informally when you may want to reflect on the progress being made and consider some pointers for improving the quality of work further. Users should feel free to adapt and edit these lists of statements to suit their particular requirements.

The criteria statements we provide are taken from the *Sounds of Intent* framework and the complete list is provided below for reference. These statements are grouped into three sections:

- R = reactive [how we respond to music]
- P = proactive [how we make music]
- I = interactive how we work musically with others]

More information and resources can be found on the *Sounds of Intent* website: http://soundsofintent.org

Here is a complete list of statements:

R.2 shows an emerging awareness of sound
R.3 responds to simple patterns in sound (made through repetition or regularity)
R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')
R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences
R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.2 makes or controls sound intentionally
P.3 makes simple patterns in sound intentionally, through repetition or regularity
P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently
P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Glossary

Pulse - The repeating steady beat, underpinning a piece of music

Beat - The repeating steady beat, underpinning a piece of music

Attack – the time taken for a sound to reach maximum volume

Tempo - The speed of a piece of music

Pitch - A measure of the frequency or how high or low notes are

MIDI - A technical facility that allows a range of digital music making equipment to connect with each other

Loop - a repeating section of musical material

Riff - a short, repeated, memorable musical phrase

Appendix - Drowned in dreams

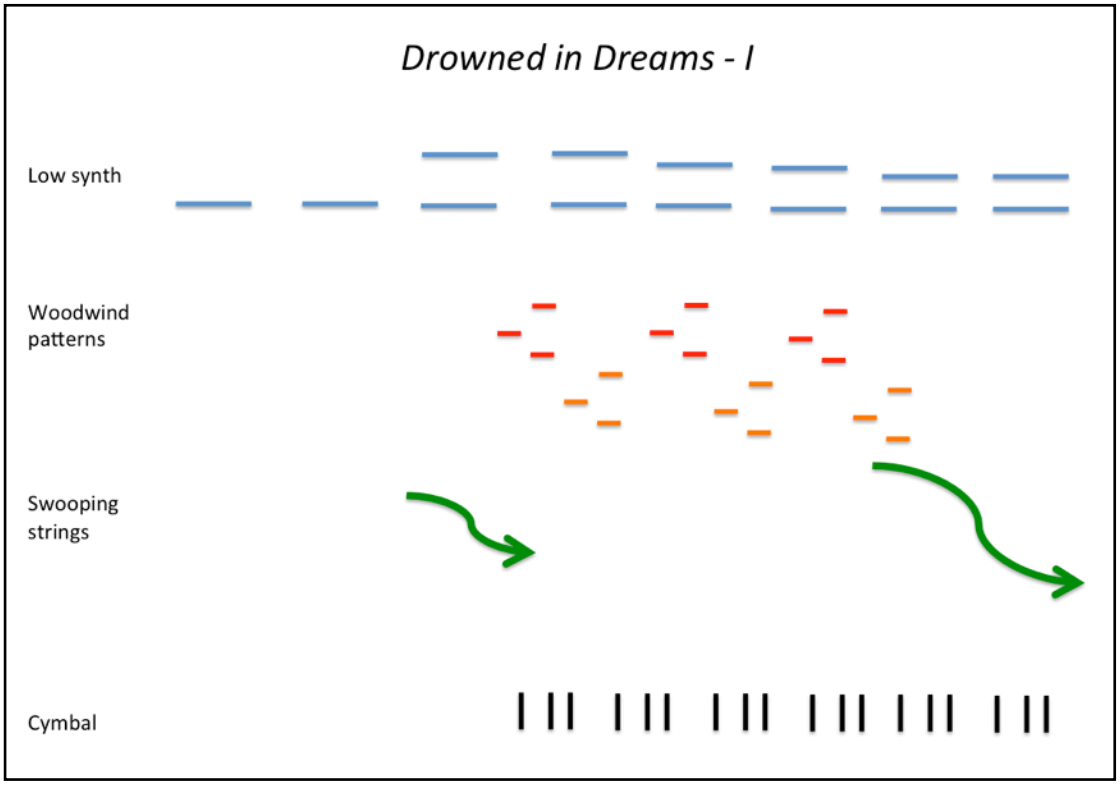
The is a piece for four players.

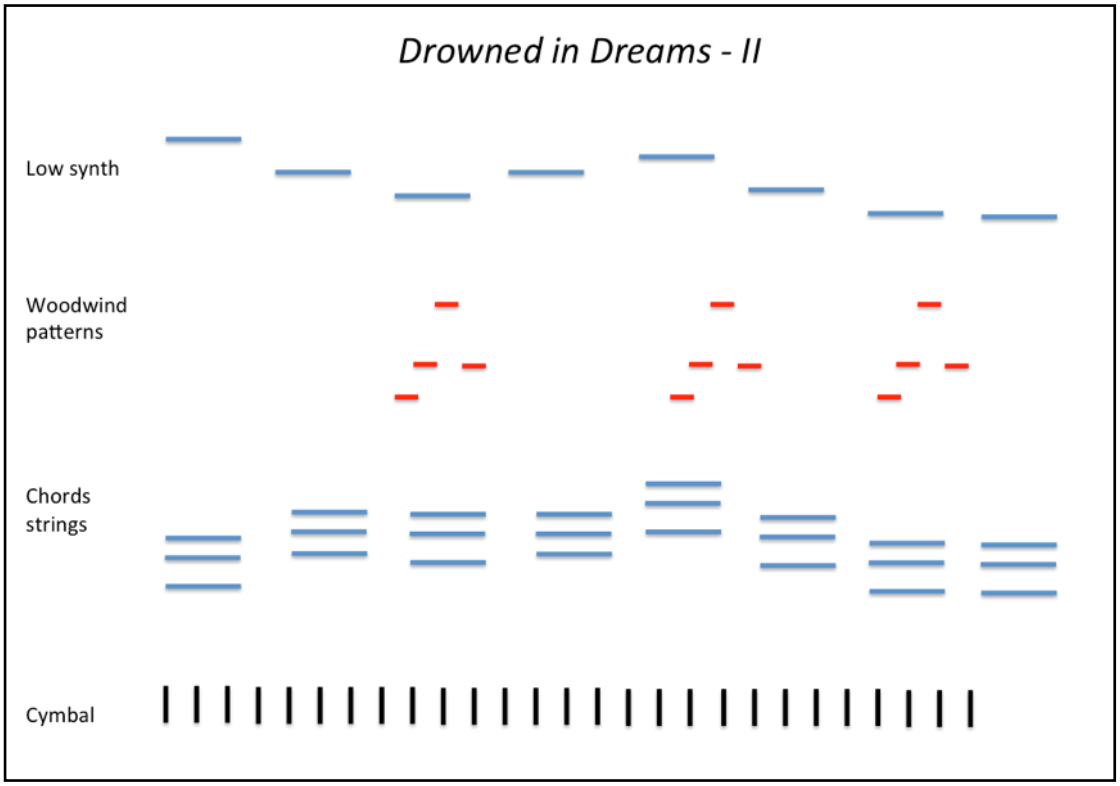
Page 1:
The synth player slowly plays 8 sustained low notes at a steady pace. A higher part is added from the third note onwards, comprising six notes in a descending passage.

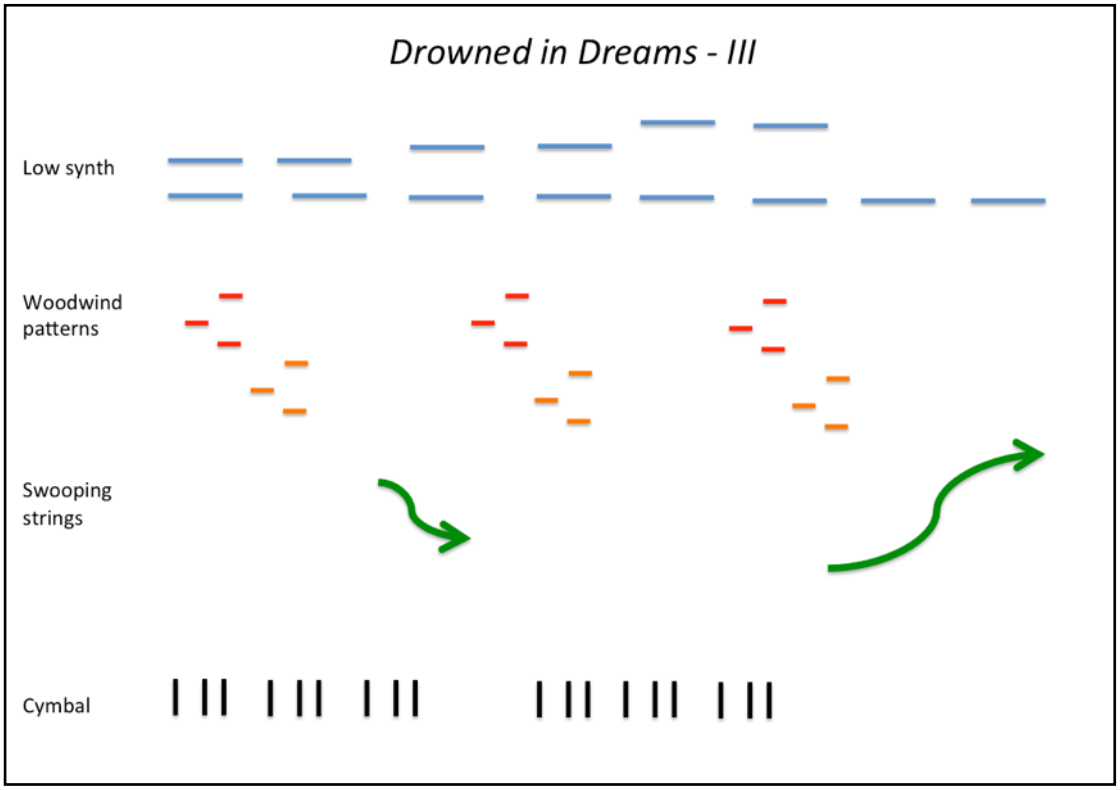
The woodwind player plays a single note, rapidly followed by a two note chord. This is followed by an ‘echo’ at a lower pitch. The entire pattern is repeated twice.

Just before the woodwind enters, the swooping strings play a descending figure. This is repeated [over a larger pitch range] as the woodwind part is finishing.

The cymbal plays a repeated three note pattern, beginning when the woodwind enters. The next two pages follow similar procedures. Visit the Soundbeam website to download a full colour printable PDF score.


Drowned in Dreams - I
Low synth
Woodwind patterns
Swooping strings
Cymbal


Drowned in Dreams - II
Low synth
Woodwind patterns
Chords strings
Cymbal


Drowned in Dreams - III
Low synth
Woodwind patterns
Swooping strings
Cymbal

Chapter 4 – musical arrangements and Soundbeam

Working with Setups https://youtu.be/90gewV5cWg4

Introduction

This booklet is one in a series which comprise a compendium of approaches to working with Soundbeam in a range of educational and other settings. The aim is to encourage thinking of Soundbeam as a versatile musical device which can be used to support music making and musical thinking.

Having this powerful music technology available in a classroom, day centre or other setting provides a potential for much wider use to support musical experience and performance, teaching and learning. If we can use Soundbeam across a much wider range of music teaching activities, then more teachers and other facilitators will become more familiar with it and get more use out of it.

Soundbeam can and should be used to complement existing music resources. Many special schools, day centres and other projects struggle with limited budgets to buy and/or maintain quality musical equipment required to adequately support curriculum activity. Classroom percussion can often be of poor quality or is poorly maintained and is therefore not capable of producing quality sounds – an essential requirement if students are to become engaged and stand any chance of producing quality work. Today's students are used to hearing high quality musical sound and will often feel frustrated, and consequently unengaged, if they are denied access to quality sound sources. Soundbeam not only provides a large range of quality sounds – it provides an interface which enables less experienced students and teachers to use them *musically*.

By creating a set of resources which offer clear, easy to follow guidance on working with music and technology for non-specialists, we address two important issues. It is well known that two areas of concern for generalist teachers in primary and special schools are around teaching music and using technology. We can address these challenges in two ways. Firstly, by making the technology easy to set up and use. Secondly, by designing curriculum music activities which generalist teachers will find easy to understand and implement.

Many Soundbeams are in use in locations other than schools. Day centres, community music projects and other charities, arts centres, private homes, hospices, care facilities and homes for the elderly are just some examples. All the activities and approaches described in these modules can be applied or adapted effectively for individuals and groups across a wide spectrum of age and ability/disability to enjoy and learn through using Soundbeam.

Soundbeam in the Classroom – key features

- Enabling non-specialist teachers to deliver music lessons. The sessions are free of technical jargon and do not assume any prior musical knowledge. Much use is made of movement and graphics to help explain and reinforce musical activity.

- Enabling SEN student to participate with others. These sessions are designed to allow MLD students to participate fully in music making with their peers in SEN and mainstream settings. Teachers will also find that many of these lessons can be adapted to make them suitable for students with more severe learning difficulties. Think carefully about the student's particular strengths and weaknesses and adapt accordingly. This will include thinking about the ways in which the student can usefully interact with Soundbeam, how they might use communication devices to respond to musical stimuli and appropriate ways in which they might work with others. At the same time, think about how these activities might be used to stretch them in to being able to access new skills and areas of musical understanding.

- Keeping the technology simple. Soundbeam is a powerful and highly sophisticated music technology platform. However many of the most important features can be accessed quickly and easily. By making considerable use of the presets and the built in sound library, teachers will be able to easily access functions with a minimum of technical knowledge. All activities can be accessed with just one beam and a few switches. Video tutorials and annotated step-by-step 'walkthroughs' provide clear guidance on using the technology. Exemplar sound files give some idea of possible musical outcomes.

- Broad and balanced ranges of activities ensure that teachers will be helping their students cover most curriculum requirements. Differentiation and extension activities are also suggested where appropriate. Assessment criteria are also provided for teachers who may require this.

- The activities are led by the music – not the technology. In addition, the use of Soundbeam can often be supported by use of conventional musical instruments in these activities. Extensive use should also be made of the voice as instrument, where appropriate.

- Any suitable person can lead these activities from the school community. In addition to classroom teachers, it may be appropriate for teaching assistants, parents, senior pupils, visiting staff and others to get involved in working with this user friendly technology.

In this Unit, we look more closely at some of the elements of structure and texture we need to consider when several sounds are being played at the same time. We begin by looking at the use of repeated rhythmic loops as a basis for accompaniment. We then look at identifying the different roles within an ensemble, where parts have either a melodic, harmonic or rhythmic basis, and ways of combining these. Consideration is also given to thinking about groups of sounds that sounds might work together in original work and in cover versions of songs. Finally, we look at how to build larger structures out of smaller pieces.

1. Building rhythmic loops

Underpinning many a catchy piece of music is a rhythmic loop played on percussion and or other instruments. Soundbeam provides access to a wide range of percussion and bass sounds which make it ideal for this purpose. This activity also provides an opportunity for students to develop rhythm playing skills using beams, switches and other instruments.

Activity

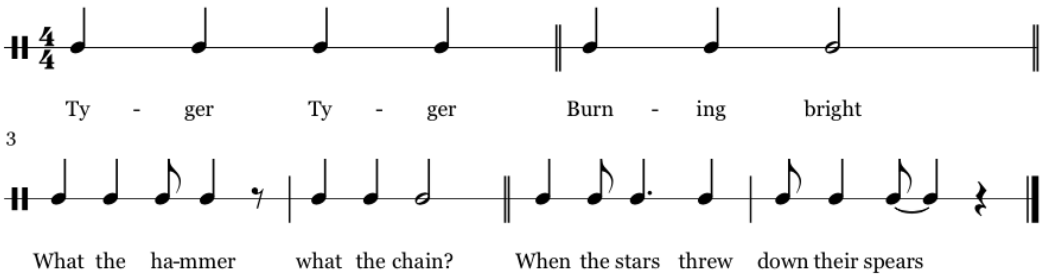
In this session, students perform simple ostinato patterns to accompany a well-known vocal rhyme or chant. The teacher takes a short section of the rhyme or chant (e.g. a few words), and asks students to repeat it in a loop. Students then transfer this repeated rhythm to instruments. The ostinato provides an accompaniment for a narration of the whole rhyme.

Consider for example Blake's poem Tyger, Tyger. You will find a copy here: http://www.poetryfoundation.org/poem/172943

Here are some possible extracts which could be used for loops:

- *Tyger, Tyger*
- *Burning bright*
- *What the hammer, what the chain?*
- *When the stars threw down their spears*

Practise first of all reciting these extracts, one at a time, to a steady beat. Include some rest beats to provide some breathing space. There are, of course, several ways in which these phrases can be read. Here is one possible interpretation:



Now think about transferring to appropriate instruments. Discuss possible choices with students. For example, a softly beaten hand drum might suggest a tiger moving quietly and stealthily through the undergrowth. The hammer and chain line - something metallic?

Listen to audio example of the phrases above

Extension

- This activity could be extended by turning the ostinato rhythm into a simple melody (i.e. so it involves both rhythm and pitch).
- Look at ways of combining the different ostinato patterns to provide increasing and decreasing layers of sound. For example more instruments might play in interludes between verses, the louder ones on the more dramatic verses etc.

Assessment Criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

P.2 makes or controls sound intentionally

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

2. Building loops on a theme or topic

Take a theme students may have been studying from another subject area. Consider some key words you particularly want the students to absorb. For example, work on the topic of 'shapes' might include:

circle, triangle, square, rectangle, pentagon, parallelogram

Students use the natural rhythms of words to compose rhythmic ostinatos

Activity

First of all, begin by repeatedly chanting aloud a word from your list. Students should join in and/or clap or tap the rhythm pattern. Do this for each word in turn. Next decide which instrumental sounds you are going to use for each shape. Here are some possibilities:

- A bass drum sound on a switch could be used to play the word '**square**'. Since this is a one syllable word it would be a good one for keeping a steady beat or pulse.
- A real **triangle** could be used for the word 'triangle', which conveniently has three syllables!
- A nice synth sound on the beam, with a student sweeping a **circle** shape using an arm or finger…
- **Pentagon** could be a switch or set of switches set to notes from a pentatonic scale. [reinforcing the ideas of fives…]. Chant 'pentagon five sides' to create five syllables.

Try different ways of combining these loops to build an interesting piece. For example:

- instruments could come in one at a time, starting with the pulse sound. As we add further layers the texture becomes denser.
- Use the loud, busy sounds more sparingly than the others by adding some rests between repetitions.
- Some sounds might work well in a call and response section.
- Draw a graphic score, or use a conductor, to cue in starting and stopping each of the loops.

Extension

Consider other groups of words on different chosen themes. Here are some possibilities to get you started:

- Names of characters from a well known film or story - *Star Wars, Harry Potter*?
- Birds – choose ones with different numbers of syllables for example *tawny owl, blackbird, lesser spotted woodpecker*. Try to find appropriate sounds to match the sounds the birds make. For example an owl makes long 'whooo' sounds, the woodpecker short, rapid wooden sounds etc.

Assessment Criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

3. Layering with different types of loops

A collection of beams, switches and other sound sources provides plenty of opportunity for combining sounds in layers. To do this effectively can be quite a complex process, more suited to those who have had significant training and experience in working with combining sounds in compositional activity. However, the basic principles are quite straightforward. They can be summarised by saying that *the parts should support and complement one another.* The following activity provides some guidance.

Activity

Once again, we are creating loops or ostinatos. These ostinatos can be rhythmic, harmonic or melodic.

Let's begin with some rhythmic ostinatos. We will need some Soundbeam switches set to play single percussion instruments. [We can, of course, use traditional percussion instruments as part of the mix].

Experiment to find a collection of sounds which work well together – a good mix of wooden and metal sounds from low thuds to twinkling high sounds. Then set about devising loops for them. Loud, noisy sounds should be used sparingly. Make sure the loops work well together, combining to produce an interesting composite rhythm which is not too bare or too cluttered. Allocate the more demanding parts appropriately to students who can cope with these..

A harmonic ostinato involves setting one or more switches to play chords, which are then triggered in repeated rhythmic patterns.

For the melodic ostinatos, choose a good variety of high/low and short/sustained sounds. Keep the patterns simple – just a few notes which have an interesting rhythm pattern. Again, opportunities for differentiation here with simpler and more demanding parts.

Now arrange into a structure, where each section has different combinations of sounds. Some sort of graphic score can be put together to aid arranging and performance.

Extension

This piece would make a good backdrop for a spoken rhyme or rap. Also excellent for dance routines!

Assessment Criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

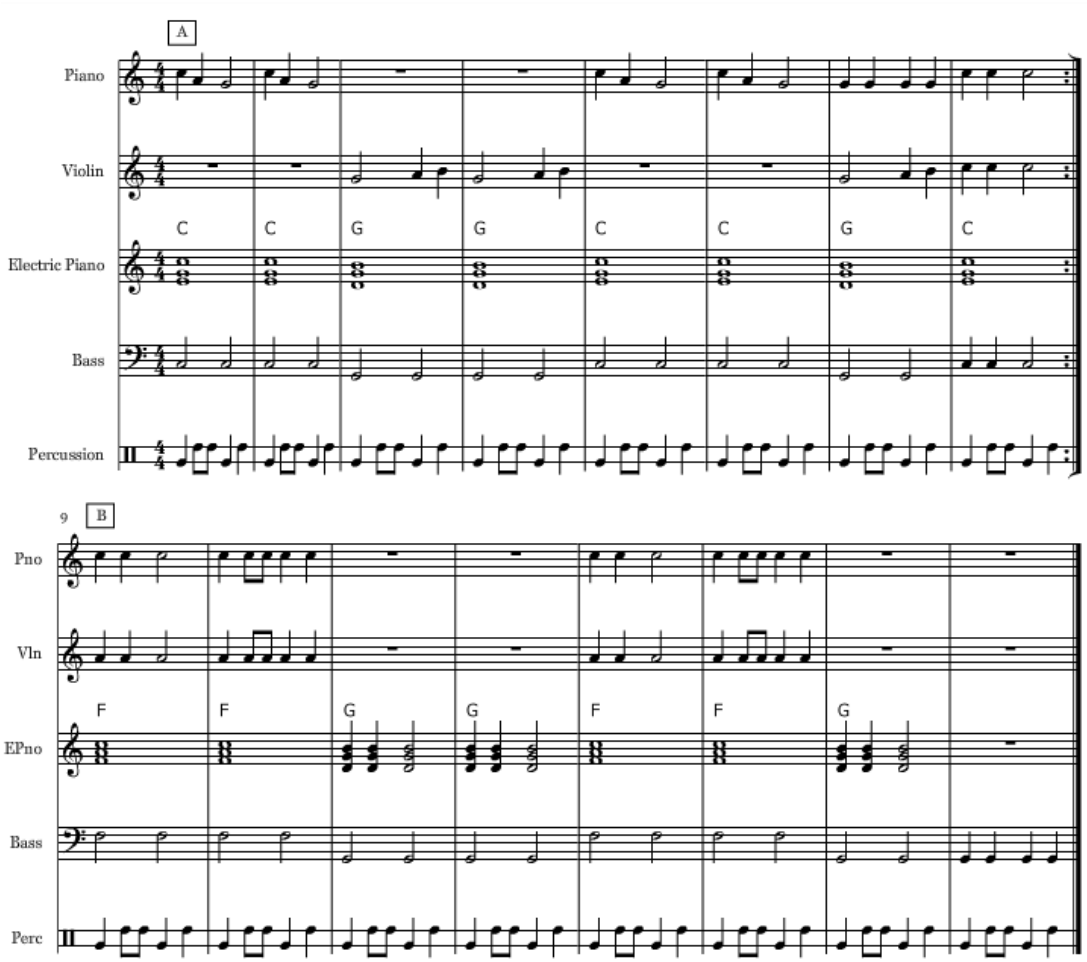
I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

4. Performing in ensemble

Students learn a simple ensemble piece (i.e. there are a number of different layers to the piece, played on different instruments). While the piece should primarily be taught by ear, this could be a good opportunity to introduce students to reading simple staff notation. (E.g. students could learn their parts and then compare what they have learned with how it is notated.)

Activity

Use this score below and/or design others on similar lines.



Listen to this audio extract of the first few bars here.

This score may look daunting at first, but closer examination shows that most parts involve repetition of simple figures. Key features of this piece are as follows:

- The percussion part is played on two drums [high and low pitched] – bongos or congas would be ideal and plays a repeated pattern throughout. These can be played on real percussion, Soundbeam or a pre-recorded track, at a suitable tempo.

- The electric piano plays simple, sustained chords and the bass plays the roots of these chords. Soundbeam switches would be ideal for this. These parts provide the harmony for the piece and, with the percussion, comprise the 'rhythm section'.
- The piano and violin parts could be allocated to one or more beams set to play just a few notes. In this piece they sometimes play in harmony and also call and response sections.
- There are two sections in this piece – A and B. These sections can be repeated in various permutations to extend the piece.
- Notice how textural variety is provided by sometimes having just some of the ensemble playing while others take a break.
- Some variety to some of the parts can be added for repeated sections. For example, the bass could play the same notes with a different rhythm. The beams could have improvised solos using notes from a C major or pentatonic scale.

Assessment Criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

5. Working with Setups and Soundsets

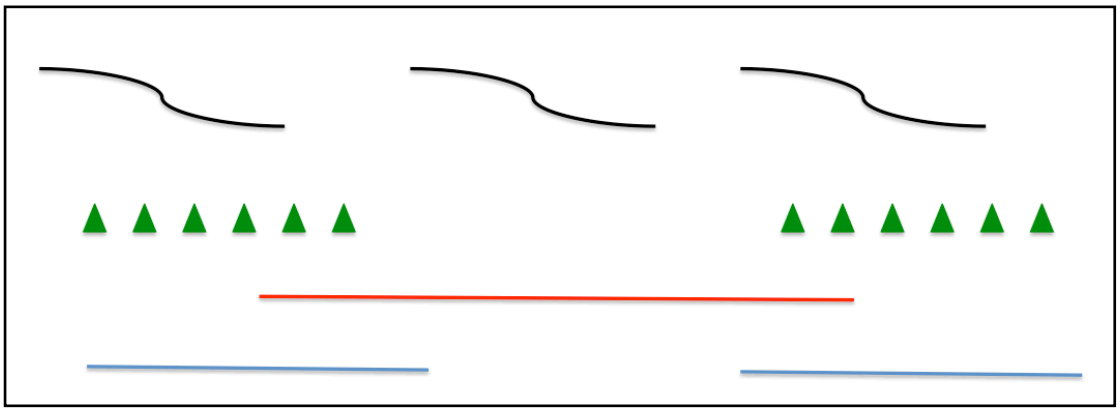
One of the best features in Soundbeam is the collections of Soundsets, Themes and Setups [earlier versions]. These are collections of sounds for one or more beams and switches which have been carefully chosen to work well together. To get the most from working with these sound collections, we need to encourage our students to think carefully about how to use these sounds effectively and appropriately in putting together a layered piece of music.

Activity

Students listen to a group of sounds in a Soundbeam collection and begin thinking about how they might use those sounds in putting together a piece of music. Here are some questions they might want to consider:

- Which sounds would be good in the background, helping to provide an accompaniment?
- Which are our foreground sounds, playing tunes and solos?
- Which sounds do we use frequently? Which ones more sparingly? Why?
- Do any of the sounds need modifying? Louder/quieter or higher/lower
- Which work well particularly well together?
- How might we vary the texture during the course of the piece?
- Do we want to bring in any other non-Soundbeam sounds?

In groups, students compose pieces that are built from a number of different layers (e.g. a rhythmic ostinato for the first layer, a melody for the second layer and a drone for the last layer). Try ideas out and notate ideas on a graphic score. This can initially be a draft version, which can be refined later on. An extract from an early draft might look like this:



In this example, the bottom two lines show two overlapping, sustained sounds – working as gentle accompaniment drones. The green triangles represent a repeated percussion idea. The black lines show a smooth descending melody played on a beam.

Listen to an interpretation of the score here

Extension

Students could swap their notations and try to perform each other's pieces. If there is time, they assess how effective the notation is and clarify any misunderstandings about how to read it.

Assessment Criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

6. Adding a bass part

A lot of the melodies and tunes we hear in schools tend to be played in higher registers. Recorders, ocarinas, young peoples voices, small glockenspiels and xylophones are all geared towards playing higher notes. There are reasons why this is the case. Instruments which play high pitched sounds are usually smaller, lighter which makes them easier to play and less expensive [which makes them easier to buy!]

Electronic instruments such as Soundbeam bring the possibility of working with low sounds without the physical demands of playing bass instruments such as the bass guitar, tuba or double bass. This next activity shows how to use Soundbeam to add a bass part to a tune.

Activity

Students compose a bass line to a simple melody that they know well. The bass line does not need to have a complicated rhythm (e.g. it could just consist of two beat notes or minims), but students should pay attention to finding notes that sound good against the melody. Of course, if you have the chords for the song you can use them to guide your students to possible note choices.

First of all you will need to know what key the melody is being played in. These keys will work well for our purposes – C, G or D major. This can be a well known tune or one the students have composed. Use this table to choose possible bass notes for your tune:

Key	C major	G major	D major
	C	G	D
	F	C	G
	G	D	A

So for the key of C major, possible bass notes are C, F and G so set up switches or a beam to play just these notes. Watch this video tutorial or setting up bass notes

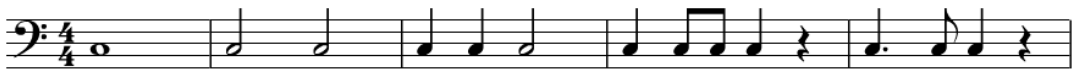
Now play or sing your tune to a steady beat. One the first beat of each bar, try one of the three bass note choices. Let your ear decide which would be the best to choose. Work through the piece until you have a complete bass line, writing down the sequence as you go. Play all the way through with your bass line and make any adjustments if required.

Extension

Use this table below for slightly more ambitious bass lines. NB You do not have to use all the note possibilities. Your tune in C major may sound best with just bass notes of C and G.

Key	C major	G major	D major
	C	G	D
	A	E	B
	F	C	G
	G	D	A

Instead of playing single bass note each bar, try short rhythmic patterns on a single bass note for the duration of a bar. Here are five possible alternative patterns for playing the note C in a 4 beats per bar piece:



Listen to these patterns here. For performance, have some students play the tune, others playing rhythmic variant of the bass line and others adding percussion. If the tune is a well known song, add some singing!

Assessment Criteria

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

7. Cover versions

Students really enjoy working on cover versions of their favourite songs. Soundbeam can really help with this. Setting beams and switches to emulate the sounds of the various instruments if often much easier than trying to set up guitars, bass, drums, keyboards and all the amplification that goes with this.

Setting scales and relative volume levels for all the sounds coming through a single device is another very practical advantage when working with Soundbeam.

Activity

Creating a faithful reproduction of a standard song can be quite a challenge. Consider, in the first instance, having students playing simplified parts along with the track. Adjust volume levels carefully so everyone can hear what is going on. Think also about sounds which might *complement* the original. For example extra percussion parts on choruses or long synth or string lines on other sections.

Buy or download the sheet music for simpler songs, which just use a few chord changes and have a straightforward structure. Discuss choices with your students and find songs which they are happy to play and sing.

There is scope here for adding improvised parts to the song. This can be thought of as a means of addressing differentiation issues. Simple improvised parts, using appropriate pentatonic scales, might help the less confident and the less experienced perform along with the song. More ambitious improvisations and solos can be used as a way of stretching and challenging more musically confident students.

Extension

For those who are confident in working with technology, try to get hold of a good quality MIDI version of the song. Listen to the parts separately to work out what is going on musically. Download chord charts to help with this. Initially students can play along to the MIDI version. Using a sequencer, the various MIDI parts can be muted once the players are confident enough to play unaided.

Another approach is to rework a song in a different musical style. So for example, a gentle ballad might be reworked as reggae song. A slow song which uses mainly acoustic instruments might be reworked with a more up-tempo electronic sound. This is a useful strategy to employ when you want to work with the strengths and enthusiasms of your students.

Assessment Criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

8. Cover songs - changing moods and styles

This follows on from the previous project. Students create an arrangement of a pop tune or melody that they know well. They can try varying the tune itself as well as creating an original accompaniment for it. Rather than slavishly trying to create a faithful copy the original, students could be given the task of changing the mood of the tune (e.g. making a fast, upbeat tune sound slow and sad).

This, of course, is also a more pragmatic approach when the original arrangement is perhaps too challenging!

Activity

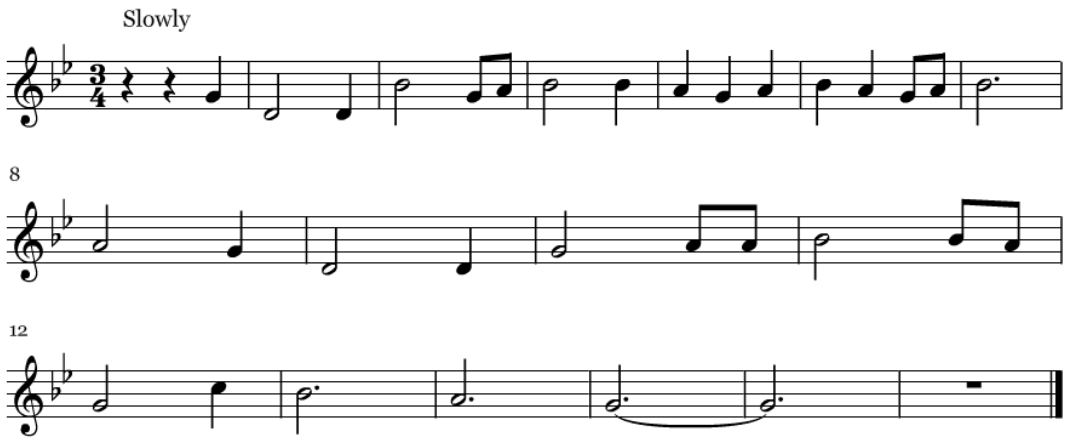
For our example, we are taking a traditional tune (to avoid possible copyright infringement) but you can apply the principles to something more contemporary.

Source some music for your tune – either from a songbook or internet download. There are some excellent traditional examples on the EFDSS site. For example, "A Poor Old Man" which you can download and listen to at http://www.vwml.org/record/CJS2/10/2884#

We can try playing this song in different ways. For example:

- A slower tempo
- Change to a minor key
- Change to three beats per bar

Some of these changes will alter the mood radically. This can be done aurally, but here is how it might look with the changes suggested above:



You can listen to this example here. Now we have changed the mood of the song, we can add other layers to support this rather more gloomy mood. Slow, deep drones on the notes G and D might sound good. Synth pads are excellent for this purpose. Plodding repeated patterns on deep resonant drum settings might also be effective.

Extension

Try also adding a bass part using just the notes G, C and D. Use switches set to a bass guitar or double bass sound.

Assessment Criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

9. Templates for Structures

When thinking about layers in music we are thinking 'vertically' – building up layers of sound, on top of each other. However, it is also important to think 'horizontally' how we structure the development of these layers of sound over time. In this project, we highlight some of the standard models, which your students can use and adapt.

Activity

Take any of these models and use it to give a group of students opportunities to work together in different ways.

- Adding one at a time. This is a favourite with many pop/rock producers and those working with electronic sounds. The piece begins with a few bars of a single instrument, say a guitar. Then a bass part is added, followed by some hand percussion. Next in comes a drum kit, followed by some keyboard sounds…..
  Take the sounds you are going to be working with on your Soundbeam beams and switches and experiment until you find a suitable order for entry of sounds. The ending of the piece can reverse the process, gradually thinning out the texture as a means of fading the piece out

- Rondo is an Italian word referring to a structure where a main musical theme is interspersed with contrasting themes. If we use letters to indicate the names of sections, then typical rondo structure might be represented as follows:

  A B A C A

  or

  A B A C A B A

- Contrasts – one of the most effective musical 'tricks of the trade' is to go suddenly from a very loud, dense texture to something much quieter. This happens in all styles of music. Listen out for examples and copy the ideas. It is often the case that the lead instruments drop out for a while leaving the background accompanying sounds to share some of the limelight. This can be useful tactically as well as musically – allowing those students who are in the background the chance to feel more important!

- Call/response in this structure two soloists exchange short phrases over a backing. Or a soloist trades phrases with a larger ensemble

- Song form – there are many variations on this, but here is a typical one:

  intro chorus verse chorus verse chorus ending

  It is usually the case that choruses have more going on in them than verses. So have several beams and switches playing in the choruses and reduce to fewer sounds for the verses.

Extension

When students have worked out some short musical sequences, look at ways of combining them to build larger pieces. Consider some of the models above or devise a new structure which will work with the materials you have.

Assessment Criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

10. The power of pentatonics

When there are several layers of music playing at once, it is important that the parts 'work together' to produce a pleasing combined result. Much of this can be done by ear - making sure that loud instruments play softly or more sparingly, and making sure that our chosen Soundbeam instruments sound good together. We can also avoid having arrangements sound too cluttered by having instruments playing at different registers. Too many bass sounds might make a piece too muddy – too many high sounds and the music might sound shrill and tinny.

Even rhythmic parts can be sorted out be ear – making sure key instruments are playing in time, and aiming for a good mix of simple and more ambitious rhythmic parts.

Ensuring parts work together *harmonically* is tougher, especially for those who have little or no background in working with scales and chords. In this unit, we consider one way of addressing this challenge – making use of pentatonic scales.

Activity

First of all set up the beams and switches to play notes from a pentatonic scale. Major and minor pentatonic scales are both available as presets in Soundbeam. So for example:

C Major pentatonic will have the notes:

C D E G A

D Minor pentatonic will have the notes:

D F G A C

There are no semitone intervals in either of these scales so the chance of having dissonant harmonic clashes is reduced considerably. The possible 'downside' is that music made using these scales can sometimes sound a bit simplistic and banal – all light and no shade. Here are some things to try to address this issue:

- Make use of interesting sounds, so the focus is more on the timbre of the instruments
- Work with contrasts – of texture and dynamics
- Use a large pitch range with low instruments and high instruments
- make rhythm a central focus by devising some catchy rhythms for some of the parts
- use the *global transpose* function to effect key changes

Extension

Set those instruments playing melodies rather than accompaniment to play full major or minor scales
Consider working with less common pentatonic scales such as:

Blues minor: E G A C D E

Blues major: G A C D E G

For something more unusual, work with a whole-tone scale. These can sound dreamy or spooky depending on the sounds you are using and how they are played:

C D E F# G# A# C

Assessment Criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

Some guidance on assessment

Each project in this Unit has criteria you might find useful, if working in a context where formal assessment and reporting is required. The criteria can be used more informally when you may want to reflect on the progress being made and consider some pointers for improving the quality of work further. Users should feel free to adapt and edit these lists of statements to suit their particular requirements.

The criteria statements we provide are taken from the *Sounds of Intent* framework and the complete list is provided below for reference. These statements are grouped into three sections:

- R = reactive [how we respond to music]
- P = proactive [how we make music]
- I = interactive how we work musically with others]

More information and resources can be found on the *Sounds of Intent* website: http://soundsofintent.org

Here is a complete list of statements:

R.2 shows an emerging awareness of sound
R.3 responds to simple patterns in sound (made through repetition or regularity)
R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')
R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences
R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.2 makes or controls sound intentionally
P.3 makes simple patterns in sound intentionally, through repetition or regularity
P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently
P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound
I.3 interacts through imitating others' sounds or through recognising self being imitated
I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')
I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills
I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Glossary

Harmony – notes sounding together to produce a musically satisfying outcome
Rhythm – musical patterns created by combinations of long notes, short notes and rests
Loop - a repeating section of musical material
Ostinato - A musical phrase which repeats
Pitch - A measure of the frequency or how high or low notes are
Pulse - The repeating steady beat, underpinning a piece of music
Pentatonic scale – a five note scale
Texture - The number of layers in a piece of music
Call & Response - A pair of musical phrases which complement one another
Graphic score - The use of visual symbols to represent music
Chords – two or more notes sounded together
Ensemble – music performed by a group of musicians
Texture - The number of layers in a piece of music
Accompaniment – music to support a singer or soloist
MIDI - A technical facility that allows a range of digital music making equipment to connect with each other
Sequencer - A computer emulated version of a multitrack recording studio
Beat - The repeating steady beat, underpinning a piece of music
Acoustic – music produced without the aid of electronics
Tempo - The speed of a piece of music
Minor – a seven note scale with a semitone interval between the second and third notes
Drone - A continuous note or chord

Pentatonic - – a five note scale

Whole tone scale – a six note scale in which all the notes are a tone apart

Unit 5: Making Music with Others

Introduction

This booklet is one in a series which comprise a compendium of approaches to working with Soundbeam in a range of educational and other settings. The aim is to encourage thinking of Soundbeam as a versatile musical device which can be used to support music making and musical thinking.

Having this powerful music technology available in a classroom, day centre or other setting provides a potential for much wider use to support musical experience and performance, teaching and learning. If we can use Soundbeam across a much wider range of music teaching activities, then more teachers and other facilitators will become more familiar with it and get more use out of it.

Soundbeam can and should be used to complement existing music resources. Many special schools, day centres and other projects struggle with limited budgets to buy and/or maintain quality musical equipment required to adequately support curriculum activity. Classroom percussion can often be of poor quality or is poorly maintained and is therefore not capable of producing quality sounds – an essential requirement if students are to become engaged and stand any chance of producing quality work. Today's students are used to hearing high quality musical sound and will often feel frustrated, and consequently unengaged, if they are denied access to quality sound sources. Soundbeam not only provides a large range of quality sounds – it provides an interface which enables less experienced students and teachers to use them *musically*.

By creating a set of resources which offer clear, easy to follow guidance on working with music and technology for non-specialists, we address two important issues. It is well known that two areas of concern for generalist teachers in primary and special schools are around teaching music and using technology. We can address these challenges in two ways. Firstly, by making the technology easy to set up and use. Secondly, by designing curriculum music activities which generalist teachers will find easy to understand and implement.

Many Soundbeams are in use in locations other than schools. Day centres, community music projects and other charities, arts centres, private homes, hospices, care facilities and homes for the elderly are just some examples. All the activities and approaches described in these modules can be applied or adapted effectively for individuals and groups across a wide spectrum of age and ability/disability to enjoy and learn through using Soundbeam.

Soundbeam in the Classroom – key features

- Enabling non-specialist teachers to deliver music lessons. The sessions are free of technical jargon and do not assume any prior musical knowledge. Much use is made of movement and graphics to help explain and reinforce musical activity.

- Enabling SEN student to participate with others. These sessions are designed to allow MLD students to participate fully in music making with their peers in SEN and mainstream settings. Teachers will also find that many of these lessons can be adapted to make them suitable for students with more severe learning difficulties. Think carefully about the student's particular strengths and weaknesses and adapt accordingly. This will include thinking about the ways in which the student can usefully interact with Soundbeam, how they might use communication devices to respond to musical stimuli and appropriate ways in which they might work with others. At the same time, think about how these activities might be used to stretch them in to being able to access new skills and areas of musical understanding.

- Keeping the technology simple. Soundbeam is a powerful and highly sophisticated music technology platform. However many of the most important features can be accessed quickly and easily. By making considerable use of the presets and the built in sound library, teachers will be able to easily access functions with a minimum of technical knowledge. All activities can be accessed with just one beam and a few switches. Video tutorials and annotated step-by-step 'walkthroughs' provide clear guidance on using the technology. Exemplar sound files give some idea of possible musical outcomes.

- Broad and balanced ranges of activities ensure that teachers will be helping their students cover most curriculum requirements. Differentiation and extension activities are also suggested where appropriate. Assessment criteria are also provided for teachers who may require this.

- The activities are led by the music – not the technology. In addition, the use of Soundbeam can often be supported by use of conventional musical instruments in these activities. Extensive use should also be made of the voice as instrument, where appropriate.

- Any suitable person can lead these activities from the school community. In addition to classroom teachers, it may be appropriate for teaching assistants, parents, senior pupils, visiting staff and others to get involved in working with this user friendly technology.

In this Unit, we look at various strategies for supporting students in making effective music with others. Soundbeam is one of the few music technologies which is specifically designed with ensemble playing in mind. Wireless versions of Soundbeam make setting yup for ensemble use even more straightforward but, in either, case make sure that all players in an ensemble are in visual contact with one another. This includes any students who may be playing traditional instruments alongside Soundbeam. This will be of particular importance in those activities which encourage musical conversations and responses. If several students are playing a single beam, remember you can always arrange to have them seated either side of the beam.

It is advisable with this Unit to work through the activities in the order they are presented, since some do rely on activity covered earlier on in the Unit.

1. Taking turns

A fundamental social and musical skill is knowing when to take your turn. This involves developing the discipline and control to keep your instrument silent when others are playing. It also involves listening carefully to others so that you know when it is your turn to play. Some students may require help with this.

Activity

In this unit, each child has an ‘instrument’ which they play in turn: when one child stops playing, the next one starts, until everyone in the circle has played a short phrase. The teacher shouts ‘switch!’ whenever they want to change the direction of the circle. This can be done using any mix of beams, switches or other instruments. Make sure that students are standing or seated with ready access to their instruments.

Spend a little time with each student working out what they are going to play on their instrument, so that this becomes their ‘signature tune’. It may be just a single note, a short rhythm pattern or something more complicated. When choosing sounds for use with Soundbeam, make sure the students are happy with their choices.

Extension

Next, the group only has one instrument – a single Soundbeam beam. One child plays it while making eye contact with another child, who moves into the path of the beam and takes over from them. This process is repeated until everyone has had a turn.

As the student’s concentration develops, introduce more instruments so that two or more sounds can be playing at the same time. Traditional instruments can be used alongside Soundbeam for this activity.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.2 interacts with others using sound

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

2. Copying sounds

In this session, we build on the previous activity. In addition, the student now has to listen to *what* is being played – and then copy it as best they can. Depending on the relative ability and experience of the pupil, the teacher will decide whether or not the accuracy in the copied version is acceptable. If necessary, repeated the original phrase a few times before moving onto another musical phrase.

Activity

The teacher performs a repeated action, using a beam, to generate a short sequence of notes. You might want to do this in time to a backing track. [A drum loop would be ideal, then you don't have to worry about being in the same key as the backing track]. Make the actions clear and obvious so that students can see as well as hear the action and the resulting sounds. Students then try to copy and hopefully produce the same sequence of sounds. Find some way of marking on the floor or any other surface the precise location at which the first note is played.

After a few repeats, the teacher changes to a new sequence. If students are struggling, play something simpler.

Extension

The teacher can gradually add more notes to the original phrase, to make copying gradually more challenging.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

P.2 makes or controls sound intentionally

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

3. Layering loops in a backing

In this unit, students perform simple ostinato patterns to accompany a well-known vocal rhyme or chant.

Activity

The teacher takes a short section of the rhyme or chant (e.g. a few words) and asks students to repeat it over and over. We sometimes refer to this as 'looping'. Students then transfer this repeated rhythm to Soundbeam switches or beams, which are set to trigger short percussion sounds. The ostinato acts as an accompaniment to the whole rhyme.

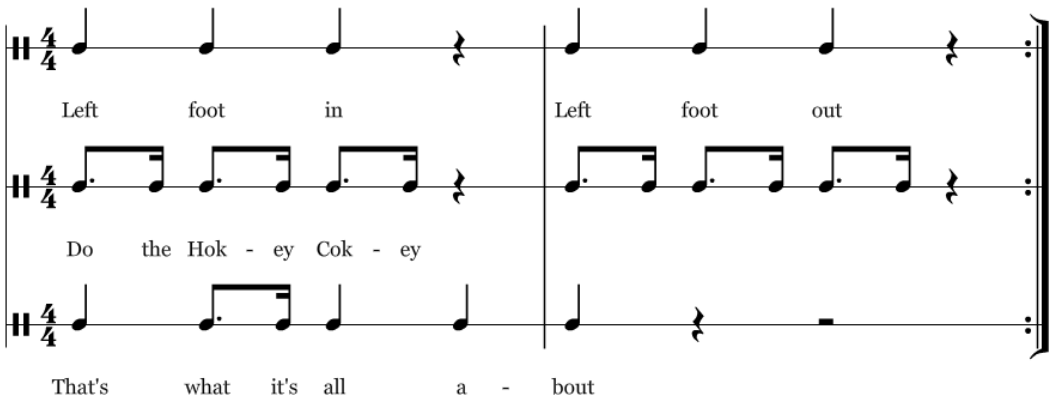
For example, choose one of the following:

- *Left foot in, left foot out* [easy]
- *Do the Hokey Cokey* [moderate]
- *That's what it's all about* [hardest]

Try repeating this process with different rhymes and chants, or different rhythms. This activity can be used to explore the concept of texture. There are two parts to the texture here: the accompaniment layers and the chant of the whole rhyme or poem. If appropriate, use a mix traditional instruments and voices with Soundbeam sounds in this activity.

Extension

Split the class into different groups, and have each group practise one of the rhythm patterns learned in the previous week. Order these patterns into a structure to create a whole piece, where each group has to perform their pattern at the correct time. Add rests between repetitions so that the loop fits exactly into a four or eight beat structure. For the example above, an accompaniment might look like this:



You can listen to this example here

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

4. Building melodies

This session develops earlier activities by inviting students to add notes to an incomplete phrase in order to build melodic patterns. This involves musical thinking in two directions – recalling what has come before and where the phrase might go next. This can be done as a small group or solo activity.

Activity

Students sit or stand so they can access the beam quickly and easily. It might be a good idea to find some way of marking on the floor (or any other surface) the locations at which the respective scale notes are played. One child plays a note. The next child plays the first note and adds their own. The third child plays the first two notes and adds another, and so on. Students develop the ability to recall patterns and reproduce sounds with increasing accuracy.

Extension

- First of all, have the students concentrate on getting the sequence of pitches in the correct order. Once they can do this, encourage them to try and emulate the rhythm of the developing phrase. Use a backing track or tap a steady beat to help with this.

- Record the work and challenge students to perform the melodies accurately at a later time.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.2 makes or controls sound intentionally

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

5. Calling – and responding

One of the earliest and most popular ways of making music together was to engage in musical conversation or dialogue, using a form known as 'call and response'. So for example in a work song the task leader would sing an opening line and the workforce would sing a response in chorus. Sometimes the words of the call are repeated with varied responses. Sometimes it works the other way round. Here is an example:

Not last night but the night before

Step back baby, step back

Twenty four robbers at my door

Step back baby, step back

Open up the door and let them in

Step back baby, step back

Hit 'em on the head with a rolling pin

Step back baby, step back

You can hear this on YouTube https://www.youtube.com/watch?v=WZxxNjOG6RI

Activity

Students learn a call-and-response song, where the teacher sings a line (the 'call') and the students answer it with a complementary phrase (the 'response'). There are good examples to be found in many of the songbooks from SingUp, Sing for Pleasure and A&C Black publications.

Students can either:

- sing the responses,
- play the [simpler] responses on Soundbeam or a traditional instrument
- play the rhythm pattern of the responses, on a percussion setting or single note on Soundbeam

Extension

Students could *improvise* a response to the call played or sung by the teacher.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

6. Musical conversations

The purpose of this activity is to help students develop some skill and experience in working with improvisation. By providing a supportive structure to the activity, we can help students produce improvisations which are musically interesting and worthwhile.

Activity

Students sit facing each other in pairs, each with access to a Soundbeam or switches. They have a musical 'conversation' on their instruments, each child gauging when it is their turn to play.

Encourage students to respond musically to each other, rather than just playing anything. This could include elements of copying phrases or call and response (see previous activities).

Extension

- A rhythm backing, which may be played on Soundbeam, could be used to encourage students to play their phrases to a steady pulse.
- Students could also try playing with *opposites* (e.g. if one student plays loudly, the other has to play more softly).
- Record the work so that students can listen back and reflect on the quality of the musical interaction.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

7. Working with Harmony

Harmony can be a complex subject, but students can explore some of the basic ideas simply and effectively using Soundbeam. The visual element of a musical gesture in a beam, or over a set of switches, can really help to reinforce what happens when we harmonise melodies.

Activity

A teacher or student learns to play a simple tune on Soundbeam. This can be done using the beam or a set of switches. The second player copies this melody a third higher. Set up the beams and switches so that this is possible. Here is one way of doing this:

- Set up a beam to play a C major scale [C D E F G A B C]
- Set up another beam to play the same scale and adjust the transpose setting for that beam to +4 (providing that the transpose setting for the first beam was at 0. If it wasn't, beam 2 needs to be 4 steps (semitones) up)
- The first student plays the first phrase of their tune. For example E D C D E__
- As the first student repeats their phrase, the second student 'mirrors' this performance three notes higher. In this case their notes would be G F E F G__
- Once this is secure, the students play their phrases simultaneously

A similar activity can be done using switches. The first student has switches set to notes C D E. The second student has switches set to notes E F G. Again, if they sit opposite each other they can mirror each others actions. Glockenspiels and xylophones can also be used effectively in this activity.

Extension

- Reverse the process so that the first student plays the higher notes and the second student harmonises using notes a third below.
- Try harmonising using different intervals, where the notes are either a 4^{th}, 5^{th} or 6^{th} apart.

Listen to an example here

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

8. Rounds and canons

Students learn to sing or play simple rounds. Most school songbooks will have good examples to choose from and good examples can be found on the internet. For example: http://www.mtrs.co.uk/subscriptions/Downloads/support/vocal_activities.pdf

Once students are familiar with the concept, they can then use Soundbeam to create some original rounds for performance.

Activity

In this unit, students compose their own very simple, two-part rounds, to be played on Soundbeam. Set the beams and/or switches to play a pentatonic scale – major or minor. Now they should devise a set of four short phrases. The phrases should sit comfortably within an eight beat framework. Set up a steady pulse and count in '1 2 3 4'. Here is an example (the line___ denotes a longer sustained note):

E D C D E G E

G A G A G___

E D C D E G A

C D E D C___

Listen to an example here

First of all the players should play through the tune together. Then they should split so that the second group begin playing when the first group have reached the beginning of line 2.

Note: use of pentatonic scales will ensure that there are no harmonic 'clashes' between the parts. It might be simpler to start off with a devised round where each line has the same number of notes played in the same rhythm. For example, here is a simplified version of the round above:

E D C D E___

G A G A G___

E D C D E___

C D E D C___

Extension

This activity could make use of music technology. E.g. students devise a short, four line melody, using Soundbeam . They then record it using an mp3 recorder, app or computer software. They play back the recording and play the melody live four beats later, to create a round.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

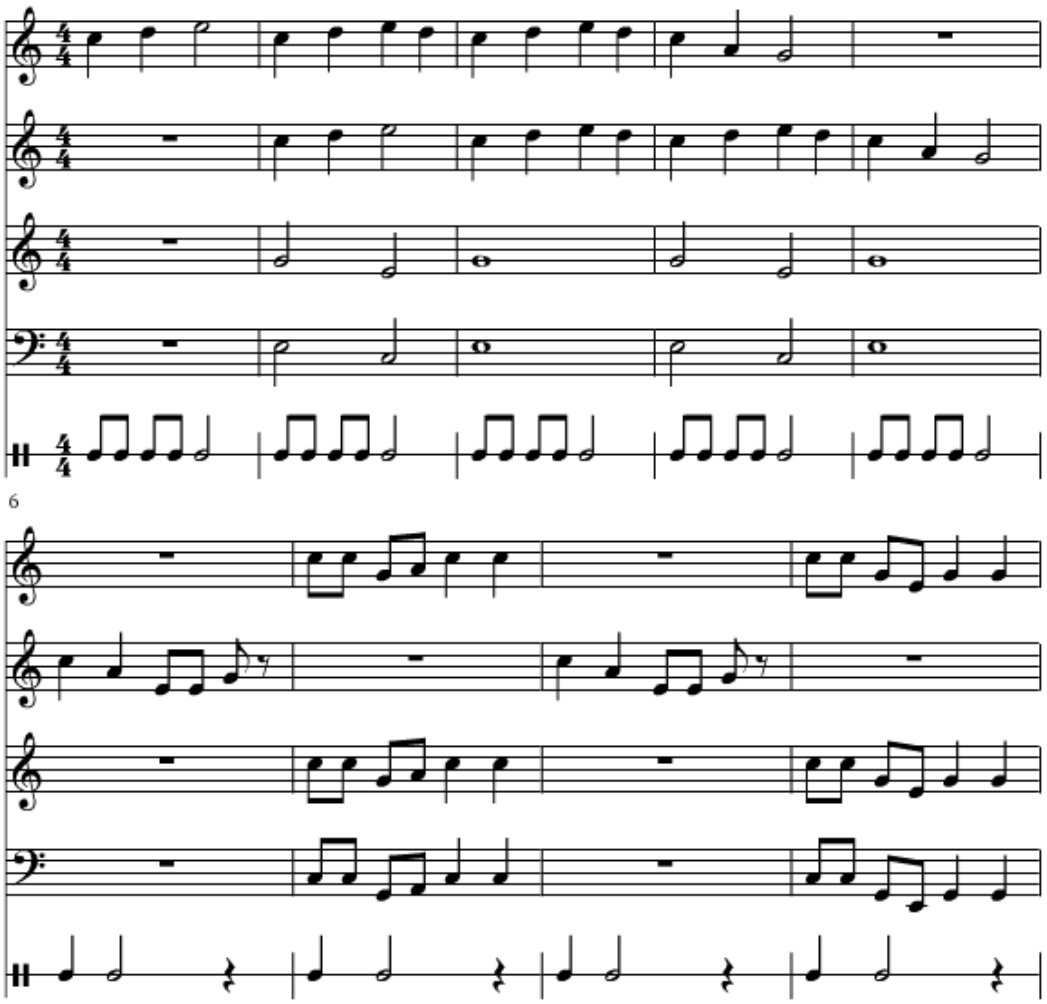
P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.3 interacts through imitating others' sounds or through recognising self being imitated

9. Bringing it all together - Parts in an ensemble

The musical skills that students have been developing in the above activities can be brought together in ensemble performances. These can be devised for any combination of beams switches, other instruments and voices. Here is a simple outline score, in five parts, which can be freely adapted for different circumstances:



Here are some of the features used in this piece. During the first four bars:

- Part 1 develops a melody, building on the notes C D E….
- Part 2 begins by playing in canon with Part 1
- Parts 3 and 4 are harmonised parts
- Part 5 is a percussion loop

Bars 5 to 8 are built on call and response.

Listen to an example here

Notes

This piece can be extended by repeating sections and having different instruments coming in and dropping out for particular sections.

All the notes come from a C major pentatonic scale.

Consider using presets in Soundbeam as a way of making sure the instruments sound good together.

Simplify some of the parts as required. For example the call/response section can be played on just one or two notes, using the rhythm indicated.

New phrases can be devised to extend the score. Perhaps include ideas generated by students in the previous sections?

Although this example as been presented in standard notation, a graphic score version could work equally well.

Simpler parts, such as drones, can be added to this piece. There could also be some sections which allow for improvisation.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

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10 Working with chords

A particularly useful feature in later versions of Soundbeam is the ability to set switches to trigger chords of midi 'instrument' sounds (not samples). These can be assigned to a switch with versions of Soundbeam 2, 5 and desktop (not SB1) . Users can select from a note sequence which already has chords within it or create their own using 'record note sequence/record pitch sequence'.

SB2 is limited to 4 note chords, SB5 = 10 notes, DTSB more than 10

In this project we show how chords can be constructed and used in progressions in an ensemble music making situation. But first, a little music 'theory'.

Chords are made up of two or more notes played together.
The most common ones are major and minor chords. This chart shows how we can derive major and minor chords from a scale of C major.

C D E F G A B C' D' E' F' etc.

A chord of C major uses these notes in red:

C D E F G A B C' D' E' F' etc.

So we start with C – skip a note and add E – skip a note and add G

The chord of F major uses these notes in red:

C D E F G A B C' D' E' F' etc.

And the chord of G major uses these notes in red:
C D E F G A B C' D' E' F' etc.

These three chords are the most widely used chords in accompaniments in the key of C.

Watch these video tutorials on creating and using a chord sequence

(Soundbeam 2 version)

(Soundbeam 5 version)

Activity

Set up switches to play chords of C, F and G major. Three switches might be set to play these chords using piano sounds. Another set could be set to play strings or organ sounds.

Set students the task of devising pleasing progressions using these chords. Three typical chord progressions are shown here:

- C C F G C C F G

- C G C G F F G C
- C C F F C C G G

These could be played over a backing of four beats per bar. Over a count of '1 2 3 4' (or using a backing drum track) play each chord in succession – each chord is held for four beats. Notice the importance of repetition in the examples shown above.

Listen to the first example shown above.
Build simple ensemble pieces, using these progressions by:

- Adding a drum or percussion track
- Adding a bassline which uses the root notes of these chords
- Improvising melody parts
- including guitar and/or keyboard players who can play chords

Extension

It is also possible to generate some minor chords from this scale. These can be built on root notes of A, D and E:

The chord of A minor uses these notes in red:

C D E F G A B C' D' E' F' etc.

The chord of D minor uses these notes in red:

C D E F G A B C' D' E' F' etc.

The chord of E minor uses these notes in red:

C D E F G A B C' D' E' F' etc.

Set up the pedals to play minor chords and ask students to explore making progressions using these chords.

Finally set six pedals to play the above major and minor chords. Ask students to devise progressions using some or all of these chords. Here are three typical examples:

- C Am F G C Am F G
- C Dm Em F G G C C
- C G Am F C G F C

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.3 makes simple patterns in sound intentionally, through repetition or regularity
P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Some guidance on assessment

Each project in this Unit has criteria you might find useful, if working in a context where formal assessment and reporting is required. The criteria can be used more informally when you may want to reflect on the progress being made and consider some pointers for improving the quality of work further. Users should feel free to adapt and edit these lists of statements to suit their particular requirements.

The criteria statements we provide are taken from the *Sounds of Intent* framework and the complete list is provided below for reference. These statements are grouped into three sections:

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Glossary

Ensemble – music performed by a group of musicians
Beat - the repeating steady beat, underpinning a piece of music
Phrase - – a group of notes which make musical sense

Ostinato - A musical phrase which repeats
Improvisation - Creating music on the spot
Harmony – notes sounding together to produce a musically satisfying outcome
Round – in which voices or instruments play the same melody, but starting at different times
Canon – see 'round'
Major pentatonic scale – a five note scale e.g. C D E G A
Minor pentatonic scale – a five note scale e.g. A C D E G
Chords – two or more notes sounded together
Root – the fundamental note of a scale or chord

Unit 6 – Ideas for Composing

Introduction

This booklet is one in a series which comprise a compendium of approaches to working with Soundbeam in a range of educational and other settings. The aim is to encourage thinking of Soundbeam as a versatile musical device that can be used to support music making and musical thinking.

Having this powerful music technology available in a classroom, day centre or other setting provides a potential for much wider use to support musical experience and performance, teaching and learning. If we can use Soundbeam across a much wider range of music teaching activities, then more teachers and other facilitators will become more familiar with it and get more use out of it.

Soundbeam can and should be used to complement existing music resources. Many special schools, day centres and other projects struggle with limited budgets to buy and/or maintain quality musical equipment required to adequately support curriculum activity. Classroom percussion can often be of poor quality or is poorly maintained and is therefore not capable of producing quality sounds – an essential requirement if students are to become engaged and stand any chance of producing quality work. Today's students are used to hearing high quality musical sound and will often feel frustrated, and consequently unengaged, if they are denied access to quality sound sources. Soundbeam not only provides a large range of quality sounds – it provides an interface which enables less experienced students and teachers to use them *musically*.

By creating a set of resources which offer clear, easy to follow guidance on working with music and technology for non-specialists, we address two important issues. It is well known that two areas of concern for generalist teachers in primary and special schools are around teaching music and using technology. We can address these challenges in two ways. Firstly, by making the technology easy to set up and use. Secondly, by designing curriculum music activities which generalist teachers will find easy to understand and implement.

Many Soundbeams are in use in locations other than schools. Day centres, community music projects and other charities, arts centres, private homes, hospices, care facilities and homes for the elderly are just some examples. All the activities and approaches described in these modules can be applied or adapted effectively for individuals and groups across a wide spectrum of age and ability/disability to enjoy and learn through using Soundbeam.

Soundbeam in the Classroom – key features

- Enabling non-specialist teachers to deliver music lessons. The sessions are free of technical jargon and do not assume any prior musical knowledge. Much use is made of movement and graphics to help explain and reinforce musical activity.

- Enabling SEN student to participate with others. These sessions are designed to allow MLD students to participate fully in music making with their peers in SEN and mainstream settings. Teachers will also find that many of these lessons can be adapted to make them suitable for students with more severe learning difficulties. Think carefully about the student's particular strengths and weaknesses and adapt accordingly. This will include thinking about the ways in which the student can usefully interact with Soundbeam, how they might use communication devices to respond to musical stimuli and appropriate ways in which they might work with others. At the same time, think about how these activities might be used to stretch them in to being able to access new skills and areas of musical understanding.

- Keeping the technology simple. Soundbeam is a powerful and highly sophisticated music technology platform. However many of the most important features can be accessed quickly and easily. By making considerable use of the presets and the built in sound library, teachers will be able to easily access functions with a minimum of technical knowledge. All activities can be accessed with just one beam and a few switches. Video tutorials and annotated step-by-step 'walkthroughs' provide clear guidance on using the technology. Exemplar sound files give some idea of possible musical outcomes.

- Broad and balanced ranges of activities ensure that teachers will be helping their students cover most curriculum requirements. Differentiation and extension activities are also suggested where appropriate. Assessment criteria are also provided for teachers who may require this.

- The activities are led by the music – not the technology. In addition, the use of Soundbeam can often be supported by use of conventional musical instruments in these activities. Extensive use should also be made of the voice as instrument, where appropriate.

- Any suitable person can lead these activities from the school community. In addition to classroom teachers, it may be appropriate for teaching assistants, parents, senior pupils, visiting staff and others to get involved in working with this user friendly technology.

In this Unit, we consider various stimuli for generating composing ideas, ways of developing structuring musical ideas and how we can use graphic notation for organising musical composition. In addition, we look at some strategies for working with standard notation.

1. Musical Conversations

Music is not just an endless, arbitrary stream of sounds. Musical ideas develop and follow each other as sentences do in a story. One of the best ways to instil this idea of musical phrasing and development is to set up a situation in which two students can naturally have a musical conversation. This activity also shows how improvisation can function as a precursor to composition.

Activity

Students sit facing each other in pairs, each with an instrument. This can be a single shared beam, a beam each or a selection of switches. They begin a musical conversation on their instruments, each student gauging when it is their turn to play.

Encourage students to respond musically to each other, rather than just playing anything. This could include elements of call and response where one student plays a phrase and the other tries to ‘answer’ or perhaps copy it. Students could also try playing with opposites where one student plays at a fast tempo, so the other plays more slowly.

Extension

Repeat the above over a rhythmic backing loop. Students should attempt to play in time to the backing, exchanging 2 bar or 4 bar phrases. i.e. phrases of equal length.

Record the work so that students can appraise their performances.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.2 interacts with others using sound

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

2. Natural Soundscapes

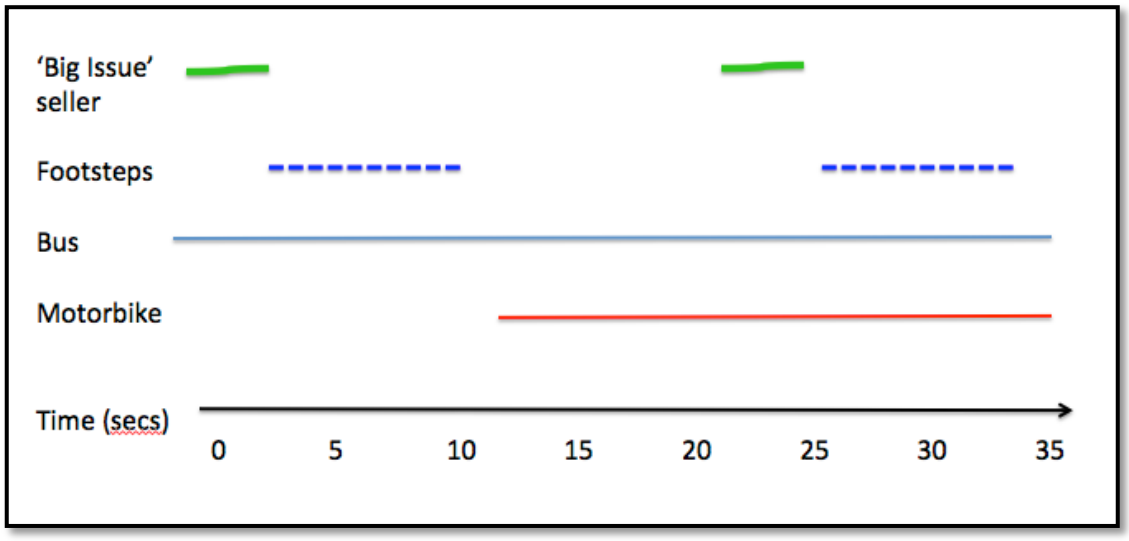
Listening closely to the sounds around us is a great activity for developing the ear and provides a good basis for developing composition work. When we listen to the sounds of our environment, we hear a range of timbres, repeated patterns, moments of contrast, a good mix of loud/quiet sounds and so on. This collage of sounds can provide a template for a musical 'reconstruction'. There are some good examples to be found at http://www.electrocd.com/en/cat/imed_1031/ by Hildegard Westerkamp et al, which give a good indication of how students' work might sound.

Activity

Using MP3 recorders or similar equipment, students record natural and man-made sounds in their local environment (possibly as part of a nature/town walk). In the classroom they play back, identify and describe the sounds, perhaps developing their understanding of musical terminology.

Students find ways to represent the sounds collected through music, by exploring the range of sounds available in Soundbeam. These sounds should aim to 'capture the spirit' of the original sounds rather than literally trying to copy them. For example, a trilling violin sound might be used to represent the song of a skylark [similar to the way Vaughan Williams did in 'The Lark Ascending']

These sounds could be put together into a short piece or soundscape to be performed by the whole class. Organise the sounds into a satisfying structure, based on the sequence of sounds from the recordings. Creating a graphic score is the best way to do this. Here is an extract from a transcription of a recording made on a busy shopping street:



Extension

Build up a collection of these soundscape scores and give each of them a title. Make these available for use by students who did not take part in the original recording – at any time in the future…

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

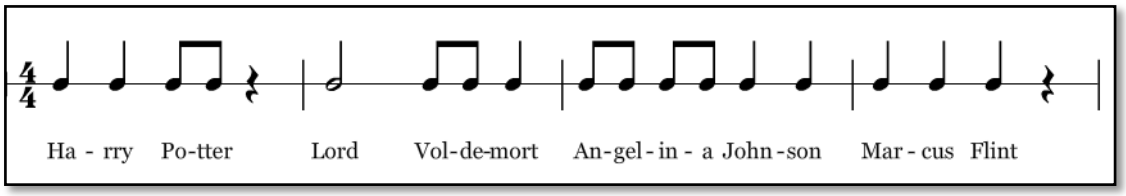
I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

3. Building up a rhythm piece

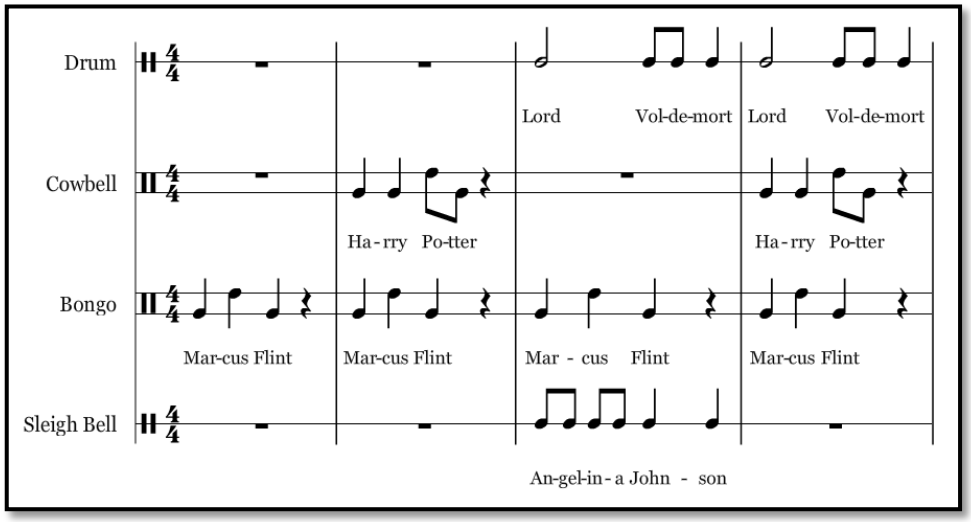
Students use short, but distinctive rhythm patterns to build up a multi layered ensemble piece. Using standard notation or rhythm counting patterns can be hard for young students. It is often best to start with patterns they know well and use regularly - the rhythm patterns of speech.

Activity

Students can take their own names, or the names of a favourite fictional character, and practise reciting them repeatedly to a steady beat. It is probably a good idea to leave a few beats rest between repetitions. Here are four examples:



Students then transfer their repeated rhythm pattern to percussion sounds allocated to Soundbeam switches or a beam. An extract from a typical composition put together in this way might look like this:



Notice:

- how some phrases end in rest, to make them fit into a 4 beats per bar structure.
- variations in texture help provide some light and shade – work out which combinations of instruments sound good together.
- the different rhythms give opportunities for some differentiation.
- It is not intended that students work from notation. The above charts are for illustrative purposes only. The exercise is essentially aural.

Listen to an audio example here

Extension

Set up a rhythm backing tracking for a group improvisation. First of all, make sure that students can find the steady beat. Now ask them to play their name patterns as part of an ensemble improvisation.

- Encourage them to listen to the other players and perhaps engage in musical conversations, including call/response type ideas.
- Encourage the idea of contrasts, perhaps by having sections where everyone is playing and others where just one player is making a sound.
- It might help to ‘conduct’ this piece, with the teacher or student indicating when individual players should start/stop playing.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns in sound intentionally, through repetition or regularity

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.2 interacts with others using sound

4. Composing journeys and trails

A good way to instil a sense of purpose, movement and natural development in a musical composition is to use the idea of a journey or trail. Many well known composers have used this idea to help provide structure for their pieces. Steve Reich's "Different Trains", Britten's "Sea Interludes", Mussorgsky's "Pictures at an Exhibition" are all good examples.

In this activity, we provide some possible starting points and suggestions for development.

Activity

Students compose or improvise sounds in response to a picture journey or trail (eg a train journey or the life cycle of the frog).

Students will have to create appropriate sounds or musical phrases for each stage in the journey. This could involve discussion as to which sounds are the most effective, and why.

Here are two possibilities for starters:

Journey around town

Activity	**Some sounds**	**Soundbeam 'translations'**
Walking to the bus stop	Sounds of footsteps	Short, evenly spaced percussive sounds on one or more switches
Bus journey	Low rumbling sounds of the engine Bell for bus stop requests	Low synthesiser sounds [beam] Bell two-tone [switches]
Inside a clothes shop*	Loud background music	More rhythmic dance music style – use a Soundbeam soundset?
Coffee shop*	Quieter background music Sounds of coffee machines, cups, teaspoons etc	A different soundbeam soundset – with percussion for 'coffee' sounds
The Library*	Quieter section – whispering/rustling sounds	Gentle background drone with voices and rustling paper
Bus journey return	See above	See above
Walking home from bus stop	See above	See above

* Sections between shops – sounds on the streets, people walking/talking, traffic etc

Water Cycle – use the above approach to complete this table

Water evaporating over the oceans		
Clouds forming		
Moving overland over higher ground		
Precipitation – rain		
Rivers flowing to the sea		

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

5. Building Musical Structures

The previous activity gives some pointers towards assembling a structure for a piece of music, based on a natural sequence of events. In this project, we look at other ways of thinking about structure in music.

Activity

Students discuss effective ways to structure a piece of music. In groups, students decide on an overall structure for the piece they are going to compose. For example:

- beginning with a bright, happy idea
- a contrasting middle section – perhaps something quieter and more reflective
- an ending that reworks the opening idea, but perhaps getting louder and busier as it approaches a dramatic climax.

Listen to an audio example here

Students start to compose their own pieces using the structures they have chosen. They will need to assemble a collection of Soundbeam sounds for available beams and switches – and also consider other sound sources, including voices where appropriate.

Students try out ideas noting what works and what does not. There is probably no need to notate these ideas until a final form begins to emerge. Once the main sections have been finalised, students may want to consider devising an introduction and an ending, based on some of the musical material already developed.

Extension

- Students can learn about some of the standard, traditional ways to structure a composition (e.g. binary, ternary and rondo forms). I
- In groups, they use one of these structures to compose a piece with at least two contrasting sections.
- The piece could involve several layers of sound, with some changes in texture during the course of the piece

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

6. Composing to a Theme

Students create group compositions, perhaps using ideas from the previous half term or a relevant cross-curricular topic. Here are some tried and tested starting points for musical exploration and interpretation:

- Rainforest – ecosystems, culture and environmental issues
- Maths - shapes, number patterns, magic squares
- Abstract art – many pictures by artists such as Klee and Kandinsky have strong musical associations and can be interpreted as graphic scores
- Nature, birdsong, patterns in nature, seasons, weather

In the activities below, we show how some of these ideas might be developed musically, using Soundbeam.

Activity

Magic Squares are grids, where the numbers in each row, and in each column, and the numbers in the main and secondary diagonals, all add up to the same number (in this case 15).

4	9	2
3	5	7
8	1	6

We can replace these numbers with the notes in a scale. For example, the notes of a C major scale are as follows:

1	2	3	4	5	6	7	8	9
C	D	E	F	G	A	B	C	D

If we replace the numbers in the magic square with these notes we now have this square:

F	D	D
E	G	B
C	C	A

Set up a series of switches, or a beam which will allow the student to play these notes. Label the switches clearly with the note names, or use colour coding. Similarly, for a beam, find some way of marking on the floor or appropriate surface, the location of the notes.

Students now have to devise phrases by choosing any starting note and moving sequentially around the square **to any adjacent note, including diagonals**. For example, starting on the note G might yield:

G D D B G E

Once they have found an interesting sequence of notes, they should work on the rhythm of the sequence to make it sound 'musical'. Build up a short composition by writing down the phrase before moving on to devising the next phrase. Students can of course repeat some of their phrases.

Listen to an audio example here

Extension

Two students could write a duet from the same magic square. A student with four or six switches could use a portion of the magic square to devise some ostinato accompaniment patterns. The other student uses the beam to play melodies over this accompaniment.

More ideas for working with music and topics can be found in these publications:

John Paynter: *Sound and Silence* [Cambridge University Press]

John Paynter: *Sound and Structure* [Cambridge University Press]

David Ashworth: *Teaching Music* [Rhinegold education]

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

7. Creating a Graphic Score

In groups, students create their own musical notation, inventing symbols to represent different sounds or elements (pitch, rhythm, dynamics etc.). They use the symbols to compose and notate short pieces.

Activity

This activity can be approached in two ways:

- *Sound before symbol* – students come up with musical ideas using Soundbeam and then thinks about how best to represent these using graphic symbols.

- *Symbol before sound* – students consider a range of symbols and think about how these might be interpreted through sound.

Symbols may be drawn freehand or using any appropriate graphics application. Here are some possibilities to get you started:

Possible interpretation of these shapes, from left to right, might be:

- A rising a falling sequence of notes
- A three note figure, which may be repeated
- Increase the tempo
- A descending phrase

Once the symbols have been agreed on, look at ways of arranging these on a score to produce a musically satisfying piece of music.

Extension

- Continuing their work from the previous week, each group swaps their score with another group's and tries to perform from it.
- These performances can be used to evaluate the effectiveness of the notation. Did the performance sound like it was supposed to? If not, how can the notation be improved?
- If there is time, students try to improve their scores, based on the feedback received.

Assessment criteria

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

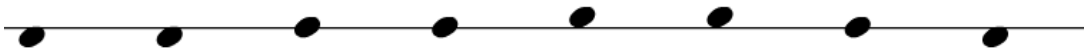
8. Composing and Notating

Writing down a composition using standard musical notation might be considered too much of a challenge for students and teachers. We can approach this systematically by initially breaking the system down into simpler components, by beginning with *pitch only* notation and then *rhythm only* notation.

Activity

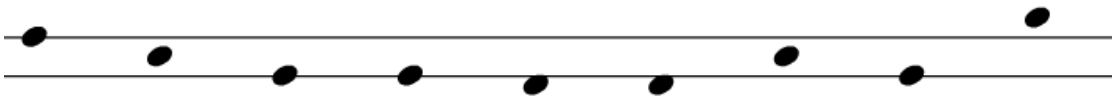
Pitch only

Begin with a one line stave, which can be used to denote three pitches – high, middle low.



Once students are confident with this, a two line stave can be used to denote five different pitched notes. For example, the notation below could be read as:

G F E E D D F E A



Rhythm only

Begin with a one line stave again. This time put all the notes on the line to denote a single pitch. Use crotchets, minims and semibreves to build up a 4 beats per bar sequence.

Once the students are confident with this, gradually develop pitch/rhythm scores using a one line stave. Eventually move onto a two line stave.

Set up Soundbeam beams and switches to play appropriate notes.

Extension

Opportunities for differentiation when working with group of students using notation is to proceed as follows. In an ensemble piece, order of difficulty would be:

- Notated, sustained drones
- Short rhythm ostinatos
- Ostinato patterns involving pitch and rhythm
- Melodic parts

Assessment criteria

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.3 makes simple patterns in sound intentionally, through repetition or regularity

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

I.2 interacts with others using sound

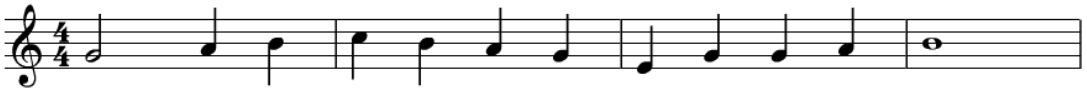
9. Themes and Variations

Students can learn about musical features by composing variations on a short melody. Each variation should highlight a different feature. For example, one variation could make use of a range of dynamics; another could alter the rhythms of the melody; a third could transpose the phrase to a higher register and so on.

This is a good way to develop a composition from a small amount of musical material. It is an approach that can help give a piece a sense of unity rather than rambling succession of unrelated ideas.

Activity

Students are given a theme to learn or devise one of their own. We might represent this in standard notation as follows (but the phrase could be taught by ear or teacher demonstration):

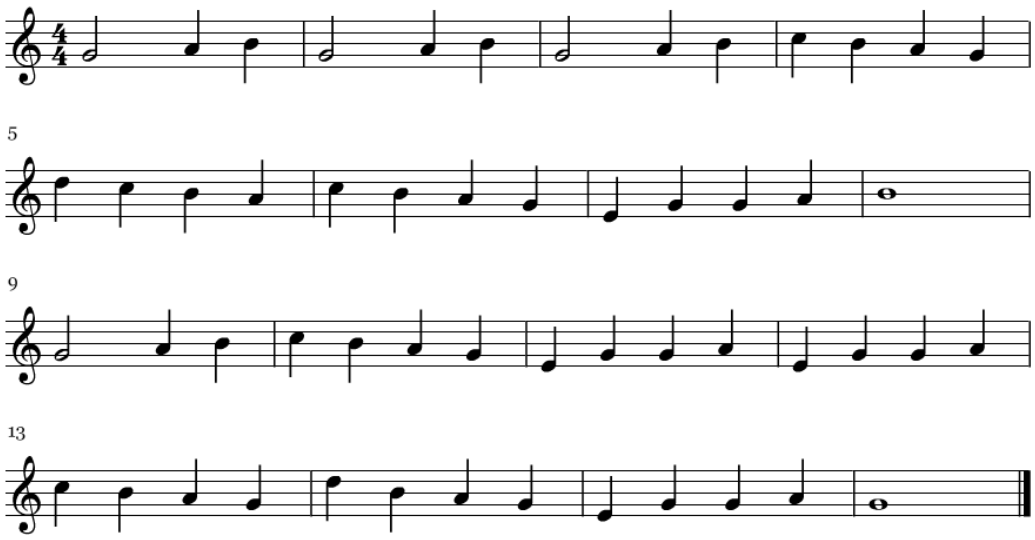


Possible variation ideas include:

- Playing the phrase faster or slower
- Changing the instrument sound
- Playing the phrase louder or quieter
- Repeating just one or two bars
- Moving the entire phrase higher or lower
- Playing the phrase backwards
- Altering some notes. For example replacing the note C with a D.

Here is a piece which uses some of the ideas above

Listen to this audio example here



Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

10. Pentatonic Scales

Pentatonic scales are found in many musical cultures around the world including most folk music styles and more recent blues, jazz and pop music. They are particularly useful as a basis for composing different layers in an ensemble piece, since these is much less chance of clashes or dissonances which can arise in music based on the conventional major or minor scales.

In this project, we provide some pointers for composing and arranging using pentatonic materials.

Activity

For this activity, we are going to use the five notes from a C major pentatonic scale. These are C D E G A. However to can extend to more than one octave. For example, C D E G A C' D' E' G' A' C''

These layers can be worked on in any order, but constantly check to make sure that the ideas for layers sound good when played together.

A bass ostinato. Set up three Soundbeam switches to play three low notes – C, G and A. Ask students to devise a simple riff which can be repeated, using just combinations of these notes.

Pentatonic chords Aside from C major and A minor, the usual range of major or minor chords are not accessible from this pentatonic scale. However students might experiment to find pleasing note combinations which they can use in a sequence of chords.

Drones – these are single, sustained notes which are held through sections of the piece. String and synth notes work particularly well. Make sure that they are not too loud.

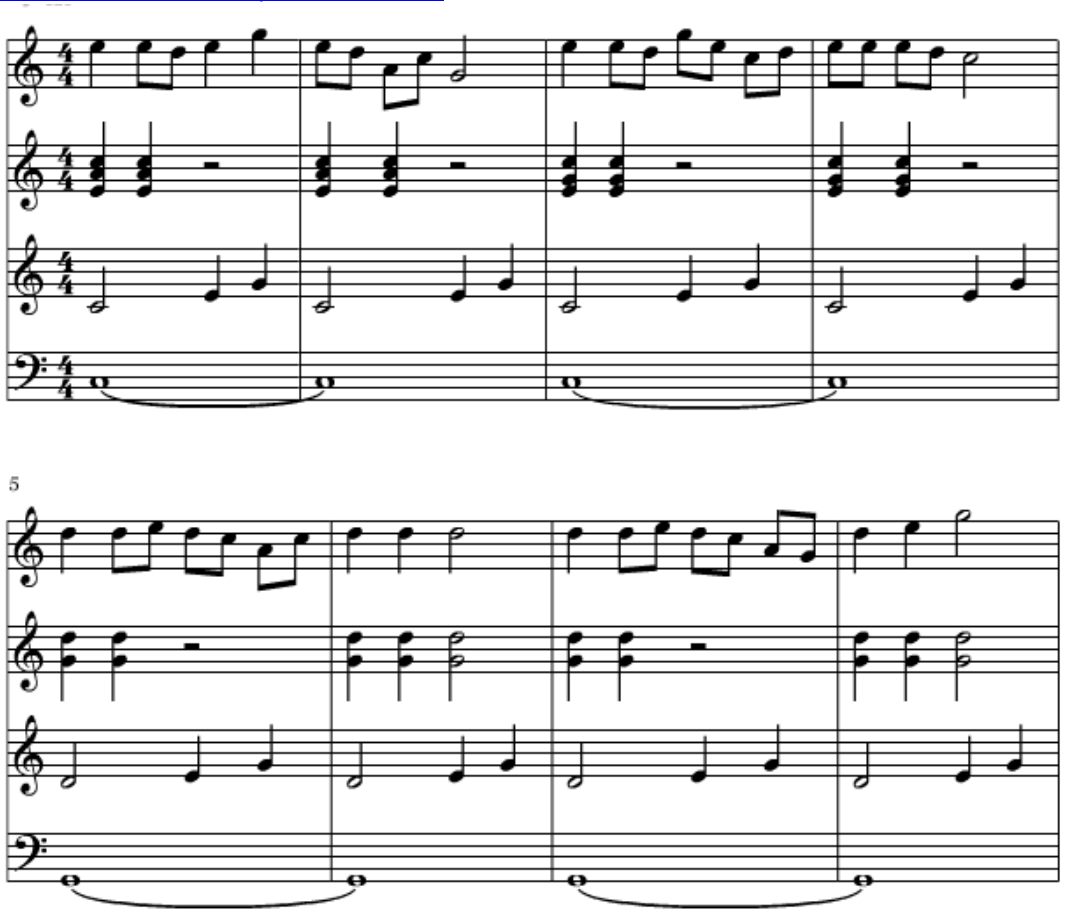
Pentatonic melodies – these can use any of the notes available. Ideally, set a beam to a two or three octave range and choose an instrumental sound with a clear tone.

Percussion – add any suitable unpitched percussion parts using traditional instruments or Soundbeam switches.

Use graphic or standard notation or a combination of these to produce a score. Alternatively the whole piece, or some parts and sections, might be learnt by ear. There is also the opportunity for some improvisation with some parts.

When arranging the piece, look for opportunities for contrasts and changes of texture.

You can hear the example below here.



Assessment Criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Some guidance on assessment

Each project in this Unit has criteria you might find useful, if working in a context where formal assessment and reporting is required. The criteria can be used more informally when you may want to reflect on the progress being made and consider some pointers for improving the quality of work further. Users should feel free to adapt and edit these lists of statements to suit their particular requirements.

The criteria statements we provide are taken from the *Sounds of Intent* framework and the complete list is provided below for reference. These statements are grouped into three sections:

- R = reactive [how we respond to music]
- P = proactive [how we make music]
- I = interactive how we work musically with others]

More information and resources can be found on the *Sounds of Intent* website: http://soundsofintent.org

Here is a complete list of statements:

R.2 shows an emerging awareness of sound
R.3 responds to simple patterns in sound (made through repetition or regularity)
R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')
R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences
R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.2 makes or controls sound intentionally
P.3 makes simple patterns in sound intentionally, through repetition or regularity
P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently
P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound
I.3 interacts through imitating others' sounds or through recognising self being imitated
I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')
I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills
I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Glossary

Improvisation - Creating music on the spot
Call & response - A pair of musical phrases which complement one another
Tempo - The speed of a piece of music
Beat - The repeating steady beat, underpinning a piece of music
Loop - a repeating section of musical material
Timbre - The tonal quality or sound of an instrument that distinguishes it from others
Graphic Score - The use of visual symbols to represent music
Phrase – a group of notes which make musical sense
Texture - The number of layers in a piece of music
Drone - A continuous note or chord
Structure – the overall plan or layout of a piece of music
Binary – a two part musical form
Ternary – a three part musical form
Rondo – repetitions of a musical section interspersed with other musical sections
Crotchet – a one beat note , in a piece in 4/4 time
Minim– a two beat note , in a piece in 4/4 time
Semibreve– a four beat note , in a piece in 4/4 time
Ostinato - A musical phrase which repeats
Drone - A continuous note or chord
Register – the range of a set of pitches
Pentatonic – five note scale

Unit Seven – Listening… and responding

Introduction

This booklet is one in a series which comprise a compendium of approaches to working with Soundbeam in a range of educational and other settings. The aim is to encourage thinking of Soundbeam as a versatile musical device which can be used to support music making and musical thinking.

Having this powerful music technology available in a classroom, day centre or other setting provides a potential for much wider use to support musical experience and performance, teaching and learning. If we can use Soundbeam across a much wider range of music teaching activities, then more teachers and other facilitators will become more familiar with it and get more use out of it.

Soundbeam can and should be used to complement existing music resources. Many special schools, day centres and other projects struggle with limited budgets to buy and/or maintain quality musical equipment required to adequately support curriculum activity. Classroom percussion can often be of poor quality or is poorly maintained and is therefore not capable of producing quality sounds – an essential requirement if students are to become engaged and stand any chance of producing quality work. Today's students are used to hearing high quality musical sound and will often feel frustrated, and consequently unengaged, if they are denied access to quality sound sources. Soundbeam not only provides a large range of quality sounds – it provides an interface which enables less experienced students and teachers to use them *musically*.

By creating a set of resources which offer clear, easy to follow guidance on working with music and technology for non-specialists, we address two important issues. It is well known that two areas of concern for generalist teachers in primary and special schools are around teaching music and using technology. We can address these challenges in two ways. Firstly, by making the technology easy to set up and use. Secondly, by designing curriculum music activities which generalist teachers will find easy to understand and implement.

Many Soundbeams are in use in locations other than schools. Day centres, community music projects and other charities, arts centres, private homes, hospices, care facilities and homes for the elderly are just some examples. All the activities and approaches described in these modules can be applied or adapted effectively for individuals and groups across a wide spectrum of age and ability/disability to enjoy and learn through using Soundbeam.

Soundbeam in the Classroom – key features

- Enabling non-specialist teachers to deliver music lessons. The sessions are free of technical jargon and do not assume any prior musical knowledge. Much use is made of movement and graphics to help explain and reinforce musical activity.

- Enabling SEN student to participate with others. These sessions are designed to allow MLD students to participate fully in music making with their peers in SEN and mainstream settings. Teachers will also find that many of these lessons can be adapted to make them suitable for students with more severe learning difficulties. Think carefully about the student's particular strengths and weaknesses and adapt accordingly. This will include thinking about the ways in which the student can usefully interact with Soundbeam, how they might use communication devices to respond to musical stimuli and appropriate ways in which they might work with others. At the same time, think about how these activities might be used to stretch them in to being able to access new skills and areas of musical understanding.

- Keeping the technology simple. Soundbeam is a powerful and highly sophisticated music technology platform. However many of the most important features can be accessed quickly and easily. By making considerable use of the presets and the built in sound library, teachers will be able to easily access functions with a minimum of technical knowledge. All activities can be accessed with just one beam and a few switches. Video tutorials and annotated step-by-step 'walkthroughs' provide clear guidance on using the technology. Exemplar sound files give some idea of possible musical outcomes.

- Broad and balanced ranges of activities ensure that teachers will be helping their students cover most curriculum requirements. Differentiation and extension activities are also suggested where appropriate. Assessment criteria are also provided for teachers who may require this.

- The activities are led by the music – not the technology. In addition, the use of Soundbeam can often be supported by use of conventional musical instruments in these activities. Extensive use should also be made of the voice as instrument, where appropriate.

- Any suitable person can lead these activities from the school community. In addition to classroom teachers, it may be appropriate for teaching assistants, parents, senior pupils, visiting staff and others to get involved in working with this user friendly technology.

In this Unit, we provide a series of listening activities which are designed to increase aural awareness and memory, and encourage more focussed listening. This is with a view to students being able to respond in more depth to the music they hear and to express their ideas and feelings about music more fully. A more fundamental reason concerns how deeper more engaged listening can lead to better music making for our students in solo and ensemble playing situations.

1. Recognising the sounds of instruments

Soundbeam has an excellent collection of sounds which students can use for making music. In this project, students develop their knowledge of these different instrumental sounds by matching pictures of the instruments to hearing them being played on Soundbeam switches. This will help them build up an 'aural collection' of sounds, will help them when they come to making decisions on which sounds to choose for composition and improvisation activities.

Activity

Assign a collection of switches to some of the available MIDI instrument sounds. These might be:

- a random mix of highly contrasting sounds
- a collection of sounds from the same musical family e.g. clarinet, flute, saxophone from the woodwind family
- a collection of sounds which might be used in any forthcoming project
- any other grouping which you might want to consider

Make sure that the students are familiar with the sounds, by playing each switch in turn and then naming or showing a picture of the instrument. Now rearrange the switches and see if the students can identify the sounds when you play them. Their responses can be verbal, use pictures or any appropriate communication device.

When they are confident with this, play a sequence of switches and ask them to identify the instruments in the order in which they were played.

Try playing two or more switches together. Can students still identify the sounds?

Extension

Select 'real' pieces of music which feature some of these instruments and see if students can still identify them in this new context. [Be aware that real instruments can sometimes sound quite different from their MIDI versions. Choose pieces with care!]

Set up a collection of switches so that one of the sounds is an 'odd one out'. For example, a brass sound in a collection of string sounds. Now play the game!

Assessment criteria

R.2 shows an emerging awareness of sound

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

2. Listen… and copy rhythms

One of the main reasons musicians will listen to recorded music is so that they can learn from it: how to copy what they are hearing on their instrument or to absorb features of the playing style as a means of developing their own performing. In this project, we begin by considering rhythm patterns.

Activity

The teacher performs a repeated action, using body percussion or vocal sounds, in time to a piece of music (e.g. taps their knees on the beat). Students copy the action. Once established, the teacher changes to a new action. The students move onto playing the new pattern in their own time or when the teacher shouts “Change!”

When this is secure, transfer the activity to Soundbeam instruments.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.2 makes or controls sound intentionally

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.2 interacts with others using sound

3. Listen… and copy melodies

Another great way to get students to listen with concentration is to set them the challenge of copying a musical phrase which you play on Soundbeam. Beams or switches can be used for this activity.

Activity

In the first activity above, the teacher's and students' switches are set to play a single sound on the same pitch. This time, teacher and student(s) have two or more switches set to different pitches. So now, instead of merely copying a rhythm pattern, the student now copies a short melodic phrase.

A possibly more challenging activity involves the use of a beam. Using any appropriate setting, the teacher makes a gesture in the beam to create a musical phrase. The student then copies this action.

Extension

The activities above can be made more challenging by asking the student to *look away* as the teacher plays the beam or switches. The student then has to copy the *sounds*, rather than simply mimicking the physical movement.

Once the students can copy phrases accurately, ask them to now copy the original phrase and add a musical extension of their own devising.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.2 makes or controls sound intentionally

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.2 interacts with others using sound

4. Making sense of sounds

John Cage and John Paynter, two important figures in music and music education respectively, both recognised the importance in working with *all* sound sources in musical exploration, not just those associated with conventional instruments and voices. In another book in this series, we discussed the use of mp3 recorders or similar equipment, to record natural and man-made sounds. These can be any sounds which are deemed to be sonically interesting – the sound of the wind blowing through trees, a motorbike revving up, a tinkling teaspoon in a coffee cup….

In this project we use these types of sound as a starting point in producing a soundscape.

Activity

Students record a collection of sounds of the environment or 'found sounds'. In the classroom they play back, identify and describe the sounds.

The challenge in this project is to find sounds, available within Soundbeam, which capture something of the essence of the original sound. So for example, a student might suggest that a cello sound would be good for musically describing the low rumbling sounds of a lorry passing on the street. They would then go on to try and play with that cello sound to evoke the sound of the lorry. This might be alternating two low notes rapidly to produce a grumbling, throbbing sound….then again, the student might come up with another 'solution' which works with completely different Soundbeam sounds!

There are no right or wrong answers here so encourage students to use their imaginations and to be as creative as possible.

Extension

Once the students have emulated a few environmental sounds in this way, they can then think about ways of combining them to produce a musically satisfying soundscape performance.

For an even more effective performance, this could be accompanied by some visuals – a slideshow or video?

Assessment criteria

R.2 shows an emerging awareness of sound

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.2 makes or controls sound intentionally

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.2 interacts with others using sound

5. Playing in style

If a student is using Soundbeam to 'play' a violin or a trumpet, we would want them to think about how a violinist or trumpeter would play their instruments. In other words we want our students to not just be playing notes, but playing them as a traditional musician would. How and what does a saxophonist play in a cool jazz band? How does a violinist play in a gently pastoral classical work? How does an organist perform a soul band?

Activity

Choose suitable extracts of recorded music which showcase individual players on certain instruments. These can be from any styles or genres of music. Listen closely to just one or two phrases repeatedly until they have been 'absorbed'. Now set up Soundbeam to play the given instrument. Try to match the scale and key of the original. Set students the task of playing the instrument, getting as close to the original as they can.

Here are some suggestions you might want to consider:

- Miles Davis, trumpet: any track from his album *Kind of Blue*
- Raphael Ravenscroft, saxophonist – from Gerry Rafferty's *Baker Street*
- Booker T Jones, organist – *on Green Onions*
- Nigel Kennedy, violinist – Vivaldi *Four Seasons*
- Yo Yo Ma, cellist - on Bach *Air on the G String*

Click here for an example of Bach *Air on the G String* being played on Soundbeam

Extension

- Set students the task of improvising an original piece, 'in the style of' an instrument and player of their choosing.
- Use standard or graphic notation to create an original work or 'cover version'

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

6. 'Odd one out'

Students sometimes find it hard to describe what is going on in a piece of music and to talk about its characteristic features. This process can be facilitated by asking them to compare and contrast extracts of music recordings. This can be done by listening to recorded extracts of well known pieces, followed up by examples specially created in Soundbeam.

Activity

In small groups, students listen to three short extracts of music and decide which one they think is the odd one out and why. Each group shares their reasoning with the rest of the class. The activity is repeated with a different selection of extracts.

This activity could be used to review the inter-related dimensions. For example, which extract is the odd one out in terms of the dynamics/instrumentation/texture, etc? The purpose of this activity is not necessarily to search for right or wrong answers – more to encourage class listening and to stimulate focussed discussion.

Next devise some musical ideas to be played using Soundbeam beams/switches. Repeat the discussion above.

Extension

In small groups students devise their own collections of 'odd one out' material, using beams and/or switches. Ask then to perform the extract to the rest of the class and see if the ensuing discussion agrees with the original intention or brings in new perspectives.

Assessment criteria

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

P.3 makes simple patterns in sound intentionally, through repetition or regularity

I.3 interacts through imitating others' sounds or through recognising self being imitated

7. Matching sounds and symbols

This is another project in which we find more ways to encourage students to listen closely to a piece of music. Listening is an active process by which we make sense of, assess, and respond to what we hear. By developing aural awareness, students will in turn become better musicians.

Students listen to and monitor their own playing to improve as musicians and by listening to the sounds made by others, they become better ensemble players.

Activity

In other projects in this resource, teachers are encouraged to collect student's graphic scores and aural recordings of these scores. We now make use of them in this project. Arrange three graphic scores so that they are clearly visible to the students. Now play the recordings from one of these scores and ask the student if they can correctly identify which score is being played, giving reasons for their choices. Framing this activity as a quiz or challenge can be a highly effective strategy for engaging students.

Extension

- Again display a selection of scores and play a single phrase from one of the scores. Ask the student to identify and locate that phrase in one of the scores.
- Play a short sequence of three or four phrases from the scores, using Soundbeam in a live performance . You may need to play the sequence more than once. Ask students to find the location of each phrase.
- Ask one of the students to now be the live performer.

Assessment criteria

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (e.g. in 'call and response')

R.6 engages with pieces as abstract 'narratives in sound' in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

I.3 interacts through imitating others' sounds or through recognising self being imitated

8. Describing Music

As we noted in an earlier project, students can sometimes find it hard to describe the essential features of a piece of music. This can be made easier if we approach this in a structured way, by shining the spotlight on each of the features of a piece of music in turn.

Activity

Prepare and perform some music on Soundbeam and ask the students to provide feedback on these elements:

Pitch – is the music high low or somewhere in between. Does it cover a large pitch range or stick to a few notes over a restricted range?

Rhythm – is the rhythm straightforward and repetitive or is it something more complicated. Is the tempo fast or slow? Does the tempo change over time?

Duration – does the piece use mainly long sustained notes or is it more 'spiky', using notes of short duration?

Timbre –what instrumental sound is being used? Hoe might you describe it? It is 'soft', 'warm', 'rough', 'brassy', 'gentle'… ?

Dynamics – is the music loud or quiet? Does the volume change over time?

Mood – how does this music make you feel? Is this music lively, sad, creepy, aggressive…?

Accessibility

Teachers may need to provide a selection of cue cards (using words or graphics) or make use of appropriate communication devices.

Extension

Produce a selection of cue cards for the various musical elements listed above. Ask students to select a number of these cards and devise a piece of music which fits with the description provided by the cards.

Students discuss the performances and suggest ways in which they might be improved to more accurately reflect the 'brief' supplied by the cue cards.

Assessment criteria

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

9. Recording students' work – and feedback

Recording students' work, produced using Soundbeam, is very straightforward. Simply connect the Soundbeam line out to your recording device *(or use Soundbeam 5's internal 'session record' function)* will produce a high quality recording, with none of the distracting background 'ambience' associated with recording acoustic instruments.

So the recording may be of good quality if we are thinking about it from a technical angle. But what about the *musical* quality? How do we assess this, and how do we help our students assess their work? This is important because, if students can accurately assess their work, they can start thinking about how they might improve their music making. This might involve revising the work being assessed, or provide pointers on the things that can be improved during subsequent work.

Activity

Below, we provide a checklist comprising some of the hallmarks and indicators of quality music making. Select the most appropriate criteria from this list when assessing any given piece of work. Encourage students to self review, using the selected criteria.

In high quality music making, we see a sense of structure, development and coherence. A quality performance should have a sense of expression, musicality and flow, and perhaps allow the performer to show off some of their technical ability. Here are some aspects to consider:

Rhythm and flow: keeping in time and maintaining a sense of rhythm is often more important than playing the right notes (whatever they might be!). Encourage your students to focus on maintaining a strong sense of rhythm in their music making, even if their choice of notes suffers slightly as a result.

A sense of development: good music should not just sound like a bunch of random notes. Encourage students to try to develop their motifs and melodies using tried and tested composition techniques such as sequence, variation, augmentation and so on. A composed or improvised melody should feel like it is developing and flowing organically from one section to the next.

A sense of style: If your students are working for example, in a jazz idiom, do they improvise using a 'jazz' scale (such as the blues scale)? Do they use syncopation? Do they use seventh chords?

Keeping to the brief: most of the activities we suggest have some sort of framework to follow, and in these cases you can assess how well students have responded to that framework. For example, if you have asked students to improvise over a set chord progression, does their melody fit with those particular chords? If you have asked them to improvise on a specific rhythm, how well do they take that rhythm and develop it?

Displaying a sense of creativity: within any given framework, can your students show a sense of creativity and inventiveness? You may find that your more technically advanced students struggle the most with this, because they are more afraid of making 'mistakes' and playing the 'wrong' notes. Try to help them see that 'right' and 'wrong' are not black-and-white concepts when it comes to music making, and that the more creative and exciting ideas will sometimes veer off into musically unusual areas!

Showing an awareness of the other musicians in the ensemble: within any group music making situation, you should encourage your students to respond to each other, through engaging in call and response, developing each other's ideas, following each other's leads and so on.

This list can be used to help develop a set of criteria for assessing your students' music, and for helping your students to improve their work. When it comes to carrying out assessment, consider audio or video recording the improvisations. You could play these recordings back to your students and ask them which bits they think worked best, and which bits didn't work so well. The resulting discussion will help your students to develop a better idea of what a good music should sound like – and will help them achieve their musical goals and aspirations.

Some guidance on assessment

Each project in this Unit has criteria you might find useful, if working in a context where formal assessment and reporting is required. The criteria can be used more informally when you may want to reflect on the progress being made and consider some pointers for improving the quality of work further. Users should feel free to adapt and edit these lists of statements to suit their particular requirements.

The criteria statements we provide are taken from the *Sounds of Intent* framework and the complete list is provided below for reference. These statements are grouped into three sections:

- R = reactive [how we respond to music]
- P = proactive [how we make music]
- I = interactive how we work musically with others]

More information and resources can be found on the *Sounds of Intent* website: http://soundsofintent.org

Here is a complete list of statements:

R.2 shows an emerging awareness of sound

R.3 responds to simple patterns in sound (made through repetition or regularity)

R.4 recognises and responds to distinctive groups of musical sounds ('motifs') and the relationships between them (eg in 'call and response')

R.5 attends to whole pieces: recognises prominent structural features (eg choruses); responds to general characteristics (eg tempo); develops preferences

R.6 engages with pieces as abstract ‘narratives in sound’ in which patterns of notes are repeated or varied over time to create meaning; differentiates between styles and performances

P.2 makes or controls sound intentionally

P.3 makes simple patterns in sound intentionally, through repetition or regularity

P.4 (re)creates distinctive groups of musical sounds ('motifs') and links them coherently

P.5 (re)creates short and simple pieces of music; potentially of growing length and complexity; increasingly 'in time' and (where relevant) 'in tune'

P.6 seeks to communicate through expressive performance, with increasing technical competence; creates pieces that are intended to convey particular effects

I.2 interacts with others using sound

I.3 interacts through imitating others' sounds or through recognising self being imitated

I.4 engages in dialogues using distinctive groups of musical sounds ('motifs')

I.5 performs and/or improvises music of growing length and complexity with others, using increasingly developed ensemble skills

I.6 makes music expressively with others, with a widening repertoire, in a range of different styles and genres

Glossary

MIDI- A technical facility that allows a range of digital music making equipment to connect with each other

body percussion - Striking the body in various ways to make percussive sounds

Beat - The repeating steady beat, underpinning a piece of music

Pitch - A measure of the frequency or how high or low notes are

Phrase – a group of notes which make musical sense

soundscape - A collage of sounds that conveys a mood or environment

found sounds - Typically 'non-musical' sounds which are used in a musical composition

scale – a sequence of notes arranged in order of pitch

key – a note or chord that provides a subjective sense of arrival and rest

improvisation - Creating music on the spot

standard notation- The standard 5 line musical notation system

dynamics - Refers to the softness or loudness of a piece of music

texture - The number of layers in a piece of music

graphic score - The use of visual symbols to represent music

sequence – repeat of a musical phrase played at higher or lower pitch

variation – a repeat of a theme in which some musical alteration takes plaxe

augmentation - lengthening or widening of rhythm or interval

syncopation - Rhythm patterns where stressed notes are placed off the beat

call & response - A pair of musical phrases which complement one another