# Other Voices

## Creative Education Kit

Fiona Hill – Imago

education.nsw.gov.au
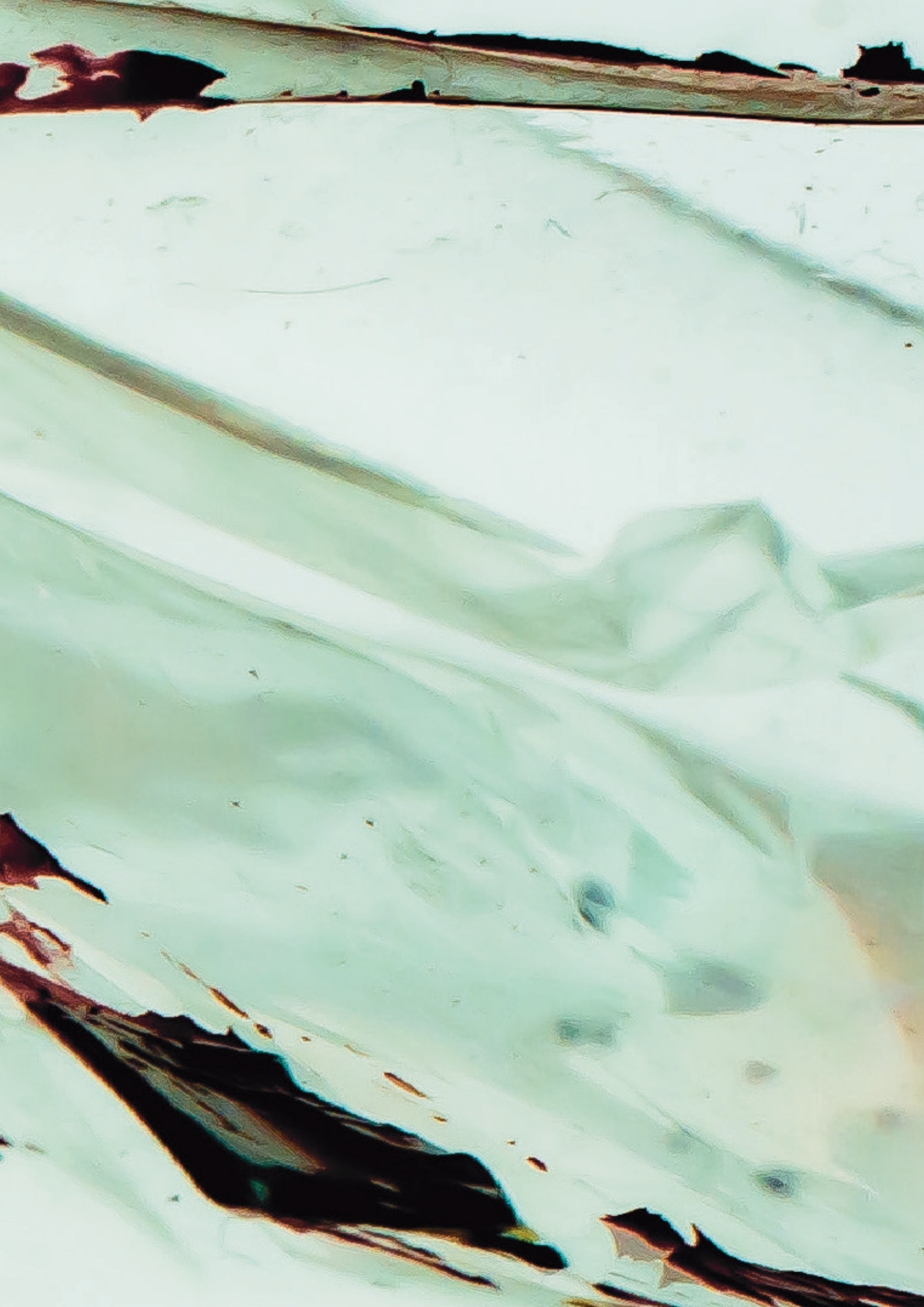
# About this resource

Other Voices is a performance, recording and education project based on three new electroacoustic works for flute and electronics by Australian composer/educators Cat Hope, Tristan Coelho and Fiona Hill. It provides access points for young composers, performers and their teachers to explore the potential for combining electronic music with instruments and voice.

This education kit provides detailed lesson plans and resource materials for Stages 4, 5 and 6 (including Music 1 and Music 2).  The activities in the kit draw together the key learning areas of composition, musicology, performance and aural skills. The content utilises a range of musical genres from pop to art music, to assist students in their understanding of the electronic genre, and to provide a stepping stone into the art music of today.

There is much to be explored through this music including extended flute and voice techniques, creating soundscapes, graphic score interpretation, and basic computer/electronics skills for exploring techniques such as delay, reverb, EQ, and looping. All technological components within the kit come with videos with step by step instructions on how to use them, and how to best implement the technology within the classroom for teaching and learning purposes.

We hope that you enjoy exploring what the electronic genre has to offer, and that it assists you in how to effectively teach this exciting and engaging style of music to your students.

Watch the introduction video on the **Other Voices website**.

# How to use this resource

There are three works included in the Other Voices Creative Education Kit. Each piece has Teaching and Learning activities for Stage 4, 5 and 6 Music which can be taught as individual activities, or become the basis for a whole unit of work.

# DAYBREAK

by Tristan Coelho

The notion of mimicry forms the point of departure for Tristan Coehlo's new work, Daybreak for flute and electronics. Transcribed birdsong has been worked into the composition through a process of looping and gradual transformation – the original mimics (the birds) are playfully imitated by the flute soloist while the electronics interact with the live flute sound through delay effects.

# HER POCKETS FULL OF INERTIA

by Cat Hope

Her Pockets Full of Inertia is a graphic score by Cat Hope based on the poem of the same name, by Claire Gaskin. It is scored for solo bass flute, flute choir, transistor radios and sub-contra bass flute. The work treats the poem as an inspiration for the mood of the piece, and creates an eerie atmosphere of stasis and cloud-like sounds through the use of extended flute techniques.

# IMAGO

by Fiona Hill

Fiona Hill's new work Imago has a very serious and emotive origin. It is a response to the stories of those affected by forced adoption within Australia. The work layers text derived from victim transcripts, interviews and governmental hearings with live and processed flute and voice with music concrete derived from domestic soundscapes.

## Introduction to the topic

The following resources can be accessed as required through the activities or as an introduction to the topic:

- people involved in this project
- digital resources introducing some of the basics of the electroacoustic sound world
- performance tips for working with technology

Digital resources include:

- Electronic Sandbox
- Introduction to basic electronics FX by Ciaran Frame
- MaxMSP instructional patch

## Scores and listening files

You will find the following resources for use throughout the kit from the **Imago resources** web page:

- a score of each work to download
- a video of each work for viewing the piece as a live performance
- full high-quality downloadable WAV audio file.

The teacher should use this audio file for all listening. Timings will be given for each listening activity and the transport bar can be used to slide to the appropriate timing.

Musicians from a broader stylistic background will be able to use the pack, as an understanding of traditional notation is not an essential prerequisite for all activities.

## Background information

Each piece contains background information relevant to all activities:

- composer biography
- background to the work
- composer Q and A
- performer information.

This information can be accessed at any point but are not essential for completing any of the activities.

## Structure of activities for each stage

- an overview of the unit and the syllabus outcomes that are addressed through the teaching and learning activities
- teaching and learning activities for composing, performing, listening and musicology
- suggested answers for the teacher.
- glossary of electronic, instrumental and compositional terms.
- reference list and resources (audio files, web pages, listening files, videos).

## Additional resources provided for activities

Where applicable there are additional resources to complete activities:

- links to standalone downloadable electronic software tools for teaching music technology techniques such as delay, reverb, EQ, looping
- video instructional clips for working with relevant technology including in-structional clips of composers using their software
- video demonstrations of extended techniques using the flute and voice
- YouTube links for repertoire for additional listening – a range of musical styles are covered to appeal to a range of listeners.

All technical requirements are freely available or affordable.

## Video introduction to Other Voices

- about Other Voices and brief introduction to the works
- highlights showreel of the pieces.

## Syllabus outcomes

If used in its entirety, teachers will cover aspects of listening, composition and performance from Stages 4, 5 and 6 of the NSW Music syllabus.

**Stage 4**: 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.10

**Stage 5**: 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10

**Music 1 Stage 6**: P1, P2, P3, P4, P5, P6, P7, P8, P9, P10,  H1, H2, H3, H4, H5, H6, H7, H8, H9, H10

**Music 2 Stage 6**: P1, P2, P3, P4, P5, P6, P7, P8, P9, P10, H1, H2, H3, H4, H5, H6, H7, H8, H9, H10

Contents of this resource assist with the Preliminary and HSC Topics of:

- An instrument and its repertoire
- Australian music
- Methods of notating music
- Music of the 20th and 21st centuries
- Technology and its influence on music
- Music of the last 25 years (Australian focus).

# Fiona Hill

Imago

# Contents

**Imago resources**: score, audio, video, downloads

# Introduction to the composer

**Growing up wedged between factories and forest, it's this space Fiona attempts to fill compositionally. Creating sounds that occupy an experimental, freethinking yet universally beautiful place is her objective.**

A common theme in Hill's electroacoustic work is the sourcing of sounds from nature and industrial environments and blending these in a musical space incorporating acoustic instruments, live performers and spatialised sonic environments.

Electroacoustic projects include: an extended work Chromoson (2010) for electronics, solo soprano, and film in 10 channel surround sound with multiple projections and Unity in Blue (2008) for 9 musicians and electroacoustics in quadraphonic sound. Other recent projects include the chamber piece Pentography (2018) for acclaimed new music group Ensemble Offspring, TV series A Dog's Tale (2017), audiobook Toilers of the Sea (2015) and short film Milk and Cookies, shortlisted for Tropfest (2014).

Fiona was Composer in Residence at Trinity Grammar School for nine years and has studied composition in Paris, Montreal, Sydney, Melbourne and Adelaide, under composers Graeme Koehne, Trevor Pearce, Martin Armiger, Jean Lesage and Sean Ferguson. She holds a Masters in Screen Composition from the Australian Film Television and Radio School.

# Introduction to the music

'She went hysterical when I was taken away
and it took two people to hold her down...

'I used to look into prams.
I was convinced that I was going to find her...

'As for my birth father, I don't know anything
other than his name.'

These are just some of the harrowing quotes from transcripts compiled on the **History of Adoption** website by Monash University. This tragedy of recent Australian history forms the foundation of the electroacoustic work Imago: for flute, voice and electronics. The piece responds to the multi-faceted stories of those affected by Forced Adoption within Australia as well as societal attitudes and the eventual governmental apology to the victims.

The word Imago is a scientific term referring to the stage that an insect reaches sexual maturity during the process of metamorphosis. In the text derived from Judith Henriksen's book Coming Home to Truth she refers to herself as the butterfly lady. The title therefore references the following: Judith (whose book much of the text is derived from), the women affected by forced adoption and the resilience of humans to heal and emerge from trauma as a transformed and brilliant being.

The piece Imago fits into the genre of Art Music and within the that the sub genre of Electroacoustics. Electroacoustics is a medium where acoustic instruments are played in combination with electronic sounds. Imago uses a combination of pre-recorded and processed acoustic instruments, field recordings from multifarious sources and live processing of the live acoustic instruments. The object of the compositional process is to blend all of these elements so that they form a unified soundworld which is intrinsically linked to the extra-musical content.

Imago was created with the support of the APRA AMCOS Art Music Fund and the Australia Council for the Arts.

Please note that content in this work could potentially raise personal or culturally sensitive issues.

Fiona Hill

# The composition process

1. The first sounds that formed the basis of the composition were lullabies recorded on standard flute, bass flute and piccolo by <u>Lamorna Nightingale</u>. The melodies were transcribed and recorded mostly in the key of F.

   - The flute sounds were processed digitally in Pro Tools mostly using the <u>GRM</u> plugin Evolution (pictured).
   - This processing created beds of sound, which sounded like timeless floating sounds, reminiscent perhaps of floating in amniotic fluid. This can be heard in the opening section of the work.

2. Flute extended techniques were then workshopped and experimented with, going through various FX such as delay, comb filter, reverb and distortion. The most effective sounds were then decided upon after listening to recordings of these workshops. Some of the flute techniques chosen were: tongue rams, flutter tonguing, bending of notes, quarter tone scales, air tones, moving from air sounds to pitched sounds, percussive consonant sounds, inhaling and exhaling and spoken text.

**Evolution**

Evolution is used to obtain continuous evolution of timbre by frequential sampling of the input signal.
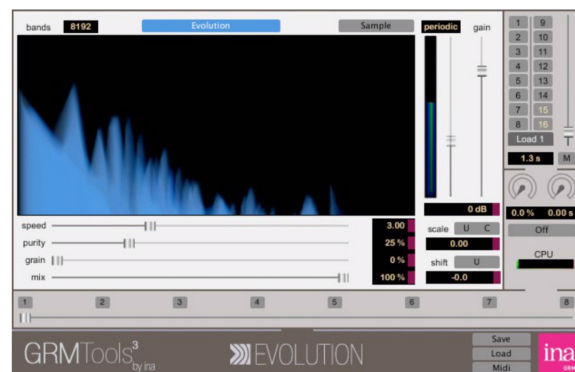
**How does it work?**

The timbre of the input signal is sampled at more or less regular intervals. The output signal is obtained by interpolation between the sampled timbres. In the following example, the three sampling instants are represented by the colours red, yellow and green. The resulting signal is a frame obtained by interpolation between the red timbre and the yellow timbre, and then between the yellow timbre and the green timbre.
This signal is represented by the red → yellow → green shading.
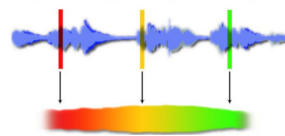
3. Text from the History of Forced Adoption transcripts was then selected and recorded as spoken word by <u>Jane Sheldon</u>. Also recorded at this stage was the lullaby 'Cherry Song' or 'Riddle Song'. Text was recorded as short paragraphs, sentences, single words said in lists so that it could be layered in the work. The 'Cherry Song' is sung by the soprano at the beginning of the work with the hand across the mouth, representing the victims of Forced Adoption being silenced. The song is then used towards the end as part of the backing track, here it is processed through a space delay filter.

4. Next the 'Musique Concrete' sections were composed. The sounds for these sections were all domestic sounds, such as fridge hum, ceiling fans, cutlery, toaster, kettle, scraping toast, metal kitchen bowls, washing machine, microwave, drawers and cupboards and metal whisks. The sounds were edited and put through various effects including EQ, noise cancellation, reversing, long reverbs, delays and space filters. Some sounds were also spliced together to make new sounds – in a <u>musique concrete (YouTube)</u> style.

5. A structure for the piece was then decided upon – a loose palindrome: Opening text from Judith Hendriksen's book, Julia Gillard apology, Victim transcripts, Waterfall section, Victim transcripts, Flute and Soprano duet, Julia Gillard apology, Closing text from Judith Hendriksen's book.

   - The text from Judith Hendriksen's book was chosen as it gave some levity to the topic. It creates a human connection and demonstrates the strength within a human to cope with adversity, journey through pain and emerge as a person able to still enjoy and appreciate life. She talks about her connection with butterflies which is related to the process of emergence.

6. The flute and soprano score was then composed to work in with the backing track within this structure. It was desirous to have the soprano differing greatly from the spoken text in the work and therefore extended vocal techniques were used such as vocal fry, whispering, shouting, whining and sounds made in different parts of the vocal tract – hence the use of the <u>International Phonetic Alphabet</u>.

7. A MaxMSP patch (download from <u>Imago resources</u>) was then written by <u>Ben Carey</u> for performance. The patch allows for playback of the backing track, live input of the flute and voice, processing of flute and voice through delay, reverse reverb, comb filter and harmoniser. The different balance of these effects is able to be controlled and set as a series of presets. These presets can then be loaded in performance via a footswitch pedal controlled by the performer.

# Creativity and collaboration

In an interview with Fiona Hill, she outlines some of her compositional processes, uses of technology and performances.

What is the inspiration behind your composition?

Fiona: My piece is based on the historical practice of forced adoption in Australia. It derives its text from transcripts of victims of this practice, in particular the birth mothers that were affected.

Why did you choose to work with the performing media of acoustic instruments combined with electronics? What were the challenges you faced in combining the two and how did you overcome them?

Fiona: This is my favourite medium to work in as I love the soundworld that is available to me by combining electronics with acoustic instruments. I find it a great way to explore the rich timbres created by the melding of acoustic instruments with electronics. The major challenge for me when working this way is to create a seamless soundworld. I overcame this by putting the live instruments through effects such as delay, reverb and pitch shifter. I also generated most of the electronics through recordings of the live flute and voice. In this way I'm generating a soundworld unique to the blending of those two
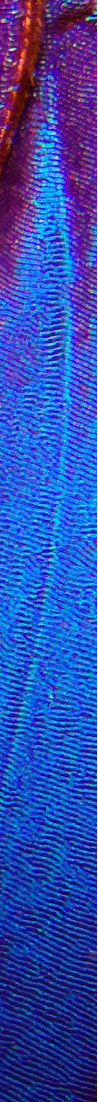
instruments and embedding it into the electronics from its inception.

What was your compositional process?

Fiona: I started with the concept of the piece and the text that I wanted to use. The piece has been evolving slowly over time, especially through the recordings that I made of the flute and voice. I recorded a number of lullabies with the flute and then processed these to make a washy, hypnotic bed of sound. This then became my starting point for layering the text. I then broke the text up into sections to come up with the overall structure of the piece. All this time as I was generating the electronic track, I was workshopping the flute and vocal sounds through a MaxMSP patch to get an idea of what would work with the sounds I had already created. Then I came up with the final structure of my piece and wrote the score for the flute and soprano.

How has the technology that you have used enhanced or hindered the musical possibilities of your piece?

Fiona: Using MaxMSP has really enhanced my ability to blend the acoustic and electronic soundworlds through the processing of the live instruments. I used ProTools to record the instruments and create the backing track. This has allowed me to transform the flute and voice recordings in ways which wouldn't be possible in a live

setting. It has also allowed me to layer many more sounds than I would be able to with the two instruments alone.

How did you develop your musical material throughout the piece?

Fiona: The musical material was initially developed through the processing of recorded sound, largely using the GRM freeze and evolution plugins . These plugins allowed me to create beds and loops of sound which formed the starting point and underlying driver of the musical material. Once these sounds were in place I was then able to layer and develop a structure to the piece. The musical ideas for the live sounds were developed through improvising over the electronic bed I created and then making selections from there of what worked well and what I wanted to use.

How would you describe the process of collaboration?

Fiona: Collaboration is an invaluable tool for a composer or any creative. Through sharing ideas and working together it's possible to draw on each other's expertise and push oneself in new directions.  In this project I worked closely with Lamorna and Jane on developing sounds that would work well with the effects processing used in the work. In particular with the flute we had a number of workshops to find the best sounds for this piece.

Lamorna, could you tell a bit about performing the piece?

Lamorna: One of the biggest challenges of performing a piece like Imago is staying together with the backing track which is fixed. This means that you need to play with a stopwatch – keeping an eye on the clock to make sure that you move from one section to the next at the correct moment as well as listening out for aural cues. Some gestures need to be synchronised like regular chamber music so following the score and having a close visual connection between the musicians is also vital.

# Activities and resources

Imago

# Stage 4

Aural/musicology

Composition – Some Things I Enjoy

Performance


Answers

Reference list and resources

# Syllabus outcomes

4.1    performs in a range of musical styles demonstrating an understanding of musical concepts

4.2    performs music using different forms of notation and different types of technology across a broad range of musical styles

4.3    performs music demonstrating solo and/or ensemble awareness

4.4    demonstrates an understanding of musical concepts through exploring, experimenting, improvising, organising, arranging and composing

4.6    experiments with different forms of technology in the composition process

4.7    demonstrates an understanding of musical concepts through listening, observing, responding, discriminating, analysing, discussing and recording musical ideas

4.8    demonstrates an understanding of musical concepts through aural identification and discussion of the features of a range of repertoire

4.10   identifies the use of technology in the music selected for study, appropriate to the musical context.

### Music 7–10 Syllabus (2003)

# Aural/musicology

A soundscape is an audio recording or performance of music and sounds used to create a particular acoustic environment. A soundscape can be created with a mix of instruments both acoustic and electric. Song writers also like to use sound sources which may come from the natural or man-made environment, including things like dogs barking, kitchen equipment and traffic.

Listen to the following songs that use a soundscape. Sometimes it's difficult to accurately identify the sound source, just describe what it sounds like. List some of the instruments and sound sources which can be heard in the soundscape before the singing begins;

**Taylor Swift – Bad Blood ft. Kendrick Lamar (YouTube)**  0:00-0:38

_____

_____

**Ed Sheeran – Perfect Symphony (with Andrea Bocelli) (YouTube)** 0:00-1:07

_____

_____

## Listening

**Imago by Fiona Hill** (0:00-2:16)

Contemporary Australian composers also like to use soundscapes as it allows them to experiment with instruments and sound sources.

Listen to the opening of Imago (0:00-2:16) and use the following table to explore and discuss the soundscape created while the woman is speaking. Focus on the concept of Tone colour – Performing media/sound sources.

| Seconds timer | Instrument or sound source? | What does it sound like? |
| --- | --- | --- |
| 0:00 to 0:04 | | |
| 0:04 to 0:22 | | |
| 0:22 to 0:32 | | |
| 0:32 to 0:49 | | |
| 0:49 to 2:11 | | |
| 2:11 to 2:16 | | |

## Further listening

Mark Franklin – The Oceania Project
Hollis Taylor – Owen Springs Reserve 2014
Leah Barclay – Triloka: Monsoon

# Composition: Some Things I Enjoy

**Imago by Fiona Hill** (0:00-2:16)

In the **video of Imago (0:00-2:16)** you can see and hear how the composer intertwines the different 'parts' of the piece during the performance. These parts consist of:

- pre-recorded track of the woman speaking
- pre-recorded flute and voice
- live performances of the soprano and flautist.

Note that sometimes the vocal and flute sounds are manipulated with electronics effects.

The composition activity is broken down into two simple steps:
In small groups create a pre-recorded track of talking which is 2 minutes long.
Compose a soundscape to enhance the pre-recorded track.

## Activity 1 – Pre-recorded talking track

In the opening of Imago, a woman is speaking about some of the things that she enjoys.

- In small groups of 3 to 4, discuss some of the things you enjoy. Write your own list using the boxes on the next page.
- Make a 2 minute recording of yourselves reading the lists, using a phone or other recording device.
- Each person in the group can read their whole list, or the lists can be mixed up by taking turns to say only one item at a time.
- The lists can be spoken in English or another language.
- Have fun with it, it doesn't need to be perfect. The recording could have laughter, clapping or background noises – it's all part of the composition.

| Some things I enjoy |
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| Some things I enjoy |
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| Some things I enjoy |
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| Some things I enjoy |
| --- |
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## Extension activity

- Use **Audacity** to rearrange and edit the recordings of your lists. Refer to the web page **How to Use Audacity** for more information.
- Experiment with changing the speed of the track or the pitch of the voice with **Audacity Effects**.

## Activity 2 – Compose a soundscape to enhance the pre-recorded track

Imago uses several layers of instruments and sound effects in the soundscape which enhances the meaning of the pre-recorded track.  In the same small groups, compose a soundscape that brings to life the list of items on your pre-recorded track.

Start by using the boxes below to research possible instruments and sound sources you might experiment with. An example has been completed for you.

| Using instruments |
| --- |
| <ul><li>guitar chords strummed</li><li>piano or keyboard</li><li>singing, humming, shouting, rapping</li><li>percussion: including tambourine and triangle claves.</li></ul> |

| Possible sound sources |
| --- |
| <ul><li>shaking a water bottle</li><li>sounds from stationery – clicking pens, moving pencil case zips</li><li>waving a tree branch with leaves</li><li>a snippet from a recorded song or game</li></ul> |

| Using instruments |
| --- |
| |

| Possible sound sources |
| --- |
| |

Play the pre-recorded track through a stereo or device that is loud enough for the whole group to hear while you create the soundscape. The idea is to improvise and have fun.

- Consider how the emotions of the pre-recorded text could be 'brought to life' by the choice of instrument/s or sound source.
- Experiment with the concept of texture by trying out different combinations of the instruments and sound sources.
- Notate your creation in some way, some examples might be graphically, with text, or in a grid.

## Extension activity

- Explore the use of electronic sounds, snippets of recordings and sound effects which you can make yourself or take from a resource such as the **BBC Sound Effect** library.
- Experiment with using **Audacity effects** to alter your soundscape. You can discover more about using effects in Electronic Sandbox.

# Performance

Perform your piece Some Things I Enjoy to the class by playing your pre-recorded track whilst performing the soundscape.

### Reflection questions

1. What was the audience's reaction to your soundscape?

2. Did you feel that your soundscape conveyed the ideas you were trying to express?

3. What was effective about your performance?

4. What could be improved?

# Stage 4 – Answers

## Aural/musicology

List some of the instruments and sound sources which can be heard before the singing begins;

**Taylor Swift – Bad Blood ft. Kendrick Lamar (YouTube)** 0:00-0:38

- city background white noise
- sudden loud crash
- an alarm goes off
- there's a horrible cracking sound
- someone yells
- some background music starts

- sounds like thumping & scrapping
- sound of breathing heavily
- sounds like glass being smashed
- low brass instruments play long notes

**Ed Sheeran – Perfect Symphony (with Andrea Bocelli) (YouTube)** 0:00-1:07

- dog barking
- acoustic guitar plays quietly introduction to song
- background noise of talking quietly
- sounds like a man singing warm up exercises

- strings play the introduction
- people talking
- people laughing

## Listening

| Seconds timer | Instrument or sound source? | What does it sound like? |
|---|---|---|
| 0:00 to 0:04 | Electronic sound source – just one pitch. | Sounds like a long electronic sound – a bit like a long microwave beep but lower. |
| | | Sounds like a big machine humming |
| 0:04 to 0:22 | Another electronic sound source. | Sounds get louder and start pulsating – like the doors on a spaceship |
| | | Sounds like it could be a scene from a sci-fi film when the space ship is landing |
| 0:22 to 0:32 | Instrument – maybe a bell vibrating. A wind instrument sound – maybe a flute? | Sounds like the flute is breathing |
| | The electronic bed of sound continues | More eerie sounds are added – like in a scary movie. |
| 0:32 to 0:49 | Instrument – a woman's voice singing. Pre-recorded wind sounds | Sounds like a woman humming or singing to herself |
| | There's still the electronic sounds and the flute sounds | Sounds like the wind getting louder |
| 0:49 to 2:11 | Instrument – voice – a woman speaking. | Sounds like a film – I can imagine a woman standing in a garden talking about her family. |
| | The electronic sounds, humming & flute sounds continue. | Notes 'wobble' and 'vibrate' in the background as the woman tells her story. Some of the sounds are like whale calls. |
| 2:11 to 2:16 | The woman stops talking at 'they keep me sane.' A clicking sound source | Sounds like a clicking screwdriver. |
| | A sound source – recording of air | Wind moving very fast. |

# Stage 4 – Reference list and resources

**Fiona Hill website**
**Imago by Fiona Hill – resources**, audio, videos and patches, date accessed 24/02/2020
**Music 7-10 Syllabus**, date accessed 16/06/19

## Aural/musicology
**Taylor Swift – Bad Blood ft. Kendrick Lamar (YouTube)** date accessed 07/07/19
**Ed Sheeran – Perfect Symphony (with Andrea Bocelli) (YouTube)** date accessed 07/07/19
**Leah Barclay – Triloka: Monsoon (SoundCloud)** date accessed 31/07/19
**Mark Franklin – The Oceania Project (SoundCloud)** date accessed 16/07/19
**Hollis Taylor – Owen Springs Reserve 2014 (SoundCloud)** date accessed 16/07/19

## Composition: Some Things I Enjoy
**Audacity** date accessed 06/06/19
**How to use Audacity**, date accessed 05/08/19
**Audacity effects** date accessed 06/08/19
**BBC Sound Effect Library**, date accessed 25/06/19

# Stage 5

Aural/musicology

Composition

Performance

Answers

Reference list and resources

# Syllabus outcomes

5.1    performs repertoire with increasing levels of complexity in a range of musical styles demonstrating an understanding of the musical concepts

5.2    performs repertoire in a range of styles and genres demonstrating   interpretation of musical notation and the application of different types of technology

5.3    performs music selected for study with appropriate stylistic features demonstrating solo and ensemble awareness

5.4    demonstrates an understanding of the musical concepts through   improvising, arranging and composing in the styles or genres of music selected for study

5.5    notates own compositions, applying forms of notation appropriate to the music selected for study

5.6    uses different forms of technology in the composition process

5.7    demonstrates an understanding of musical concepts through the analysis comparison, and critical discussion of music from different stylistic, social, cultural and historical contexts

5.8    demonstrates an understanding of musical concepts through aural identification, discrimination, memorisation and notation in the music selected for study

5.9    demonstrates an understanding of musical literacy through the appropriate application of notation, terminology, and the interpretation and analysis of scores used in the music selected for study

5.10  demonstrates an understanding of the influence and impact of technology on music

**Music 7-10 Syllabus (2003)**
© NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2003.

# Aural/musicology

Over time composers and performers have stretched the boundaries of how an instrument can be played in order to create new sounds in music. In the 20th and 21st centuries this spirit of exploration and innovation has extended into what is known as 'extended techniques'. Working together, composers and musicians explored how to create unorthodox and unusual sounds.

Every acoustic instrument has a range of extended techniques. Here are a range of instructional videos that explain how to play them.

1. **Multiphonics for Saxophone (YouTube)**

2. **Extended Techniques for Violin (YouTube)**: compressing strings and using a bow on a  vibraphone.

3. **How to Sing with Fry – Growl – Distortion – Rasp (YouTube)**: grunge vocal techniques – used by bands such as Nirvana

# Listening

In these activities you will explore extended techniques used by both acoustic and electronic instruments/sound sources across different genres of music.

## Activity 1 – acoustic instruments

Listen to the following pieces and identify and describe the extended techniques being used:

| Piece, composer and date | Describe how the instrument is 'played'. |
|---|---|
| Cathy Berberian \| Stripsody (YouTube), 1966<br>Solo Vocal (0:00-1:10) | |
| John Cage – Sonata V (from Sonatas and Interludes) (YouTube)<br>Solo Piano (0:00-2:00)<br><br>How to prepare a piano with Stephen Drury (YouTube) | |
| Beatboxing flute Super Mario Brothers Theme (YouTube)<br><br>Greg Patillo using the flute as a percussive instrument (0:00-2:09) | |

## Activity 2 – Electric and electronic instruments

The invention of electronic instruments such as electric guitars, synthesizers, recording equipment and software lead to an explosion of new possibilities across all genres of music.

In Imago, both the flute and the soprano use a great variety of extended techniques. During the performance the live instruments are put through effects such as delay, reverb and pitch shifter which further stretches the sounds we would traditionally expect of the instruments.

Listen to the following pieces and identify and describe the extended techniques being used;

| Piece, composer and date | Describe how the instrument(s) are 'played'. |
| --- | --- |
| <u>Fred Frith – solo concert at MÓZG (YouTube)</u>, 1974<br>Guitar solo (0:00-0:50) | |
| <u>Codfish \| Grand Beatbox Battle 2019 \| Solo Elimination (YouTube)</u><br>CODFISH – Australian Champion<br>Solo beatbox (1:10-2:55) | |
| <u>Kontakte (Stockhausen) (YouTube)</u>, Stockhausen, 1920<br>(7:00-9:30) | |
| <u>Lamorna Nightingale \| Hill: Imago (YouTube)</u>, Fiona Hill, 2018<br>(10:13-11:32) | |

## Extension activity – Concept analysis

The analysis of extended techniques does not fit neatly into one concept. Therefore, the following extension activity explores how many of the concepts were altered or adapted in any of the above excerpts.

Choose two or three examples from any of the acoustic or electronic excerpts in the above activities to discuss;

1.  Which concepts are altered or adapted in those excerpts?

2.  How many concepts are involved in analysing and describing extended techniques?

3.  Are some concepts more important than others when extended techniques are used?

# Composition

## Activity 1 – extended techniques

Listen to the following pieces and identify and describe the extended techniques being used:

The exciting thing is that composers and musicians are still exploring extended techniques for instruments and you can contribute to this on-going research. Start by researching and copying the techniques you have studied in the listening tasks, then experiment with those ideas, going on to find new ways to play your instruments:

1. In a small group choose 2 or 3 extended techniques you can play using your instruments.
2. Explore using dynamics and expressive techniques.
3. Compose 5 to 6 short sections.
4. Use a stopwatch to make each section 15 seconds long.
5. Use **Audacity**, **GarageBand** or other software to record some sections. **How to use Audacity**
6. Experiment with distorting the recordings in your software, or by playing them through a distortion pedal. **Audacity effects**

Watch the **Additional resources video** for information on how to amplify your instrument through a computer if you need some help.

## Extension activities

1. Where possible, use other software such as Cecilia, Cubase, Logic Pro, Pro tools, MaxMSP, to manipulate your sounds using reversing, long reverbs, delays, EQ, comb filter.

2. Investigate the use of looping equipment or software to build a longer version of your work.

3. Use Audacity, Garageband or other software to record some sections.

Tips for working with technology and effects:
- Explore the effects in Electronic Sandbox (download from **Imago resources**)
- **Download Cecilia**
- **How to use Cecilia**
- **Download MaxMSP**
- **How to use the MaxMSP patch Fiona Hill used for Imago**


## Activity 2 – Organising ideas into a structure

In Imago, Fiona Hill uses a palindrome to organise the material. A palindrome is a word, number, phrase or other sequence of characters which reads the same backwards as forwards.

Examples that use single words:

WOW           ABBA           10801          RACECAR

Examples that use a whole phrase:
- A man a plan a canal panama
- Satan oscillate my metallic sonatas

1. Give each of your 15 second sections from activity one a number – 1  2  3  and so on.

2. Experiment with organising them into different number palindromes until you're happy with the result. For example, 1 2 3 2 1 or 3 3 2 1 2 3 3

3. Write a short note about each section of your piece to remind you of what each section should sound like.

# Performance

1. Decide on the palindrome structure that will used in the performance.

2. Use a stopwatch to help time your 15 second sections.

### Reflection Questions

1. Was it difficult to perform using a stopwatch?

2. Did it matter if the performance was not perfect?

# Stage 5 – Answers

## Aural/musicology – Listening

### Activity 1 – Acoustic instruments

Listen to the following pieces and identify and describe the extended techniques being used:

| Piece, composer and date | Describe how the instrument is played. |
|---|---|
| Cathy Berberian | Stripsody (YouTube), 1966<br>Solo Vocal (0:00-1:10) | She uses her voice / vocal skills to<br>● bellowing – a bit like 'Tarzan of the Jungle'<br>● sneeze<br>● make childlike comical sounds – like brrr and bong<br>● use silly voices to say phrases of dialogue<br>● make the sounds of animals, a ticking clock |
| John Cage – Sonata V (from Sonatas and Interludes) (YouTube)<br>Solo Piano (0:00-2:00)<br><br>How to prepare a piano with Stephen Drury (YouTube) | The piano doesn't sound like a piano – even though the pianist is playing the keys as normal.<br><br>Bolts, screws, plastic and rubber are attached to the strings to drastically change how the piano sounds.<br><br>There are sounds of unusual percussion instruments, drum like sounds, bell sounds.<br>Sounds from another world. |
| beatboxing flute super mario brothers theme (YouTube)<br><br>Greg Patillo using the flute as a percussive instrument (0:00-2:09) | ● Using extended techniques to produce the beat-boxing percussive effects of hi-hat, snare rimshot and bass drum<br>● Stereoscopic flute tones which produce two separate sounds by humming whilst playing<br>● Consonant sounds like those used in Imago and used in the singing/playing. |

## Activity 2 – Electric and electronic instruments

Listen to the following pieces and identify and describe the extended techniques being used:

| Piece, composer and date | Describe how the instrument(s) are played. |
| --- | --- |
| **Fred Frith – solo concert at MÓZG (YouTube)**, 1974<br>Guitar solo (0:00-0:50) | A drum stick is put on the fingerboard behind the stings.<br>The music/soundscape is played by moving the drum stick<br>● up and down the fingerboard changes the pitch<br>● tapping it makes the rhythmic patterns<br>● wobbling it |
| **Codfish \| Grand Beatbox Battle 2019 \| Solo Elimination (YouTube)**<br>CODFISH – Australian Champion<br>Solo beatbox (1:10-2:55) | He beings with a lyrical vocal phrase<br>● starts a vocal bass riff<br>● adds a simple beat frame (BTKT)<br>● becomes more complex layering of fast beat kick, high hat, inward snare and frog sound.<br>● looping pedals further increase the complexity |
| **Kontakte (Stockhausen) YouTube)**, Stockhausen, 1920<br>(7:00-9:30) | ● pulsating quiet electronic sounds<br>● sudden, loud and unpredictable machine sounds banging and crashing<br>● electronic beeps<br>● space and silence at times<br>● whooshing sounds, unfamiliar soundscapes |
| **Lamorna Nightingale \| Hill: Imago (YouTube)**, Fiona Hill, 2018<br>(10:13-11:32) | Focusing on the use of electronic devices/software:<br>● long high pitched electronic sounds – which become more discordant and tense.<br>● the acoustic instruments (vocal & flute) are processed through delay, reverse reverb and pitch shift<br>● the electronics allow more layers of sound to be added |

## Stage 5 – Reference list and resources

<u>Fiona Hill website</u>
<u>Imago by Fiona Hill – resources</u>, audio, videos, score and MaxMSP patch, date accessed 24/02/2020
<u>Music 7-10 Syllabus</u>, date accessed 16/06/19

### Aural/Musicology

<u>Multiphonics made EASY for saxophone!! (YouTube)</u>, date accessed 26/06/19

<u>Extended Techniques for Violin (YouTube)</u> – Compressing strings and using a bow on a vibraphone, date accessed 26/06/19

<u>How to Sing with Fry – Growl – Distortion – Rasp (YouTube)</u>, date accessed 26/06/19

### Listening Activity 1

<u>Cathy Berberian | Stripsody (YouTube)</u>, date accessed 26/06/19

<u>John Cage – Sonata V (from Sonatas and Interludes) – Inara Ferreira, prepared piano (YouTube)</u>, date accessed 26/06/19

<u>How to Prepare a Piano with Stephen Drury (YouTube)</u>, date accessed 26/06/19

Greg Patillo – <u>beatboxing flute super mario brothers theme (YouTube)</u>, date accessed 26/06/19

### Listening Activity 2

<u>Fred Frith – solo concert at MÓZG (YouTube)</u>, date accessed 26/06/19

<u>Codfish | Grand Beatbox Battle 2019 | Solo Elimination (YouTube)</u>, date accessed 26/06/19

<u>Kontakte (Stockhausen) (YouTube)</u>, date accessed 26/06/19

### Composition

<u>Audacity</u>, date accessed 06/06/19

<u>How to use Audacity (wikiHow)</u> date accessed 17/2/2020

<u>Audacity Effects</u> date accessed 03/08/2019

<u>Electronic Sandbox (Imago resource)</u>, date accessed 18/08/2019

<u>Cecilia</u>, date accessed 05/08/19

<u>MaxMSP</u>, date accessed 18/08/2019

# Music 1 Stage 6

# Syllabus outcomes

**Preliminary**

P1    performs music that is characteristic of the topics studied

P2    observes, reads, interprets and discusses simple musical scores characteristic of topics studied

P3    improvises and creates melodies, harmonies and rhythmic accompaniments for familiar sound sources reflecting the cultural and historical contexts studied

P4    recognises and identifies the concepts of music and discusses their use in a variety of musical styles

P5    comments on and constructively discusses performances and compositions

P6    observes and discusses concepts of music in works representative of the topics studied

P7    understands the capabilities of performing media, explores and uses current technologies as appropriate to the topics studied

P8    identifies, recognises, experiments with and discusses the use of technology in music

P9    performs as a means of self expression and communication


**HSC**

H1    performs stylistically, music that is characteristic of topics studied, both as a soloist and as a member of an ensemble

H2    reads, interprets, discusses and analyses simple musical scores that are characteristic of the topics studied

H3    improvises and composes music using the range of concepts for familiar sound sources reflecting the cultural and historical contexts studied

H4    articulates an aural understanding of musical concepts and their relationships in a wide variety of musical styles

H5    critically evaluates and discusses performances and compositions

H7    understands the capabilities of performing media, incorporates technologies into composition and performance as appropriate to the topics studied

H8    identifies, recognises, experiments with, and discusses the use and effects of technology in music

H9    performs as a means of self expression and communication


## Music 1 Stage 6 Syllabus

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# Aural/musicology

## Exploring unity and contrast

How a composer uses unity and contrast is a common question in HSC Music 1. However, the understanding of what produces a sense of unity or contrast for the listener is not a simple set of answers because it is influenced by a person's cultural background, social group, education and personal taste. Through the following activities of listening, composing and performing you are encouraged to discuss your subjective responses and support your opinions with the concepts of music.

## Activity 1

In this activity you will focus on the concept of pitch and consider the question:

> Do you always want a harmonious relationship or can dissonance be important?

The understanding of what makes harmony or disharmony in a relationship is a complex and subjective topic. Composers can organise the harmonic relationships between the different parts in a multitude of ways to communicate with their listeners. They can create a harmonious sound which contributes to a sense of unity and cohesion, or create disharmony between the parts to produce contrast and tension. Composers manipulate these consonant or dissonant harmonies to make us feel the widest range of responses: from relaxed and happy, to stressed and anxious.

Listen to the following excerpts and complete the table below by adding your own ideas to describe the harmonic relationships.

Some possible answers have been given to help you get started.

| Title, composer and date | Dissonant or consonant harmonies? | How do the harmonies make you feel? |
|---|---|---|
| **Lamorna Nightingale l Hill: Imago (YouTube)**<br>Contemporary Art/Electronica 2019<br>By Fiona Hill<br>10:10-11:09 and 11:32-12:45 | Two dissonant parts which clash with each other.<br>Further dissonance is created by the singer's note bends and quarter tones.<br>The flute uses sliding microtones to emphasise the disharmony of the story | • full of tension<br>• feels unsettling<br>• disturbing<br>• feels like the parts are quarrelling |
| **Psycho – The Shower Scene (YouTube)**<br>American film, 1960<br>by Bernard Herrmann<br>4:10-5:03 | | |
| **Spider-Man – What's Up Danger (YouTube)**<br>Film music, 2018<br>By Blackway and Black Caviar<br>0:00-0:40 and 0:40-1:00 | | |
| **BBC Proms 2011: Tim Minchin – F Sharp (Comedy Prom)**<br>Contemporary comic song, 2006<br>0:00-1:13 | | |
| **Penderecki – Threnody (Animated Score)**<br>Threnody for the Victims of Hiroshima for 52 strings<br>Western art music, 1960<br>5:52-6:29 | | |

Further listening:

1. **The Twilight Zone Theme (Youtube)**
   TV series theme by Marius Constant
   0:00-0:50

2. **Mojo Juju – Native Tongue Featuring The Pasefika Vitoria Choir (YouTube)**
   Indigenous contemporary
   0:00–1:49

3. **The Legend of Zelda – main theme song (YouTube)**
   Game music by Koji Kondo, 1986
   0:00-1:27

Discussion questions:

1. Were the responses very personal and different, or were there some common ones?

2. Do you always want a harmonious relationship, or can disharmony be important?

3. How do the different harmonic relationships affect the sense of unity or contrast within a piece?

## Activity 2 – Comparative listening and score reading

Traditional lullabies are relaxing songs to help babies go to sleep that can be sung or played. They use simple melodies and rhythms which are easy to sing in a soft voice to express love and affection. The relationships between the musical layers create a sense of unity and this produces music which is predictable and soothing. The lullaby can go on for as long as needed because the melody is easy to repeat whilst the lyrics may change.

Use all the concepts of music to compare how the same lullaby, I Gave My Love A Cherry – The Riddle Song can be treated in two very different ways;

Version 1: performed by The Laurie Berkner Band
**The Laurie Berkner Band – I Gave My Love A Cherry, Riddle Song (YouTube)**

Version 2: **Imago by Fiona Hill**

Look at the score of I Gave My Love A Cherry (The Riddle Song) which has been arranged in a simple three chord version for vocal melody, tuned percussion and bass.

# I Gave My Love A Cherry

I Gave My Love A Cherry – performed by The Laurie Berkner Band

Listen to version 1 performed by The Laurie Berkner Band to help you complete the concept analysis table.
Some possible anscers have been given to help you get started.

| | Pitch | Duration | Tone colour | Dynamics and expressive techniques | Texture | Structure |
|---|---|---|---|---|---|---|
| Mnemonic | Please | Don't | Touch | Dirty | Toilet | Seats |
| The Laurie Berkner Band | The melody uses notes from the chordal accompaniment which creates consonant harmonies between the parts.<br><br>The melody itself uses consonant intervals which creates a singable and relaxing song. | | | | | |

# I Gave My Love A Cherry – performed in Imago by Fiona Hill

Listen to version 2 of the lullaby as used in Imago (0:00-0:30 and 0:30-2:11) to help you complete the concept analysis table. Looking at the score may assist you. Some possible answers have ben given to help you get started

| | Pitch | Duration | Tone colour | Dynamics and expressive techniques | Texture | Structure |
|---|---|---|---|---|---|---|
| Imago introduction 0:00-0:30 | The opening electronic sounds are sustained like a drone but there's no melody. | | More electronic sounds are added with an eerie pulsating effect. | | Opens with one layer then more electronic sounds are added. The long flute notes start just before the soprano starts singing | – |
| 0:30-2:11 | | It's difficult to feel a regular pulse and no sense of when it's a strong first beat of a bar. Also, the use of rubato obscures the pulse. | A woman's voice is singing the song but it's difficult to hear because the soprano is instructed to put her hand over her mouth. The electronic soundscape and flute parts also obscure the voice. The pre-recorded woman saying 'I am a happy, ful- filled woman' is the dominant sound. | | More layers are added but they are all working independently. They don't move together or create any sense of unity – quasi polyphonic. | |

## Discussion questions for activity 2 – concept analysis of version 1

1. Is this a successful lullaby?  Why?

2. Does this version create unity or contrast for the listener?

3. Which concepts are most important in this version?

## Comparison questions for activity 2 – concept analysis of version 2 Imago

1. Is this use of I Gave My Love A Cherry successful as a lullaby?

2. Do the relationships between the parts create unity or contrast?

3. Why do you think Fiona Hill chose to use the original lullaby in this way?

## Aural/musicology further listening:

- **Brahms – Wiegenlied (YouTube)**
- **The Beatles – Golden Slumbers (YouTube)**
- **The Wiggles – Hush Little Baby (YouTube)**
- Imago by Fiona Hill – I Gave My Love a Cherry (listen to Imago from the **Imago resources** web page)
  It returns at the end (11:30-12:00) in the backing track where it has been processed electronically.

# Performance

In small groups of 4 or 5 students perform I Gave My Love a Cherry as a relaxing and happy lullaby. Use your knowledge from the concept analysis of The Laurie Berkner Band version to guide your performance.

Experiment with manipulating each concept to create as much unity as possible:

- dynamics and expressive techniques: use a lyrical style and consistently soft dynamics
- duration: maintain simple repetitive rhythms in all of the parts
- pitch: simple consonant harmonies between the parts.  Keep the pitch register above middle C.

# Full Score

# Imago

Fiona Hill

# Composition and performance

## Lullaby or horror scene?

Here you will compose music for two very different scenes in a film – each scene is 2 minutes long.

Version 1: The music for a scene in which a baby is peacefully going to sleep which will focus on using all the concepts to create unity between the parts.

Version 2: The music for a scene in which it has all gone badly wrong – a horror scene. The music will focus on using all the concepts to create nightmarish contrasts.

### Version 1

Use your knowledge and experience of researching and performing version 1 of I Gave My Love A Cherry to guide your choices;

1. Form small groups of 4 or 5 students.

2. Compose your own accompaniment which is suitable for a lullaby. The accompaniment could be a loop recorded on phones or using **Audacity** or other recording software.

3. Audacity and this site explains how to use it: **How to Use Audacity**

4. Re-use the lyrics from the lullaby or write your own.

5. Compose a melody above the simple accompaniment or loop.

Perform your lullaby with the aim of making your class feel relaxed and sleepy.

### Version 2 – Horror scene

Reuse the accompaniment or loop from your lullaby composition – but this time;

1. Compose a melody to go above the accompaniment which is scary – using dissonant harmonies between the parts.

2. Explore pitch register – use a bass pitch register for the melody or suddenly change pitch registers of the song.

3. Re-use the lyrics from a lullaby or write your own.

4.  Experiment with manipulating each concept to create as many disturbing contrasts as possible, for example;

-   Dynamics and expressive techniques – use a harsh vocal style and sudden changes of dynamics.
-   Duration – try erratic rhythmic patterns to scare the listener.
-   Pitch – create dissonant harmonies between the parts.

Perform your lullaby with the aim of making your class feel stressed and anxious.

Things to consider and experiment with to create more dissonance – reuse ideas from Imago:

-   micro-tones, note bending, slides, chromatic scales
-   bi-tonality, crushed chords, atonality
-   distortion (guitar effects), different guitar tunings, extended techniques
-   electronica distortion, electronic drones, soundscapes
    **Audacity effects**

## Reflection questions:

1.  Which version created the biggest response from your audience?

2.  Which was the most fun to compose and perform? Why?

3.  How did you manipulate the concepts to create two different versions?

4.  Is it important for composers to be able to create both unity and contrast? Why?

## Extension activity

Use the lullaby melody that you wrote in the composition activity above and now try manipulating it in different audio software. You could use the software Audacity or Cecilia to add effects to the melody to radically alter it similarly to what Fiona Hill did in Imago.

1. Record your melody on your phone or software

2. Import the audio file into your chosen software

3. Add effects like reverb, delay, harmoniser, distortion to radically change the sound of your original melody. You can learn more about this in the Electronic Sandbox

## Performance tips for working with technology

- Watch the **Additional resources video** on how to amplify your instrument through a computer.
- Explore the effects in Electronic Sandbox (download from **Imago resources**)
- **Download Audacity**
- **How to use effects in Audacity**
- **Download Cecilia**
- **Adding effects and exporting sound files in Cecilia**
- **Download MaxMSP**
- **How to use the MaxMSP patch Fiona Hill used for Imago**

# Music 1 Stage 6 – Answers

## Activity 1 – Aural/musicology: Exploring unity and contras

| Title, composer and date | Dissonant or consonant harmonies? | How do the harmonies make you feel? |
|---|---|---|
| **Lamorna Nightingale l Hill: Imago (YouTube)**<br>Contemporary Art/Electronica 2019<br>By Fiona Hill<br>10:10-11:09 and 11:32-12:45 | Two dissonant parts which clash with each other.<br>Further dissonance is created by the singer's note bends and quarter tones.<br>The flute uses sliding microtones to emphasise the disharmony of the story | • full of tension<br>• feels unsettling<br>• disturbing<br>• feels like the parts are quarrelling |
| **Psycho – The Shower Scene (YouTube)**<br>American film, 1960<br>by Bernard Herrmann<br>4:10-5:03 | Dissonant harmonies – especially the violin's semi-tone cluster chords. | • tense and anxious<br>• sense of forboding<br>• the screeching |
| **Spider-Man – What's Up Danger (YouTube)**<br>Film music, 2018<br>By Blackway and Black Caviar<br>0:00-0:40 and 0:40-1:00 | 0:00-0:41 – dissonant harmonies and rapping is aggresive and out of tune with accompaniment. The repeated ostinato patter uses chromatic notes and sounds atonal.<br>0:41-0:55 – male singer changes to more consonant harmonies and a melody which 'fits' more easily with the accompaniment | • music starts with an unsettling feeling – an eerie effect<br>• but it changes to a vocal melody that's consonant which is easier and more relaxing to listen to |
| **BBC Proms 2011: Tim Minchin – F Sharp (Comedy Prom)**<br>Contemporary comic song, 2006<br>0:00-1:13 | In the opening, the vocal melody and piano accompaniment are consonant but in the chorus the vocal part goes up a semitone and becomes dissonant. | • starts in tune and easy to listen to<br>• becomes jarring and tense with the F sharp joke |
| **Penderecki – Threnody (Animated Score)**<br>Threnody for the Victims of Hiroshima for 52 strings<br>Western art music, 1960<br>5:52-6:29 | All of the parts clash with each other all of the time. The crushed chords, chord clusters, note bending and microtone slides create total dissonance. | • unrelenting noise – gets more and more tense<br>• horrible sounds that feel hostile and ugly |

# I Gave My Love A Cherry – performed by The Laurie Berkner Band

Listen to version 1 performed by The Laurie Berkner Band to help you complete the concept analysis table. Some possible anscers have been given to help you get started.

| | Pitch | Duration | Tone colour | Dynamics and expressive techniques | Texture | Structure |
|---|---|---|---|---|---|---|
| Mnemonic | Please | Don't | Touch | Dirty | Toilet | Seats |
| The Laurie Berkner Band | The melody uses notes from the chordal accompaniment which creates consonant harmonies between the parts. The melody itself uses consonant intervals which creates a singable and relaxing song. | The 4/4 time signature is consistent throughout. The tempo is slow. The accompanying chords change regularly on the beat. The melody moves in a predictable pattern using simple crotchets. Almost the same rhythm is used for all four phrases. | The woman's vocal melody is warm and in tune. The use of a child's voice contributes to the soothing style. The guitar accompaniment softly strums the chords. The piano accompaniment plays the chords to support the vocal notes. The drum kit keeps the beat. | The sond is quiet with very little dynamic change. The vocal style is legato and mellifluous. | There are two textural layers – melody and accompaniment, creating a homophonic texture. The chords and melody have a very close relationship and work together to create a consistent and predictable texture. | The melody and accompaniment is repeated for every verse. Only the lyrics change as the story progresses. There are four phrases which are very similar because they use almost the same rhythm and predictable harmonies. |

# I Gave My Love A Cherry – performed in Imago by Fiona Hill

Listen to version 2 of the lullaby as used in Imago (0:00-0:30 and 0:30-2:11) to help you complete the concept analysis table.
Looking at the score may assist you. Some possible answers have been given to help you get started

| | Pitch | Duration | Tone colour | Dynamics and expressive techniques | Texture | Structure |
|---|---|---|---|---|---|---|
| Imago introduction 0:00-0:30 | The opening electronic sounds are sustained like a drone – but there's no melody. | No sense of pulse (no time signature or bar lines on the score.) | More electronic sounds are added with an eerie pulsating effect. | The electronic sounds become slightly louder as other sounds are added. The flute notes reverberate quietly. | Opens with one layer then more electronic sounds are added. The long flute notes start just before the soprano starts singing | Opening soundscape acts as an introduction before the singing starts. |
| 0:30-2:11 | The melody notes of I Gave My Love A Cherry is just reconisable. There are no consonant chords in the accompaniment – the electronic sounds and flute don't fit with the melody. The flute uses microtones which unsettle any sense of key centre even more. | It's difficult to feel a regular pulse and no sense of when it's a strong first beat of a bar. Also, the use of rubato obscures the pulse. | A woman's voice is singing the song but it's difficult to hear because the soprano is instructed to put her hand over her mouth. The electronic soundscape and flute parts also obscure the voice. The pre-recorded woman saying 'I am a happy, ful-filled woman' is the dominant sound. | The lullaby melody stays muffled and soft.<br><br>The electronic and flute soundscape is also soft. The loudest part is the woman talking. The flautist uses extended techniques to create an airy effect. | More layers are added but they are all working independently. They don't move together or create any sense of unity – quasi polyphonic. | The sections are organised with a stop watch. The regular 4-bar phrases of the original can't be heard. |

# Music 1 Stage 6 – Reference list and resources

**Fiona Hill website**
**Imago – resources**, audio, videos, score, MaxMSP patch, date accessed 24/02/2020
**Music 1 Stage 6 Syllabus**, date accessed 16/06/19

## Aural/musicology
### Activity 1
**Bernard Herrmann – Psycho (theme) (YouTube)** from Psycho, date accessed 30/06/19
**Blackway & Black Caviar – 'What's Up Danger' (YouTube)** from Spider-Man: Homecoming, date accessed 30/06/19
**BBC Proms 2011: Tim Minchin – F Sharp (YouTube)** date accessed 30/06/19
**Penderecki – Threnody (Animated Score) (YouTube)** date accessed 30/06/19

### Activity 1 – Further Listening
**The Twilight Zone Theme (YouTube)** by Marius Constant, date accessed 30/6/2019
**Mojo Juju – Native Tongue Featuring The Pasefika Vitoria Choir (YouTube)**, date accessed 30/06/2019
**Zelda Main Theme Song (YouTube)** by Koji Kondo, date accessed 30/6/2019

### Activity 2
**The Laurie Berkner Band – I Gave My Love A Cherry, Riddle Song (YouTube)** date accessed 30/6/2019

### Activity 2 – Further listening
**Brahms – Wiegenlied (YouTube)**
**The Beatles – Golden Slumbers (YouTube)**
**The Wiggles – Hush Little Baby (YouTube)**

**The Documentary – Lullabies in the Arab World – BBC Sounds** date accessed 25/06/19
**The universal language of lullabies – BBC News** date accessed 25/06/19
**BBC Sound Effects**, date accessed 25/06/19
**Soundtrap – make music online**, date accessed 25/06/19

## Composition and performance
**Download | Audacity** date accessed 06/06/19
**How to use Audacity (wikiHow)** date accessed 17/2/2020
**Audacity Effects** date accessed 03/08/2019
**Electronic Sandbox (Imago resources)**, date accessed 18/08/2019
**Cecilia** date accessed 03/08/2019
**MaxMSP download**, date accessed 18/08/2019

# Music 2 Stage 6

# Syllabus outcomes

## Preliminary

P1     confidently performs repertoire, that reflects the mandatory and additional topics, both as a soloist and as a member of an ensemble

P2     demonstrates an understanding of the concepts of music, by interpreting, analysing, discussing, creating and notating a variety of musical symbols characteristically used in the mandatory and additional topics

P4     creates, improvises and notates music which is representative of the mandatory and additional topics and demonstrates different social, cultural and historical contexts

P5     analyses and discusses compositional processes with stylistic, historical, cultural and musical considerations

P6     discusses and evaluates music making constructive suggestions about performances and compositions

P7     observes and discusses in detail the concepts of music in works representative of the mandatory and additional topics

P8     understands the capabilities of performing media, explores and uses current technologies current technologies as studied

P9     understands the capabilities of performing media, explores and uses current technologies as uses current technologies as studied

P10    performs as a means of self expression and communication

## HSC

H1     performs stylistically, music that is characteristic of topics studied, both as a soloist and as a member of an ensemble

H2     reads, interprets, discusses and analyses simple musical scores that are characteristic of the topics studied

H3     improvises and composes music using the range of concepts for familiar sound sources reflecting the cultural and historical contexts studied

H4     articulates an aural understanding of musical concepts and their relationships in a wide variety of musical styles

H5     critically evaluates and discusses performances and compositions

H7     understands the capabilities of performing media, incorporates technologies into composition and performance as appropriate to the topics studied

H8     identifies, recognises, experiments with, and discusses the use and effects of technology in music

H9     performs as a means of self expression and communication

# Listening guide – Imago

| Timing/ sections | Musical features |
|---|---|
| Intro | |
| 0:00-0:49 | Introduction<br><br>• The tempo is marked freely with rubato. There is an absence of bar lines and a time signature, which further emphasises the rhythmic ambiguity and lack of clear pulse. The use of time in minutes and seconds as a reference point, is essential in allowing for musical success during performance between both the electronics and the performers. Box notation as seen in the flute part also supports this.<br><br>• The opening begins with the electronics creating a drone using a harmonic bed of slowly layered notes starting with a G, and then a perfect 4th, major 2nd and major 6th above it. The dynamics gradually increase as the chord becomes thicker. Reverb is apparent in the flute part.<br><br>• The flute introduces sustained notes utilising half-covered notes to create an airy timbre, as more higher pitched electronic lines are added. Microtones are evident in the tremolo's leading into section A.<br><br>• The vocal line begins quietly singing the lullaby Cherry Song in the key of F, with instructions given for the vocalist to sing with the hand over the mouth. This symbolises the birth mothers' of forced adoption being silenced, resulting in a muffled timbre and pianissimo dynamic.<br><br> |

| Timing/ sections | Musical features |
|---|---|
| **A1 Section** | |
| 0:49 – 2:17 | Opening Story – Judith Henrikson's text <br> • The main vocals enter using spoken text taken from Judith Henrikson's book Coming Home to Truth detailing her harrowing experience of forced adoption. <br> • The Cherry Song lullaby and long flute tones continue as accompaniment to the spoken words using a polyphonic texture. This results in slightly thicker textural layering, heightened by dynamic swells provided by the flute. <br> • Extended techniques in the flute part including pitch bending and flutter tonguing in addition to performance directions such as 'gradually less sparse' and 'use flutter or vibrato on any pitches', contribute to the improvisatory nature of the piece. <br> • The end of this section builds with a creaking/cracking sound from the left speaker which is imitated with the same sound reversed in the right speaker. This is followed by a crescendo whoosh that pans from right to left bringing everything to an abrupt end. The tail end of live delayed flute is heard as a bridge between the end of this section and the beginning of section B. |
| **Section B** | |
| 2:17-2:36 | Julia Gillard Apology <br> • This section starts with the Julia Gillard quote: 'Their children grew up, denied the bond that was their birth right.' It then continues using a montage of layered spoken text taken from Julia Gillard's 2013 apology to those that suffered the effects and consequences of forced adoption. <br> • The flute and voice both provide sustained notes creating an unsettled mood due to the dissonant pitch created between the multiphonic used in the flute part, and the high D provided by the soprano. 'Little pulses and articulations' coupled with the breathy tone also contribute to the eerie mood. The live delay adds to the sustained effect in the flute and voice. <br> • The dynamics here range from ppp to mp. <br> • Reversed speech is used as a texture underneath the main apology text. The main text is layered and panned left and right to create a sense of space and to tell the story more succinctly. |

| Timing/ sections | Musical features |
|---|---|
| Section C | |
| 2:36 – 6:55 | Main Section 1 – Story Section<br>• This section contains the birth mother's stories with text taken from the History of Forced Adoption transcripts.<br>• The section starts with a decrescendo from the electronics, vocals and flute with the text 'the pain never goes away', before a laboured breathing loop is heard.<br>• The phonetic alphabet is used in the vocal part in combination with vocal fry creating a strained, breathy timbre and providing a contrast in tone from the spoken text.<br>• A faint electronic beeping with two short notes repeated can be identified at 2:47 providing a quasi pulse. Over time this becomes manipulated and distorted. A watery dripping sound can also be heard.<br>• This section utilises a plethora of expressive and extended techniques in both the vocal and flute part. In the vocal part techniques include: vocal fry (2:55) whispering, (2:55) shouting (5:21), whining (2:55), vibrato (4:38) and pitch bending (4:38) communicated through a range of unconventional notation methods such as box note heads, and triangles and brackets for the inhale and exhale pattern of the vocals.<br>• The flute part consists of a covered air tone where the mouth covers the entire embouchure hole and percussive sounds are made using the consonants such as 't.' Other extended techniques by the flute include: breathy sounds (3:41), flutter tonguing (4:30), vocalisations (5:42), harmonics, tremolos and microtones (4:38), tongue rams (4:54), pitch bending, feathered beaming (5:28),<br>• Electronic techniques include delay which is utilised in the echo effect created at 4:54 and the word slut at 5:13 uses ascending pitch shifted delay. |

| Timing/ sections | Musical features |
|---|---|
| | • An improvisatory element is featured in this section as specific instructions are given to performers to freely interpret the music at times, for instance, at 2:55 subtle expressivity over precision at all times, consequently variations in pitches and vowels are ok.<br>• 6:17 marks the beginning of a musical climax as all parts build in intensity. The vocal fry in the voice is now in its high register generating a squeezed and abrasive tone, coupled with more frequent layering and faster rhythmic patterns provided by the spoken text. In contrast, the flute uses its low register and plays harmonic partials to create multiphonics. Flourishing ascending semiquaver and demisemiquaver scalic passages in the flute then prevail, using F octatonic scale and a descending quarter tone scale at 6:46. The electronics contribute to the intensity and climax through a rumbling wall of sound which is created by the complex layering of sounds. This crescendos to fortissimo and descends in pitch with the flute, until the abrupt finish of all textural layers.<br>• Musique concrete begins at 6:17 with domestic sounds such as fridge hum, ceiling fans, cutlery, toaster, kettle, scraping toast, metal kitchen bowls, washing machine, microwave, drawers and cupboards, metal whisk. The sounds have been manipulated through various effects including EQ, noise cancellation, reversing, long reverbs, delays, and space filters. Some sounds have also been spliced together to make new sounds in a musique concrete style. |
| Section D | |
| 6:55 – 7:46 | Waterfall Section<br>• This section provides a respite, with the natural recorded sounds of a waterfall and kookaburras. Audible exhaling breaths are superimposed over the natural sounds. The texture here is much thinner, and rhythmically less busy than the previous section.<br>• A high pitched electronic drone of a major 3rd slowly appears over the natural sounds. The flute plays a long sustained D in its lower register, contrasting the electronic pitches, as a transition into the next section. |

| Timing/ sections | Musical features |
|---|---|
| Section C | |
| 7:46-8:19 | Transition Section – Story section<br>● This passage outlines the birth mother's story through spoken text which uses a delay effect. Underneath this is the whispered text as seen on the score at 7:46 which uses both crotchets, quavers and quaver triplets.<br>● The high pitched electronic drone continues from the previous section with the addition of a long sustained rumbling sound throughout the excerpt. Other cinematic type sounds which have been created by  scraping cups and cutlery with electronic effects such as reverb and panning, can be heard as an accompanying layer to the vocal and flute lines to enhance the story told. For instance, hospital noises.<br>● The flute continues to implement sporadic rhythmic gestures and breathy fragments created by the various extended techniques as seen before in its low register.<br>● The dynamics here are soft, despite having many textural layers. |
| 8:19-10:13 | Main Section 2 – Story Section<br>● The textural layers become more complex and busy with multiple lines of text telling the birth mother's stories.<br>● The vocal part returns to implementing vocal fry amongst other extended techniques such as wide vibrato (8:36), shouting (8:38), whining 'like air out of a balloon' at (8:53), feathered beaming (9:10).<br>● The flute part also becomes more varied and rhythmically involved using a plethora of note values from semibreves to demisemiquavers. Extended techniques as before are also featured, however the dynamics here are extensive and rapidly vary between motifs, for example at 8:19.<br>● The register of both the vocals and the flute are extended to almost their entire range and move using a variety of contours. This creates tension, as the pitch range combined with the extended techniques creates a multitude of percussive and abrasive tone colours. |

| Timing/ sections | Musical features |
|---|---|
| | • Electronic techniques such as delay and pitch shifted delay are incorporated quite extensively throughout this section, such as in 9:12 then 9:16. |
| Section E | |
| 10:13-13:37 | Soprano and Flute Duet<br>• The tonality of this section suggests a G tonal centre to begin with, however this is immediately abolished to become truly atonal and dissonant, with microtonality, pitch bending and the introduction of extended techniques in both parts, for example at 10:50.<br>• This whole section is reminiscent of a 'duo' and is based on lullaby fragments. In the opening as the flute plays a varied fragment of the lullaby 'Rock-a-bye Baby'. This is immediately imitated by the vocal part using rhythmic diminution, for example at 10:13.<br>Rock-a-bye original:<br><br>Soprano and flute fragment based on the original lullaby:<br> |

| Timing/ sections | Musical features |
|---|---|
| | <ul><li>Another lullaby fragment titled Brahm's Lullaby can also be seen in the flute part at 11:59<br>Brahm's Lullaby original:<br><br>Brahm's Lullaby fragment as found in the flute part:<br><br></li><li>The electronics feature a sustained tone cluster of notes in a high register until lower pitches are introduced at 11:01. A harmoniser technique where multiple pitches can be heard is used in both the flute and vocal part. For example, flute (11:22) A harmonic bed is seen at 12:46. Pitch shifted delay is also seen at 13:01.</li><li>Unison between the vocals and flute is seen at 11:40.</li><li>The rhythmic language here is more varied in its use of rhythms from semiquaver quintuplets to tied semibreves. The cell notation is not featured, with a return to more conventional notation, with the exception of no bar lines. The beat is still indefinite.</li><li>A fast descending and ascending scalic run using the octatonic scale is seen in the flute part, for example at 12:06. This leads to a climax at 12:12 with both parts in their high register at the dynamic of ff.</li><li>There is a gradual release of tension that directly follows this climax, through the descending contour of both parts which is supported by the sliding microtones and diminuendo into 12:38.</li><li>A fragmented and distorted version of the lullaby I Gave My Love a Cherry acts a cadence point for this section and as a transition into the next section.</li></ul> |

| Timing/ sections | Musical features |
|---|---|
| Section B | |
| 13:37-14:56 | Julia Gillard Apology<br>● Similar musical features as heard in the previous B section are also heard here.<br>● A climax is heard using an electronic rumbling coupled with a crescendo to bring this section to an end. |
| A2 Section | |
| 14:56-15:22 | Closing Story – Judith Henrikson's text<br>● Medium pitched to low pitched harmonic beds are featured by the electronics as an accompaniment to the spoken text.<br>● The title Imago is whispered repeatedly as the flute continues to play breathy tremolos resulting in an airy and mellow timbres created by all performing media. |
| 15:22-15:55 | Coda<br>● The butterfly lady text is aptly accompanied by a fluttering in the electronics produced by the technique of granulation of the vocal part.<br>● The dynamics gradually decrescendo little by little in all parts to niente.<br>● The use of breath in the flute and vocal parts is used again, representing the personal nature of the story, and the conceptual idea that the breath is the element that sustains life. |

## Summary of the global structure

|    | Intro – (0:00-0:49) |
|----|----|
|    | Intro – (0:00-0:49) |
| A1 | Opening story – Judith Henrikson's text (0:49-2:17) |
| B  | Julia Gillard Apology (2:17-2:36) |
| C  | Main section 1 – Birth mother's story section (2:36-6:55) |
| D  | Waterfall Section (6:55-7:46) |
| C  | Transition Section (7:46-8:19) |
|    | Main section 2 – birth mother's story section (8:19-10:13) |
| E  | Soprano and flute duet (10:13-13:37) |
| B  | Julia Gillard Apology (10:13-13:37) |
| A2 | Closing Story – Judith Henrikson's text (14:56-15:22) |
|    | Coda (15:22-15:55) |

# Aural/musicology

## Activity 1 – Extended techniques
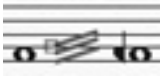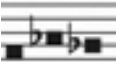
An extended technique is a way in which sound is created on an instrument by using non-traditional methods of sound production.
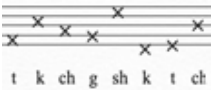
Watch the video of Lamorna Nightingale (flute) and Jane Sheldon (voice) demonstrate and explain the extended techniques used for Fiona Hill's piece Imago, and fill in the table below. Tone colour words to select from are suggested on the following page.

Video Link 1 – **Flute Extended Techniques**
Video Link 2 – **Voice Extended Techniques**
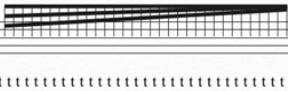
### Flute techniques

| Notation | Name | Describe the tone colour | How is the sound produced? |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

| Notation | Name | Describe the tone colour | How is the sound produced? |
|---|---|---|---|
| *flz.* <br> (whole note notation) | | | |
| (whole note notation) | | | |
| (notation with x noteheads) <br> t k ch g sh k t ch | | | |

## Vocal techniques

| Notation | Name | Describe the tone colour | How is the sound produced? |
|---|---|---|---|
| (notation with square notehead) | | | |
| (notation with square, œ, triangle) | | | |
| *VF* <br> (whole note notation) | | | |
| (wavy line notation) | | | |
| (notation with t t t t t...) | | | |

## Further listening

- **Berio: Sequenza III for solo voice (YouTube)**
- **Saariaho: NoaNoa (YouTube)**

## Tone colour words

bright
glittering
clear
sparkling
shimmering
silvery
pure

dry
hollow
percussive
rumbling

mellow
resonant
warm
smooth
sweet

distorted
aggressive
coarse
dark
muddy
abrasive

nasal
murky
reedy
eerie
thin

majestic
powerful
grand
strong
booming
resonant

breathy
airy
wheezing
muffled
muted

piercing
metallic
brassy
blazing
squeaky

artificial
electronic
buzzing
synthetic
scratchy

## Activity 2

Listen to the following excerpt 1 (0:00-2:11) taken from **Fiona Hill's Imago** and answer the following questions using the score provided.

1. Describe the roles of the performing media in this excerpt.

2. Explain how expressive techniques are used to create musical interest in this excerpt.

3. How has the composer treated the lullaby theme below in the excerpt? Refer to page 1 of the score and compare the two versions.



Listen to excerpt 2 (6:17 – 7:25) and answer the following question:

4. Explain how tension and release is created in this excerpt. Please make specific reference to the score.

5. Analyse the treatment of pitch in this excerpt with specific reference to the score.

## Activity 3 – Musique Concrete

Musique Concrete is the experimental technique of using recorded sounds as raw material. This material is then manipulated to create a montage of sound.

Fiona Hill uses musique concrete in her piece Imago in section C from 6:17-6:55. The sounds for these sections were all domestic sounds, for example, fridge hum, ceiling fans, cutlery, toaster, kettle, scraping toast, metal kitchen bowls, washing machine, microwave, drawers and cupboards, metal whisk. The sounds were edited and put through various effects including EQ, noise cancellation, reversing, long reverbs, delays, space filters. Some sounds were also spliced together to make new sounds – in a musique concrete style.

Choose two of the following musique concrete excerpts below and identify what sound sources you can hear:

- **The Avalanches – Since I Left You (YouTube)** (0:00-1:17)
- Joey Honore – **Musique Concrete 'The Olde Man' (YouTube)** (0:00-1:20)
- **Gotye – Seven Hours With A Backseat Driver (YouTube)** (0:00-0:25)
- **Pierre Schaeffer – Etude aux chemins de fer (YouTube)** (0:00-1:00)
- **Pink Floyd – Money (YouTube)** (0:00-0:43)

## Comparative Listening

Listen to **Imago by Fiona Hill** (6:17-6:55) and **Etude aux chemins de fer by Pierre Schaeffer (YouTube)** (0:00-0:45) and discuss how musique concrete has been used in each excerpt. Refer to the concepts of music in your response.

# Composition

## Activity 1

1. Explore the musique concrete sounds that Fiona Hill used in her piece Imago. Download Imago Musique Concrete sounds from **Imago resources**.

2. Load the sounds into electronic software Cecilia. Visit **Cecilia** to download a free version of the software. View **How to use Cecilia**.

3. Listen, experiment, explore and manipulate the sounds. You can explore this further using the Electronic Sandbox (download from **Imago resources**).

4. Export the files from Cecilia into either **GarageBand**, **Logic Pro X** or **Audacity** to generate a composition.

## Activity 2

Fiona Hill uses a variety of different compositional techniques to develop her musical ideas in her piece Imago including rhythmic devices such as rhythmic diminution, syncopation and fragmentation. The following task will assist you in understanding a range of compositional devices, and how they can be applied to generate new musical material starting from just 1 note. Be sure that whatever you write, you are actually able to play on your instrument.

1. Write down a 6-8 bar rhythm using a variety of note values using one pitch. Consider rhythmic features that create interest such as syncopation, multi-metre, additive rhythm, use of rests, use of triplets or tuplets, or new rhythmic subdivisions such as dividing a 4/4 bar into groups of 3, 3, 2 quavers. Make sure your rhythm adheres to the conventions of the time signature that you're using, and that you are able to play the rhythms you write, for example:

2. Select 1 or 2 bars of your rhythm and experiment with the following rhythmic devices. You can select different bars of your original composition to complete the exercise below:

| Technique | Prime | Experiment |
|---|---|---|
| Retrograde |  |  |
| Rhythmic augmentation |  |  |
| Rhythmic diminution |  |  |
| Permutation |  |  |
| Fragmentation |  |  |

3. Using all or some of these rhythmic experiments, extend your original one note composition to create a 16 bar composition. Think about how you will use rests to add a sense of space and phrasing to your composition. Tempo is also an important consideration, especially when coming to performing your piece!

4. Using as many different dynamic technique devices that you can think of, add dynamics to your composition. Imagine how this will sound on different instruments. For example, there is no point writing a crescendo over a sustained note on the piano as the sound of the piano naturally decays over time, however, it would be musically successful to write for an instrument that sustains sound like a violin or clarinet. Think about how the natural shape of the phrase would move: for instance, a run might naturally have a crescendo or diminuendo. How can you use dynamics to create effect? Try using forte piano or sfzorandos, for example:

5. Now add articulations to your composition. Think about the effect of different articulations on the sound, this can be a good way to create some climax in your piece as well as adding a layer of interest and complexity to the music, for example:



6. Now add extended techniques to your composition. These are techniques that are specific to your instrument. Some examples are: strings can play pizzicato or use Bartok pizzicato, where the string is plucked hard enough to hit the finger-board of the instrument, certain overtones can be played on wind and brass instruments, flutter tonguing is an effective technique on the flute, the keys on wind instruments can be used to create rhythmic effects. See how many extended techniques you can think for your own instrument and add them where you think it would be musically effective.



7. Now it's time to edit your composition! Think about the overall effect of your composition. Try to create a sense of direction and shape which generates an overall impression. This should be done by thinking about a structural outline, for example: your piece may start frenetically, have a contrasting calm section in the middle and gradually work its way to being frenetic again at the end. Similarly, your piece could start with a sense of mystery and then continue with a contrasting section which is aggressive. Make changes or adjustments as you see necessary to create a final draft.

8. Perform to the class. Record yourself if you can so you can evaluate the effectiveness of your composition.

## Discussion

1. What was the most successful section in your composition? Why?

2. What was the least successful section in your composition? What could you have done differently?

3. What have you learnt from this task in regards to developing musical ideas?

# Performance and composition

This task explores the human voice and the different sounds and tone colours that can be formed through the exploration of extended techniques and the International Phonetic Alphabet used in Fiona Hill's piece Imago.

## Activity 1

1. Warm up – As a class, view and perform **Parachute Jump** vocal warm up.

2. In groups of 2 or 3 people, brainstorm 5 to 10 different vocalisations or sounds that you can think of that don't use language. For example, 'sss', 'oop' and clicking the tongue.

3. Using either manuscript or a blank piece of paper, create your own notation for each of the sounds. This could be using graphic notation, traditional notation, or a combination of both.

4. Present and perform your ideas to the class.

## Activity 2 – The International Phonetic Alphabet (IPA)

In this task you will create a soundscape in small groups to be performed with the backing track used for Imago.

Fiona Hill uses the IPA in her work Imago as a way to notate the different tone colours that can be performed using the human voice.
The International Phonetic Alphabet is a set of sounds that linguists use to describe the sounds used in all spoken languages from around the world. Essentially if you can make any sound with your voice you can find a symbol to represent it using the IPA.

1. Explore the sounds and symbols used in the International Phonetic Alphabet via one of the links below. See if you can find the symbol for at least one or two of the vocalisations your group came up with in activity 1.

**Interactive IPA Chart**
**IPA Charts with Audio**

2.  Listen to the Imago backing track (download from **Imago resources**) and identify any musical features that are apparent at each timing indicated on the score, for example 0:00, 0:21, 0;47, by writing on the **graphic score template** provided. The first description has been done for you.

3.  In your group of 2 or 3 people, create a soundscape to be performed with the backing track used for Imago (0:00 – 2:16). Your instrumentation should consist of at least 1 voice and 1 instrument. The vocals must incorporate the use of the IPA and/or any other sounds your group came up with. The instrumentalist must use the octatonic scale as pitch material, such as F octatonic scale:
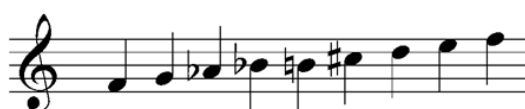


## Things to consider:

Vocalists
- If available to you, set up a microphone through an amp or PA so your part can be heard clearly over the electronics. You can learn how to do this by watching the **Additional resources video**.
- Consider the relationship between yourself, the instrumentalist/s and the electronics in regards to roles and textures.
- Consider both long and short sounds.
- Explore your vocal range through different registers.
- Use a variety of articulations and dynamics to emphasise particular sounds.

Instrumentalists
- If available to you, set up a microphone through an amp or PA so your part can be heard clearly over the electronics. You can learn how to do this by watching the **Additional resources video**.
- Consider the relationship between yourself, the instrumentalists/vocalists and the electronics in regards to roles and textures.
- Consider a variety of pitch or harmonic possibilities or devices, such as drones/sustained notes, scalic passages, sequences.
- Consider both long and short sounds.
- Explore your range through different registers.
- Use a variety of articulations and dynamics to emphasise particular sounds.
- Consider the incorporation of extended techniques to alter the tone colour.

4. Notate on the graphic score the instrument/s and vocal parts using the most appropriate type of notation for what you have written. This can be a combination of traditional notation and/or graphic notation and IPA. Refer to Fiona Hill's score of Imago for further inspiration.

5. Perform to the class and video your performance on your phone/ipad for the reflection task below.

## Extension Activity

Alternatively you can do the above activity and instead, work directly with the MaxPatch software that Fiona Hill created for use by the performer's for her work Imago. In this patch you'll be able to add additional effects to your sounds such as delay, pitch shift, comb filter and reverse reverb.

1. Download the Imago MaxMSP patch from **Imago resources**.

2. Watch the screencast to learn **how to use the patch**.

3. Continue part 2 as written above.

## Reflection

1. Describe your compositional process in detail.

2. How were your listening skills challenged in the process of performing your piece?

3. Describe the relationships between the performing media in your performance.

Imago graphic score performance activity – Page 1

| Time | 0:00 | 0:21 | 0:47 |
|---|---|---|---|
| **Voice** | | | |
| **Instruments** | | | |
| **Electronics** | *p* <br> Relaxing sustained drones/harmonic beds | | |

Imago graphic score performance activity – Page 2

| Time | 1:01 | 2:00 | 2:11-2:16 |
|---|---|---|---|
| **Voice** | | | |
| **Instruments** | | | |
| **Electronics** | *p* ⟨ Relaxing sustained drones/harmonic beds | | |

# Glossary

## Electronic techniques

| Name | Definition |
|---|---|
| Musique Concrete | |
| EQ | |
| Noise cancellation | |
| Reversing | |
| Reverb | |
| Delay | |
| Looping | |
| Pitch shifting | |
| Panning | |
| Harmoniser | |

## Flute techniques

| Name | Definition |
|---|---|
| Flutter tonguing | |
| Tremolo | |
| Tongue ram | |
| Key clicks | |
| Circular breathing | |
| Stereoscopic flute tones | |

## Vocal techniques

| Name | Definition |
|---|---|
| Vocal fry | |
| Vibrato | |
| IPA | |

## Compositional techniques

| Name | Definition |
|---|---|
| Drone | |
| Microtone | |
| Chance music | |
| Cell notation | |
| Pitch blending | |
| Multiphonics | |
| Harmonics | |
| Harmonic bed | |
| Feathered beaming | |

| Name | Definition |
|---|---|
| Harmonic partials | |
| Octatonic scale | |
| Atonal | |
| Tone cluster | |
| Extended techniques | |
| Rhythmic diminution | |
| Rhythmic augmentation | |
| Syncopation | |
| Fragmentation | |
| Multimetre | |

| Name | Definition |
|---|---|
| Additive rhythm | |
| Retrograde | |
| Permutation | |
| Soundscape | |
| Palindrome | |
| Graphic notation | |
| Bi-tonality | |
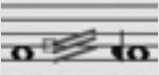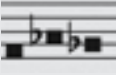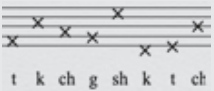
# Music 2 Stage 6 – Answers
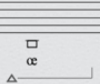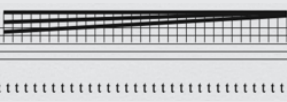
## Aural/musicology

### Activity 1 – Extended techniques

### Flute techniques

| Notation | Name | Describe the tone colour | How is the sound produced? |
|---|---|---|---|
|  | Harmonic | Breathy and transparent | Use a low note fingering and blow the air slightly faster so a higher harmonic pitch comes out. |
|  | Timbral trill | Fluttering and shimmering | Use 2 slightly different fingerings for the same note and alternate them. |
|  | Multiphonic | Harsh and buzzing | When 2 different pitches are sounded at the same time. You use a special fingering to do this. |
|  | Tongue ram | Muted and muffled | Cover the entire embouchure hole with your mouth and ram your tongue into the hole. |
|  | Flutter tongue | Glittering and buzzing | Either roll you tongue or use the back of the throat to create a gargle effect and play a note at the same time. |
|  | Airy tone | Airy and breathy | Direct a lot of the air over the top of the embouchure hole, rather than into it. |
|  | Percussive articulations | Percussive and hollow | Use consonant sounds like 't', 'k' and 'cha' and play them across the flute. |

## Vocal techniques

| Notation | Name | Describe the tone colour | How is the sound produced? |
|---|---|---|---|
| | Sing approximate pitch with breath tone | Warm and breathy | Maintain your support and add an 'h' sound to disturb the vocal tone core. |
| | Breath tone with an inhalation | Breathy and wheezing | Sing the pitch whilst simultaneously inhaling the air. Start with a 'surprised' sound. |
| VF | Vocal fry | Distorted and eerie | It starts from a glottal constriction, but then you capture the beginning of the release. |
| | Wide vibrato | Ringing and resonant | An exaggerated version of vibrato when you shake your larynx around. |
| | Feathered beaming | Percussive and dry | This is a notation for all musicians. The rhythm begins fast and then becomes slow. |

## Activity 2

Listen to the following excerpt 1 (0:00-2:11) taken from Fiona Hill's Imago and answer the following questions using the score provided.

1. Describe the roles of the performing media in this excerpt.

The performing media used in this excerpt include the electronics, flute and female vocals. The excerpt begins with the gradual introduction of the electronics using a drone and harmonic beds, before other electronic sounds emerge. The flute is then added providing long sustained notes using an airy timbre, with the addition of a faint vocal line singing a lullaby faintly heard amongst the textural layers. The texture here is relatively thin and homophonic with the vocal line providing the melody, whilst the other layers provide harmonic accompaniment.
When the spoken vocal line enters, the other layers continue with similar musical material, although the parts become more varied in pitch, rhythm and expressive and extended techniques.

2. Explain how expressive techniques are used to create musical interest in this excerpt.

The flute includes a plethora of extended techniques for expressive purposes to provide variety in the excerpt. At 0:24 the flute tone produced is airy. This technique is further manipulated by the use of microtone tremolos, flutter tonguing and vibrato as indicated at 0:49, creating further variety in tone colour within the excerpt. The dynamic swells which start and end at niente further enhance the expressive qualities of the flute line, thus creating musical interest.

The vocal part in the background uses a muffled timbre as indicated at 0:31 by the vocalist placing their hand over their mouth. This is contrasted by the spoken text which uses indeterminate pitch and is articulated with clarity, in contrast to the muffled lullaby creating further musical interest, due to the juxtaposition of timbres and textural layering.

3. How has the composer treated the lullaby theme below in the excerpt? Refer to page 1 of the score and compare the two versions.

The original lullaby as seen below uses a definite time signature of 4/4 with regular bar lengths as compared to the adaptation of the lullaby in Imago, which is absent of bar lines and a time signature. Another distinction can be made in the pitch material where the original theme uses a G pentatonic scale, where as in Imago it has been transposed, incorporating an F pentatonic scale. The structure of the excerpt in Imago also includes an additional phrase to the end of the lullaby excerpt, using the lyrics taken from the third verse. The electronics use delay to create layering of the lullaby in the excerpt.

Listen to excerpt 2 (6:17 – 7:25) and answer the following question:

4. Explain how tension and release is created in this excerpt. Please make specific reference to the score.

Answers may include:

**Tension**

Tone colour and dynamics and expressive techniques
- The individual tone colours of the instruments are exacerbated by harsh sounding extended techniques that alter the timbre. For example: Vocals – vocal fry and pitch bending at 6:17 'like air out of a balloon' at 6:40. Flute – harmonic partials to create multiphonics at 6:17, flutter tongue 6:27.
- Shouting by the vocals, coupled with derogatory spoken text with particular words accented, creates emotional tension for the listener. For example 'sinner' at 6:33 or 'whore' at 6:49.
- The timbres incorporated by the electronics include a low pitched crescendo rumble throughout the excerpt which creates a somewhat overwhelming 'wall of sound', resulting in tension.
- The incorporation of musique concrete sounds are bright and more percussive in timbre, resulting in highly articulated indeterminate rhythmic patterns which create tension.
- The dynamic of the whole excerpt starts at moderately loud and gradually builds to fortissimo due to the additional layering of electronic sounds, resulting in tension and climax.

**Texture**

- The gradual layering of all performing media, in particular, the use of many electronic layers incorporating recurring delay, results in a busy, thick, poly-phonic textural soundscape. This is enhanced by the crescendo dynamic.

**Duration**

- The rhythmic ambiguity of the excerpt due to the free rhythms derived from the spoken text, and lack of pulse/metre generates tension.
- The short note values of the flute incorporating semiquaver and demisemi-quaver runs also contributes to the evolving intensity of the excerpt.

**Pitch**

- At the beginning of the excerpt, higher pitched vocal and electronic tones are evident, with the vocalist singing at the top of their register using vocal fry, for instance at 6:17. The range of pitch in the excerpt increases including both low and high pitched electronic sounds, and the flute moves from its low register at 6:17, into its higher register by 6:46. This wide range of pitch, and variety of registers incorporated by the performing media generates tension.
- The harmonic language is mainly atonal with the incorporation of microtones creating dissonance, for instance at 6:46.
- The flute plays rapid ascending and descending octatonic scales resulting in a climax at 6:46 with a microtonal descending scale which creates tension.

**Release**

The release occurs at the beginning of the D section at 6:55. This section provides a respite, with the natural recorded sounds of a waterfall and kookaburras. Audible exhaling breaths are superimposed over the natural sounds at 7:06. The texture here is much thinner, and rhythmically less busy than the previous section. A high pitched electronic drone of a major 3rd slowly appears over the natural sounds which is a welcomed consonance compared to the dissonance heard in the previous section.

5.  Analyse the treatment of pitch in this excerpt with specific reference to the score.

Sample answer:

The harmonic language is atonal with an overwhelming dissonance created by all of the textural layers. The flute does incorporate some recognisable pitch patterns including rapid ascending and descending F octatonic scales, for example at 6:32 and a microtonal chromatic scale at 6:45. The electronic techniques including the use of delay, creates thick, clusters of sound which also contributes to the dissonance as multiple electronic, vocal and flute parts are layered.

A wide range of pitch, and variety of registers are incorporated in the excerpt. At the beginning of the excerpt, higher pitched vocal and electronic tones are evident, with the vocalist singing at the top of their register using vocal fry, such as in 6:17 and pitch bending at 6:40. The range of pitch in the excerpt increases including both low and high pitched electronic sounds. The flute moves from its low register at 6:17, into its higher register by 6:46.

## Activity 3 – Musique Concrete

Choose two of the following musique concrete excerpts below and identify what sound sources you can hear:

Since I Left You by The Avalanches (0:00-1:17)
- Taps dripping
- Rocks or pebbles being dropped
- Bird tweeting
- Rubble falling
- Floorboard creaking

The Olde Man by Joey Honore (0:00-1:20)
- Clock ticking
- Wrench or ratchet turning
- Locks and chains
- Money or coins
- Creaking of wood

Seven Hours With A Backseat Driver by Gotye (0:00-0:25)
- Steam train
- duck/goose quacking

Etude aux chemins de fer by Pierre Schaeffer (0:00-1:00)
- Train master's whistle
- Steam train chugging on tracks
- Train whistle
- Train brakes being applied
- Squeaking and tapping

Money by Pink Floyd (0:00-0:43)
- Cash register ring
- Coins being dropped
- Purchase receipt being torn

## Comparative Listening

Listen to Imago by Fiona Hill (6:17-6:55) and Etude aux chemins de fer by Pierre Schaeffer (0:00-0:45) and discuss how musique concrete has been used in each excerpt. Refer to the concepts of music in your response.

Sample answer:

In Fiona Hill's Imago, the musique concrete is used to provide a textural soundscape behind the vocal and flute lines, as this section of the piece moves towards a climax at section D. (6:55). The multiple layers and contrasting timbres and pitches generated by the musique concrete, contribute to the thickening texture and busy montage of sound.

In Pierre Schaffer's Etude aux chemins de fer, the musique concrete is used as the musical focus for the composition as the recorded samples take on the motivic role. Rhythmic grooves are generated by spliced rhythms of the audio sound samples. Timbral and pitch interest is demonstrated by the contrast between higher pitched whistle sounds, and low pitched rumbling chugging sounds of the train.

# Glossary – Answers

## Electronic techniques

| Name | Definition |
|------|-----------|
| Musique Concrete | Musique Concrete is the experimental technique of using recorded sounds as raw material. This material is then applied and manipulated to create a montage of sound. |
| EQ | Equalisation is the process of boosting or cutting parts of the frequency spectrum. |
| Noise cancellation | The process that results in noise being removed from the audio signal. |
| Reversing | Playing an audio sample backwards. |
| Reverb | An audio effect to simulate an acoustic space. |
| Delay | A sound that is captured and played back again after a certain period of time. |
| Looping | In electroacoustic music, a loop is a repeating section of sound material. A loop can be created using a wide range of music technologies including turntables, digital samplers, synthesizers, sequencers, drum machines, tape machines, delay units, or they can be programmed using computer music software. |
| Pitch shifting | Transposing a stream of audio up or down in pitch. |
| Panning | Moving the location of the sound within the stereo left and right image. |
| Harmoniser | The process of adding additional pitch shifted audio (typically by a harmonic interval) to an audio stream. |

## Flute techniques

| Name | Definition |
| --- | --- |
| Flutter tonguing | Roll the tongue in the mouth whilst playing. |
| Tremolo | Oscillate rapidly between the two notes indicated. |
| Tongue ram | Producing a popping sound along with the note. |
| Key clicks | Strongly clicking the keys of the instrument to produce a pitch resonance but no air is blown through. |
| Circular breathing | Breathing in through the nose while simultaneously pushing air out through the mouth using air stored in the cheeks. |
| Stereoscopic flute tones | Produce two separate sounds by singing while playing. |

## Vocal techniques

| Name | Definition |
| --- | --- |
| Vocal fry | A way of speaking in which the voice appears very low pitched and a creaking or glottal sound is produced. |
| Vibrato | A pulsing slight variation in pitch sung or played on an instrument for expressive purposes. |
| IPA | The International Phonetic Alphabet is a set of sounds that linguists use to describe the sounds of spoken languages. |

## Compositional techniques

| Name | Definition |
| --- | --- |
| Drone | A sustained tone usually low in pitch, in which other musical layers are layered upon at other pitches. |
| Microtone | An interval smaller than a semitone. |
| Chance music | Chance music (also Aleatoric music) leaves some element of the composition to chance, such as throwing dice to decide some primary element of how the composition and performance are realised. |
| Cell notation | Also known as 'box notation'. The box around the group of notes is to be played according to the instructions given on the score. |
| Pitch blending | Alter the pitch of a note slightly, either up or down. |
| Multiphonics | Multiphonics are an extended technique in which multiple pitches are performed at once on an instrument that is typically only able to produce one layer of sound. |
| Harmonics | An overtone accompanying a fundamental tone. |
| Harmonic bed | A drone that is harmonised. |
| Feathered beaming | Feathered beaming shows a gradual change in the speed of notes played. |
| Harmonic partials | The immediate overtones that appear when playing harmonics. |
| Octatonic scale | An eight note scale alternating between whole steps and half steps. |
| Atonal | An absence of tonality. |

| Name | Definition |
|---|---|
| Tone cluster | A group of adjacent notes played together often resulting in dissonance. |
| Extended techniques | Atypical methods of sound production that often result in unique tone colours. |
| Rhythmic diminution | Decreasing the note lengths of a musical idea. |
| Rhythmic augmentation | Increasing the note lengths of a musical idea. |
| Syncopation | When notes are played off the beat. |
| Fragmentation | Using only parts of a musical idea. |
| Multimetre | Changing time signatures within a piece of music. |
| Additive rhythm | When rhythmic patterns of quavers are grouped in a mixture of 2s and 3s. |
| Retrograde | When a motif is played backwards. |
| Permutation | Changing the order of notes in a motif. |
| Soundscape | The auditory environment which surrounds a listener. Not dependent on melody or pitch, but in feeling, colour and texture. |
| Palindrome | A palindrome is a word, number, phrase or other sequence of characters which reads the same backwards as forwards which can be used as a structure in a composition. |
| Graphic notation | Representation of music through the use of visual symbols outside the realm of traditional music notation. |
| Bi-tonality | The use of two different keys at the same time. |

# Music 2 Stage 6 – Reference list and resources

**Fiona Hill website**
**Imago by Fiona Hill – resources**, audio, videos, sounds, score, backing track, MaxMSP patch, date accessed 24/02/2020
**Music 2 Stage 6 Syllabus**, date accessed 16/06/19

## Aural/musicology

### Activity 1 – Extended Techniques
**The strange world of extended vocal techniques – Limelight**, date accessed 09/06/19

### Further listening
**Berio: Sequenza III for solo voice (YouTube)**, date accessed 05/08/2019
**Saariaho: NoaNoa (YouTube)**, date accessed 05/08/19

### Activity 3 – Musique Concrete
**The Avalanches – Since I Left You (YouTube)** (0:00-1:17),  date accessed 04/05/19
Joey Honore – **Musique Concrete 'The Olde Man' (YouTube)** (0:00-1:20), date accessed 09/06/19
**Gotye – Seven Hours With A Backseat Driver (YouTube)** (0:00-0:25), date accessed 04/05/19
**Pierre Schaeffer – Etude aux chemins de fer (YouTube)** (0:00-1:00), date accessed 04/05/19
**Pink Floyd – Money (YouTube)** (0:00-0:43), date accessed 04/05/19
**Music Concrete (YouTube)**, date access 21/07/19

## Composition
**Cecilia**, date accessed 05/08/19
**Electronic Sandbox**, date accessed 18/08/19
**GarageBand**, date accessed 05/08/19
**Logic Pro X**, date accessed 05/08/19
**Audacity**, date accessed 05/08/19
**Ina GRM – Groupe de Recherches Musicales** – GRM Tools, Evolution plugin, date access 21/07/2019

### The International Phonetic Alphabet (IPA)
**Interactive IPA Chart**, date accessed 09/06/19
**IPA Charts with Audio**, date accessed 09/06/19
**International Phonetic Alphabet**, date accessed 21/7/19

### Extension Activity
**Ben Carey**, date accessed 21/7/19