

Lesson Plan

AR & VR LESSON PLAN

Visualising Music

Learning Area	The Arts - Music & Visual Arts, Digital Technologies	Kit	Lumination Learning Lab & AR/VR Education Kit
Year Level	Years 7 & 8	Duration	1x 60 minute Lesson

Introduction/Description

Visualising music is a powerful tool for enhancing one's musical experience. It involves using the imagination to create vivid mental images that complement the sounds and rhythms of music. This technique has been used by musicians and artists throughout history, and it has proven to be a valuable source of inspiration and creativity.

Learning Intentions

Students will explore the concept of visualising music, including the different ways in which it can be done, and its benefits for musicians and listeners alike. Through a combination of guided visualisation exercises using Tilt Brush, researching the phenomenon of synesthesia, and group discussions whilst using Augmented Reality, students will develop their ability to visualise music and gain a deeper understanding of its emotional and expressive qualities. By the end of the lesson, students will have a greater appreciation for the power of imagination in the musical experience.

Task Summary

Students will create their own piece notating a piece of music using audio reactive brushes in Tilt Brush.


Preparation

Students are expected to:

- Have some background in using IMVR.
- Have some background in using the HHVR headsets.
- Have some understanding on how to use Tilt Brush and the audio reactive brushes (see [tutorial](#) if need be).
- Have a song/ piece of music given to the teacher (optional).
- Have some background in using the AR Gallery function on Google Arts and Culture ([tutorial](#) here).

Teachers should make sure that:

- IMVR headsets are calibrated and charged.
- Mobile Devices should be charged and have the latest version of the Google Arts and Culture app.

- They are familiar with Tilt Brush experience and the Audio Reactive brushes using IMVR.
- They are familiar with using the AR Gallery function on Google Arts and Culture ([tutorial](#) here).
- Teacher has a playlist on a music platform (e.g. spotify, window media player, iTunes etc) either collated by student choices, or teacher choices that has been saved/ accessed on the IMVR PC.
-  Visual Music Notation Teaching Deck has been checked and the teacher has enabled the deck's accessibility so students can access them.
- Students are divided into pairs or groups depending on how many devices are available. A suggested rotation cycle may be:

Group	Round 1	Round 2	Round 3
Group 1	IMVR	Google Arts & Culture	HHVR
Group 2	HHVR	IMVR	Google Arts & Culture
Group 3	Google Arts & Culture	HHVR	IMVR

This may differ based on student numbers and number of IMVR stations



Resources

- **IMVR Apps**
 - [Tilt Brush](#)
Tilt Brush lets you paint in 3D space with virtual reality. Unleash your creativity with three-dimensional brush strokes, stars, light, and even fire. Your room is your canvas. Your palette is your imagination. The possibilities are endless.
- **VR Videos:**
 - [TAS - The Canyon 360 4k \(VR\) www.tasvisuals.com](#) (2.39)
A combination of music and incredible visuals in a 360 experience
 - [Cave of Sounds](#) (0.22)
Visualization of sounds in VR space. Experimental project.
 - [Fantasynt | 360 VR Music Visualizer](#) (5.48)
Virtuality proudly presents: FANTASYNTH, an audio-reactive, progressive visual experience designed for Virtual Reality. Glide through a 360-degree procedurally populated environment that comes alight with the music.
 - [Hearing Color, Seeing Sound. This Is Synesthesia. \(360 Video\)](#) (4.12)
What would happen if some of your senses overlapped? What would that experience feel like? In this special 360° episode, we show you what it's like to have synesthesia.

- **Apps:**

- [Google Arts and Culture - Kandinsky AR Pocket Gallery](#)
(Best viewed on devices)
Follow Kandinsky's evolution through time and space in three augmented reality rooms
- [Google Arts and Culture - Play a Kandinsky](#)
(requires headphones)
What if you could hear color? Explore Vassily Kandinsky's synesthesia and "play" his pioneering masterpiece, Yellow-Red-Blue, with the help of machine learning.

- **Teaching Materials:**

- [Classical Music Visualization - YouTube](#)
- [Painting Music | Peaceful Calm Piano Melodies | Classical Instrumental Music](#)
-  Student Digital Notebook Visual Music Notation
-  Visual Music Notation Teaching Deck

Other Learning Areas

- Visual Arts
- Digital Technologies

Learning Sequence

1

Introduction
(5-10 mins)

Ask students to close their eyes and listen to a piece of music (your choice or from this [playlist](#)) and visualise what it would look like notated. What colours did they see? What shapes? Any images? Ask them to respond on slide 2 of their

☐ Student Digital Notebook Visual Music Notation

Alternatively, students could have some paper and textas and draw as they listen to what they 'see' in the music.

Explain to students that the ability to 'visualise' music and notate in different ways is important to the creative process. Show them 30 seconds of one of the following pieces from this playlist [Classical Music Visualization - YouTube](#) and ask them to respond to on slide 3 of their

☐ Student Digital Notebook Visual Music Notation

Introduce the stations to students and their tasks.

2

Development
(40-45 mins)

Station 1 - Tilt Brush

Using the Audio Reactive Brushes in Tilt Brush, students create their own form of notation or visual piece to a piece of music. Depending on the lesson, the teacher may already have some pre-loaded choices in a playlist the students can choose from, or the teacher may have collated personal song choices from the students for them to use.

Station 2 - HHVR

Students view the 360 videos that show examples of music notation in a visual medium. They are to answer the following discussion questions on slide 6 of their

☐ Student Digital Notebook Visual Music Notation :

- How does this connect with what you know already about music notation?
- Do you believe using colour/ shapes etc is a viable form of musical notation? Why/why not?
- What place does visual notation have in music?

Station 3 - Kandinsky

Students explore the '[Play a Kandinsky' experiment](#) on the Google Arts and Culture App. Students then head to the pocket gallery function on Google Arts and Culture and access the [Kandinsky Gallery](#). As they explore this gallery, they are to answer some questions on chosen pieces on page 7 in their

☐ Student Digital Notebook Visual Music Notation

3

Conclusion
(5 mins)

Students complete the following statement on visual notation of music in their

☐ Student Digital Notebook Visual Music Notation :

I used to think _____ and now I think
_____ because_____

Modifications

Adaptations

Students may all have the same piece of music to draw to on Tilt Brush.

Students may work on one piece together as a group or pair on Tilt Brush.

Extension Ideas

Students could screen record a walkthrough of their piece on Tilt Brush to make a 'music video'.

Students may write a musician's/ artist's statement on their piece they created in Tilt Brush.

Curriculum Connections

Australian Curriculum	NSW Curriculum	Victorian Curriculum
Year 7&8 music AC9AMU8D01 Develop and practise listening/aural skills and vocal and/or instrumental skills/techniques for manipulating elements of music to achieve expressive effects	Stage 4 - Music 4.6 experiments with different forms of technology in the composition process	Year 7&8 music Experiment with elements of music, in isolation and in combination, using listening skills, voice, instruments and technologies to find ways to create and manipulate effects (VCAMUE033)

<p>Visual Art</p> <p>AC9AVA8D01</p> <p>Experiment with visual conventions, visual arts processes and materials to develop skills</p> <p>AC9AVA8D02</p> <p>Reflect on the ways that they and other artists respond to influences to inform choices they make in their own visual arts practice</p>	<p>Stage 4 - Visual Art</p> <p>4.1 uses a range of strategies to explore different artmaking conventions and procedures to make artworks</p> <p>4.6 selects different materials and techniques to make artworks.</p>	<p>Visual Art</p> <p>Experiment with materials, techniques, technologies and processes in a range of art forms to express ideas, concepts and themes in artworks (VCAVAV035)</p> <p>Explore how artists use materials, techniques, technologies and processes to realise their intentions in artworks (VCAVAE034)</p>
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<p>Cross-Curriculum Priorities</p> <p>☒ Aboriginal and Torres Strait Islander Histories and Cultures</p> <p>☒ Asia and Australia's Engagement with Asia</p> <p>☒ Sustainability</p>	<p>Capabilities</p> <p>☒ Literacy</p> <p>☒ Numeracy</p> <p>✓ Digital Literacy</p> <p>✓ Critical and Creative Thinking</p> <p>✓ Personal & Social Capability</p> <p>☒ Ethical Understanding</p> <p>☒ Intercultural Understanding</p>
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