

# TOOLKIT

## AUDIO VISUALISATION

### BRIEF INTRODUCTION

Understanding how visuals and sounds combine can deepen our appreciation for objects, by tapping into psychoacoustic theory and graphic scores, this toolkit offers an assignment on creating an Audio-Visual Experience.

### BACKGROUND INFORMATION IN VIDEO(2MIN)

[https://media.ed.ac.uk/media/Further+information+about+Toolkit+Audio+Visualisation/1\\_627fdu5s](https://media.ed.ac.uk/media/Further+information+about+Toolkit+Audio+Visualisation/1_627fdu5s)

### INSTRUCTIONS (15MIN)

## 1 CHOOSE OBJECT

(2 min) Choose an object that interests you and that has a distinct sound associated with it. It could be anything from nature, machinery, musical instruments, or everyday objects.



## 2 TAKE PHOTO

(1 min) Take a clear and focused photo of the chosen object.



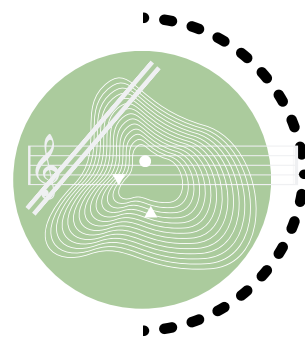
## 3 CAPTURE SOUND

(3min) Capture the sound that the selected object makes. This could be its natural sound, like the chirping of a bird, the ticking of a clock, or any sound produced when interacting with the object.



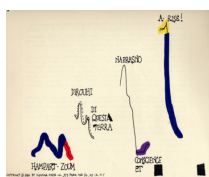
## 4 MAKE A VISUAL SCORE

(6min) Based on the audio, create **visual scores** on paper or drawable software in your phone (e.g. Note), it can blend conventional elements notation with the unconventional.



**\*The visual score** means a written notation of a musical or dance composition (MOMA, n.d.).

#### YOU CAN REFER TO SOME MUSICAL ARTWORKS BY ARTISTS.



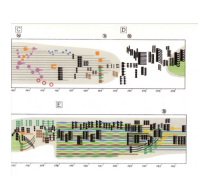
**3. John Cage - Aria**  
John Cage, the man behind so much groundbreaking music including the famously silent '4'33", was a keen graphic score composer. It might look like random scribbles, but each line indicates a different style of singing, rotated in ways that are different colors, and the black squares indicate non-specified 'non-musical' sounds.



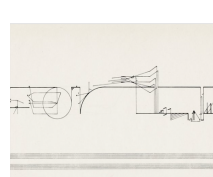
**4. Bergström-Nielsen - Towards An Unbearable Lightness**  
One feature of many graphic scores is they can be played by any number of players, of any standard, on any instrument. His two performances sound the same, but all the players will be following the same instructions.



**5. Crumb - Twelve Fantasy-Pieces after the Zodiac for Amplified Piano**  
With so many notes, this score would be difficult for any pianist to read if it was laid out simply on the page. Luckily, this piece by Crumb also contains three detailed pages of instructions, with movements including Primeval Sounds, Crucifixion and Spiral Galaxy.



**6. Ligeti - Artikulation**  
Ligeti wrote his electronic piece, Artikulation, in 1958. Although it existed as a recording, there was no score for musicians to 'see' the music. Rainer Wehinger studied the piece in the 1970s and created this colourful explanation of the music, with a text key explaining all the colours and symbols.



**7. Cardew - Treatise**  
This is just one fragment of the 193-page score for this lengthy work. Unlike many graphic scores, this piece has no instructions as to how it should be played, so every performer has to make up their own rules!

Classic FM. (n.d.). John Cage - Aria. [online] Available at: <https://www.classicfm.com/discover-music/latest/graphic-scores-art-music-pictures/cage-aria/>

## 5 SHARE

(3min) Finally, you can interpret the graphic score by yourself. As well as, you can share the graphic score to others, let them to interpret.



**You can share and upload the visual scores you create here:**

[Audio Visualisation \(Congmeng Wang\)](https://www.congmengwang.com/audio-visualisation)

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Classic FM. (n.d.). John Cage - Aria. [online] Available at: <https://www.classicfm.com/discover-music/latest/graphic-scores-art-music-pictures/cage-aria/>

Hochberg, J. (2010). John Cage's '4'33". YouTube. Available at: <https://www.youtube.com/watch?v=JTEFKFXs4>

MOMA. (n.d.). Score. [online] Available at: <https://www.moma.org/collection/terms/score#:~:text=A%20written%20notation%20of%20a.date%20or%20by%20another%20performer> [Accessed 6 Dec. 2023]. School, T.L.A.R. (2020). Psychoacoustics: The Psychology of Sound. [online] The Los Angeles Recording School. Available at: <https://www.larecordingschool.com/psychoacoustics-the-psychology-of-sound/>