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| **Date:** Week 11 | **No. Of Pupils:** 30 aprox. | **No. Teachers:** 2 | **Duration:** 1 hour |

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| **Role of Teaching Assistants:**  To provide support to student’s who were absent or struggling. To participate in group performances and discussion. Advanced peers should also be used to assist other peers.  Aid with set up and take down of equipment. |
| **Prior Knowledge of Pupils:**  An understanding of how to operate a Raspberry Pi and write basic coding using the application Sonic Pi.  Commands: *Play, Sleep, Run, use\_synth, loop do, end, use\_sample, sleep sample\_duration, in\_thread, rrand, .choose, with\_fx, attack, release, sustain* |
| **Contents: Lesson 11 of 11(12)**  Student will use all of their knowledge developed throughout the term to participate in a class performance of a Sonic Pi Orchestra. |
| **Vocabulary/keywords**  Conduct, fade, harmony, tonality, texture, instrumentation, timbre |
| **Anticipated problems:**  Issues with Raspberry Pi (check all Pi’s before use)  Possibility of absence students (peers/teaching assistants to assist with catch up) |

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| **Learning Objectives**  **1.** To perform as a class  **2.** To reflect upon the performance  **3.** To understand Sonic Pi as an instrument | **Learning Outcomes**  **All** pupils would be able to perform in the Pi ensemble  **Most** pupils would be able to reflect upon the performance  **Some** pupils would be able to conduct the performance |

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| **Resources**  Conducting cards |
| **Risk Assessment**  Medium – Trip hazard due to multiple cables, use of electrical equipment. |
| **Ultimate Learning Outcome**  **1.** To compose a piece of music using Sonic Pi  **2.** To create a live performance as a group using Sonic Pi  **3.** To understand how a computer can be used as a musical instrument |

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| **Timing** | **Task/Activity** | **Resources** |
| **Explain** | Explanation of the performance as well as assessment criteria and etiquette.Have three students conduct alongside, each one should take control of a different environment. |  |
| **Explore** | Pi Ensemble Performance  - Underwater  - Forest  - City  - Space | Speakers (*Loud*) |
| **Evaluate** | Reflection upon the performance. Students should be analysing the musical elements of the performance as well as the conductors compositional choices |  |
| **Extend** | Engage in using Sonic pi as an instrument discussing computer science and musical issues. |  |
| **Closing** | Pack up equipment. |  |

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| **Equipment**  x15 Raspberry Pi, x15 Monitors, x15 keyboards and Mouse, x30 sets of headphones, x15 headphone splitters, x15 SD cards, x15 power supplies, x15 volume controllers. Speakers (loud) |

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| **Possible Questions for Reflection/Recommended Resources** |
| How would you describe the texture of the piece as the conductors brought in different parts?  How did using dynamics individually affect the whole performance?  Can a computer be a musical instrument?  Do you feel like musicians using Sonic Pi?  What could be the next step with using computers to make music? |

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| **Assessment** | **Assessment Criteria** |
| **Individual** – Using all knowledge gathered throughout the course students should create their own personal composition based around the suggested briefs listed (*Can be altered*).  **- Compose an original piece in any style.**  **- Compose a horror soundtrack for a film**  **- Rewrite a famous/well known song using Sonic Pi.**  Documentation on planning and development of the composition is also recommended to aid assessment. This can be completed via: written, audio diary, video diary. (*Due week 10*) | Use a system of 1-4 to assess different aspects of the composition  **Technique**  **1** (*easy*) – correct use of commands: play, sleep, loop do, end  **2** (*Intermediate*) – correct use of commands above plus: use\_synth, use\_sample,  **3** (*Upper Intermediate*) – correct use of commands above plus – in\_thread do, with\_fx, attack, release, sustain.  **4** (*Advance*d) – correct use of commands above plus: rrand, .choose, default.  **Structure/Texture**  **1** (*easy*) – use of 2-4 loops to create different sections  **2** (*Intermediate*) – The above plus use of multiple synths and instruments.  **3** (*Upper Intermediate*) – Use of threads to layer instruments in time  **4** (*Advance*d) – Advanced use of threads and instruments.  **Timbre/FX**  **1** (*easy*) – correct use of at least 2 FX  **2** (*Intermediate*) – the above plus altering parameters of FX throughout piece.  **3** (*Upper Intermediate*) – the above plus use of instrument manipulation.  **4** (*Advance*d) – the above plus combination of other features into FX such as rrand.  **Style/Write Up**  **1** (*easy*) – piece matches overall feel of brief.  **2** (*Intermediate*) – Clear sense of influences and application.  **3** (*Upper Intermediate*) – Detailed reflection using correct musical terms on piece.  **4** (*Advance*d) – piece stands on its own as a composition with a detailed write up explaining thought process of creation. |
| **Performance** – All students will engage in a soundscape performance at the end of the term. There will also be opportunity for students to conduct as well. Possible environments. (*Due week 11*)  - **Space, City, Forest, Underwater** | **Preparation**  **1** (*easy*) – inadequate preparation of 4 soundscapes.  **2** (*Intermediate*) – 4 basic loops for performance with a clear contrast in sound  **3** (*Upper Intermediate*) – use of advanced techniques to create soundscapes.  **4** (*Advance*d) – Loops display clear understanding of sounds in relation to music using advanced techniques  **Performance**  **1** (*easy*) – Compositions are played without interaction.  **2** (*Intermediate*) – correct use of faders to alter dynamics.  **3** (*Upper Intermediate*) – basic use of live coding within performance.  **4** (*Advance*d) – Advanced use of live coding potentially from a blank workspace during the performance. |