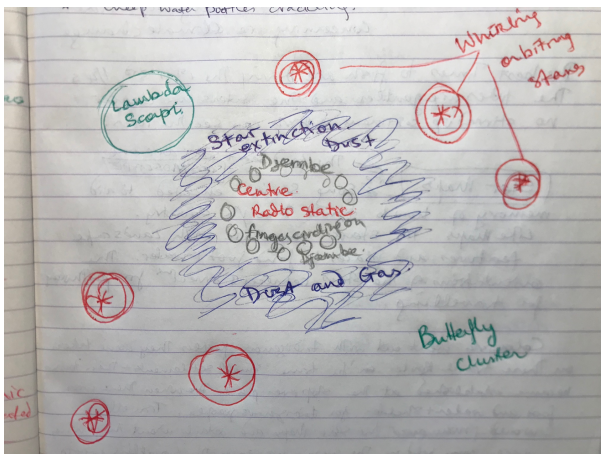


Year 5/6: The Milky Way Black Hole. Sagittarius A

There was no way that I could not let a Neighbourhood explore their chosen neck of the Galaxy woods just because another Neighbourhood had voted for the same thing. After all, there is more than one Black Hole in the Universe. The 5/6s were quite knowledgeable about black holes and had a number of facts to pin against the improvised sounds they were finding. They knew that there is a super huge black hole at the centre of the Milky Way Galaxy, that nothing can escape from a black hole - not even light, and that, if you fall into a black hole you'll get stretched. We looked more closely at the Milky Way black hole and learned that it is called Sagittarius A. Closely orbiting near it is an open star cluster of about one hundred and twenty stars called the Butterfly Cluster, and a constellation of stars that form the tail of the Scorpius Constellation called Lambda Scorpi. BINGO: Instrumental mini ensembles were literally falling out of the sky! There are other whirling orbiting stars that are visible, but Sagittarius A itself can't be visually observed due to star extinction dust. Astronomers have detected strong radio waves emitting from the black hole resulting from huge amounts of mass being concentrated into a smaller area of the black hole in a catastrophic collapse. This sounds like a steady hiss or static. Other radio waves emitted from stars whose orbit is close to the black hole can also be detected.

The more we learned about Sagittarius A, the more the 5/6s found that they had a narrative to convert into a sound scape, rather than creating a narrative from a palette of sound exploration. As we had 120 students in the 5/6 Neighbourhood, we decided to have two interpretations of Sagittarius A with some subtle changes in the sound worlds.

We also became excited about a 'new comer' to our bells and percussion sound world: the Steel Drum.



Sagittarius A: Tonal Centre G. 5/6 C & D	Sagittarius A: Tonal Centre C. 5/6 A & B
Lambda Constellation: Bells pitched C, G & D led by Elissa. 8 students	Lambda Constellation: Bells pitched C, G & D led by Elissa. 8 students
Butterfly Cluster: G triad pitched Stainless steel bowls & metallophones (with G, B & D keys only) with Peter on the steel drum. 8 students.	Butterfly Cluster: Steel tongue drums in C with Peter on Steel Drum. 8 students
Orbiting Stars: Harmonic Whirlies in G & C. 3 students	Orbiting Stars: Harmonic Whirlies in G & C. 3 students
Remaining students are:	Remaining students are:
Star dust/Black Hole static: Crumpling grease proof paper	Star dust/Black Hole static: Swirling light weight chains on the gym floor
Hot Photons: Bell with mallet rubbing the outside. Choose a number between 4 and 12. Walk chosen number as steps while sounding your bell with the rubbing mallet. Stop, bob down, count your number in seconds, stand and repeat.	Hot Photons: Bells and chains. Create a shimmering sound by swirling the chain around the perimeter of the bell which results in a softly pitched sheen of sound.
	Hot Photon Movement: Choose a number between 4 and 12. Walk chosen number as steps while sounding your bell with the chain. Stop, bob down, count your number in seconds, stand and repeat.

Initial floor plan for 5/6 Black Hole and the Table showing Black Hole components with student performer numbers and instrumentation.

In Week 5 when Pete and Elissa performed an 'improv jam' for all the Home Groups on the steel drum and the steel tongue drum, the students said it sounded like we were all at the beach! They also recognised the sound of the steel drum from the soundtrack to the film 'The Little Mermaid'. These connections are no accident as the steel drum creates a sound world at the heart of the great carnivals in the Caribbean. The steel drum, as we know it today, was formally invented by Ellie Mannette in the 1950s, and grew out of the tradition of banging trash can lids at Carnival time in the early 20th Century. Excluded from the grand Carnival itself, the poorer people of Trinidad took to the streets to celebrate their own carnival with the exuberant racket of scrap metal homemade instruments. It is fantastic that the steel drum emerged from this tradition and that Trinidad is proud to name it as their national instrument.

There are massive steel drum orchestral competitions every year, and this instrument has taken the world by storm as the quintessential street party sound. However, Pete also created sounds in the steel drum that students said sounded like:

'Atoms' (Zara Yr 2), and the orbiting of planets around the sun, or, like 'Beam me up Scotty' from Star Trek (Chris Yr 5/6). By swirling marbles around in the pan of the steel drum a magical sound of all the pitches emerged beneath the rolling marble clatter. It was like a 'sound kaleidoscope'. Now, of course, the students wanted to roll marbles around everything!

The sounds of steel instruments were a focus of the 5/6 performance and the different timbres achieved sounded terrific in the gym. The pinging and flanging bright sound of the steel drum, contrasted with the softer rolling steel tongue drums the students played. Also, the round resonant metallophone bars, which were pitched lower than the other metal instruments, had a richer tone, and these had a way of 'sound- seeping' like mist though the microtonal dong and boing of the random stainless-steel bowls.



Pete introduces the Steel Drum/Pan and swirls marbles around its interior. Students improvise on the Steel Tongue Drums, and compare the sounds of metallophones and stainless-steel bowls.

Elissa and Peter worked with the Lambda and Butterfly groups to encourage them to find their own music language for their constellations, and also to be able to lead their groups in performance. The departure point for finding a performance shape was directed by the students. The Butterfly Constellation performers were inspired to find musical gestures to express the shapes of expanding butterfly wings and other butterfly behaviours, whereas the Lambda students chose cluster patterns to represent stars twinkling on and off.

Yr 5/6 students rehearsing the song 'Cosmogony' and brainstorming Lambda Constellation ideas with Elissa. The students 'test drive' the 'Harmonic Whirlies'.



Pete shapes the butterfly sound gestures, and Elissa asks the students to consider which instrument makes the best star dust: fingernails swirls on djembe, rain sticks or rustling grease proof paper?

