WHAT'S IN A NAME?

Bringing Maths and Music together in Project Based Learning with an Orff approach.

LIGHT SPEED

This session covers a 6+ week unit of work in both Maths and Music. There is no way to include everything you'd need to know to teach it in these notes, but extensive resources will be given to you on the day and even more resources are available online.

ONLINE

Grab all of the resources here:

http://bit.ly/ZUw05W

All of the worksheets and performance scores will be shared in dead-tree format during the workshop, but the online versions include videos, study scores, Sibelius files, recordings and more.

They fit into three sub-folders, which reflect the structure of this workshop. They are…

1 PLAYING

We'll perform the classroom arrangement of the letter B section of my *Passion* which was originally composed for symphonic winds. In the online folder, a score in PDF and Sibelius format is provided, along with an MP3 of a sample realization.

The students and/or teacher can choose the structure of the piece, with three sections to learn. It can be taught by rote, though we won't have time to do that today. The solos are provided in all common transpositions, and can be performed in canon with a number of soloists.

2 LISTENING

The performance repertoire is given context through active listening and analysis. It turns out that the piece the students were playing is a code, a dedication to the commissioners of the music.

Looking back in history, we listen to pieces by Bach, Liszt, Brahms and Schumann and discover messages written in them. We then come back to the future and decode further messages in the more recent Humberstone. What do they mean?

In the online folder, scores, recordings and worksheets are included.

3 MATHS/COMPOSITION

We'll do a shortened version of the maths task, in which maths students practiced calculating angles while creating an attractive pattern. The numbers involved in creating the pattern then become a 'code' to be encrypted inside their compositions in music class.

In our classes, students used GarageBand to work independently to create their composition. They added multiple layers to compositions using only pitches generated by their codes.

In classes without music technology, the same process could be used in small groups, where each participant creates a layer from the same pitch set, based on the code.

A worksheet is provided to help students map their code to pitches which in turn are then used in composition.

In the online folder, stimulus/tutorial videos are provided, plus samples of work and the worksheet.

If there is time, I'll show student samples of work, and summarise the approach to Project Based Learning that I've developed in response to 18 months of study in Australia and internationally.

The music programme for this unit of work is available as a Google Doc here:

http://bit.ly/10bjCAW