

Music and Maths – A Perfect Pairing

How a cross curricular approach to music and maths can improve children's attitudes to learning and outcomes in both subjects.

During the academic year 2019-2020, with funding from Wiltshire Music Connect, The Mead Academy Trust carried out a research project designed to explore how the teaching of **music** and **maths** can be combined in the primary school classroom, and the impact that this has on pupil outcomes in **both** subjects. The project aimed to test new, innovative approaches and analyse their success and long-term impact.

The project involved three distinct strands of work:

1. Using songs linked to mathematical concepts
2. Using 'Mathewhackits' to embed learning of timetables recall and understanding of 'time'
3. Music and maths workshops with a visiting specialist (*Jimmy Rotherham – Primary music specialist and finalist in the 2019 Global Teacher Prize.*)

This short report summarises the key outcomes of the project and provides useful links for colleagues at other schools.

1. Using songs linked to mathematical concepts

Using songs as a warm up activity, three times a week, before delivering formal lesson learning was an exciting development. Teachers soon discovered that delivering maths singing offered a fun, fully accessible and different approach to maths learning. Parents came to ask what the songs were and if they could access them at home because the children loved them so much. Knowing the songs provided the opportunity to prompt children to apply their songs during learning tasks e.g. counting in fives.

There are a number of suitable songs available in '[I Love Maths](#)' and '[Marvellous Maths Songs](#)', published by [Out Of The Ark Music](#). The 'Counting in 5s' song impacted learning the most, with data evidencing progress by all learners; by the end of the programme, 50% of the learners were secure and confidently able to use the song to count in 5s accurately.

2. Using 'Mathewhackits' to embed learning of timetables recall and understanding of 'time'

Children were introduced to '[Mathewhackits](#)', which uses rhythm to enhance learning of timetables using Boomwhackers, whilst also introducing children to different styles of music and time signatures. The objective was to create a short, high impact intervention that could be used by the class teacher on a daily basis, and we found that it is particularly effective when it is used every day. We observed great engagement from the children, leading to progressive fluency of timetables and improvement of beat and rhythm.

Teachers found the programme easy to fit into their busy daily schedule, with some choosing to use it during daily DPA sessions. Using the resource had enhanced their teaching of timetables, with children more confident to chant the timetables by the end of the set period.



Children told us that *'I like it because it gets the tune in my head so I can remember it'*. Progress was tested using children's average speed using Timestable Rockstar paper tests which encompass speed and accuracy. The baseline and two consequent testing periods across the year show considerable to significant progress for most children across the year group. Using the Boomwhackers as part of their daily times table practice, in conjunction with other teaching method, has had a positive impact on progress.

3. Music and Maths workshops with a visiting specialist

We worked with [Jimmy Rotheram](#) (*primary music specialist and finalist in the 2019 Global Teacher Prize*) to hold a series of workshops for children, which introduced a wide variety of resources to improve children's understanding of maths through music. These included keeping a pulse, rhythm, measuring pitch with the body, doubling and halving tempo, singing timetables with a ball, comparing and sequencing intervals of time, estimating the answer to a calculation, and right angle dancing.

Children were involved in a very practical way, and loved the experience. With visits to schools now so restricted, we would strongly encourage others to explore holding similar sessions virtually. You can also find out more in this helpful [BBC video](#).



The research project enabled us to consider the impact of combining the teaching of maths and music using a range of approaches and resources. Although we were able to collect some quantitative data, most of our results and data were qualitative in nature. Both the teachers and children enjoyed the combined teaching approaches and teachers reported that children were more confident with some aspects of maths. Since the formal research project ended we have continued to use the approaches and resources to enhance teaching and learning.

If you would like to find out more about this project please contact teachingschool@themead.wilts.sch.uk