



Significant Episode: Chocolate cake

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Finding: 3.8 Pathways

Include multiple pathways and approaches to learning that allow students to investigate a range of mathematical concepts and methods and strategies.

There were a couple of things that stood out for me from this lesson. First, all my students, and particularly my Indigenous students, found the active and 'hands-on' nature of the activity fun and engaging. Second, and perhaps more importantly, they seemed to gain a better grasp of the concepts (fractions) and were thinking more deeply about the mathematics.

Background

I was teaching a 'tricky' year 8 class when I began the *Make it Count* program. Our first task that we were set through the program was to choose a lesson from Maths300 and try it out with our class. At first I did think 'how will I have time for that?' After a search through the lessons, I noticed one called 'Chocolate Cake', which directly related to fractions, which coincidentally was our next concept according to our busy term overview.

What happened?

I gave it a go – without going into detail about the lesson – it involved students getting out of their seats and making choices that would affect their and their groups' outcome in the game. The students absolutely loved it and we ended up playing it a few times. After the third game of 'Chocolate Cake' we started recording the results in a mathematical format and the students got it. Some students who already had an understanding of fractions seemed to understand the concept well. Others seemed to have 'light bulb' moments, which were announced to everyone. Some students even stated "OHHH that is what my year 7 teacher was trying to tell me".

This activity gave the students a visual and material platform to dive into fractions. I was so impressed by the outcome of the learning that took place and the conversations that took place that I have incorporated this style of learning/teaching as part of my teaching pedagogy.

Results

I began to adapt my lessons so that they were hands on, interactive, related to the real world, and gave the students a tangible memory that they could recall and relate to the concept. I found the students enjoyed immensely any lesson that involved a game where there was a winner, this aligned perfectly with their competitive nature. I also noticed that they enjoyed the interactive activities that allowed them to get up and move about the classroom. This was reinforced by conversations where students stated "this can't be maths, because we are playing games and having fun."

When we met as a group for *Make It Count* I shared my story and expressed my enthusiasm for the active style of learning (see Terry's significant episode). Even though I was concerned about 'time' for these style of lessons, I discovered that the students grasped the concept quicker and had better recall which resulted in improved results, but most noticeably there was a huge improvement for wanting to learn maths.

"The key outcome for me was the power of a meaningful and conceptually relevant context for investigating mathematical ideas."

