Danny Brown’s Make Maths Workshop

## Session a

Danny Brown delivered his first session of the year as part of the ATM London schedule. He explained that mathematics lessons should be about having fun whilst our students learn and he delivered a thought provoking and exciting session. Danny teaches mixed ability classes and all of his problems are delivered in a way that makes them accessible to all students. He demonstrated that by using open ended investigations we are able to challenge our most able students and simultaneously engage the rest of the class.

We started off standing in a circle discussing the gruesome ways the Romans killed people, which was an excellent starting point for Josephus Problem[[1]](#footnote-1). The question was simply: Where should you stand if you don’t want to get killed? This gave a great start to a mathematical investigation that could easily be used in the classroom. After about 10 minutes we were all drawn in by the algebra that emerged from the discussions.

Using a similar idea from the Josephus Problem we there shown a quick card trick that applied the mathematics! From card tricks, to counting chickens[[2]](#footnote-2) we were shown a fascinating way of proving Pick’s Theorem. It was great to be presented with mathematics that was well connected and offered the opportunity of some real exploration.

Finally, we were shown some finger maths[[3]](#footnote-3). This was a quick and fun method for doing arithmetic with your hands. Danny shared some lovely diagram that students had produced from this idea and we were drawn into a discussion of the mathematical patterns that had emerged.

The idea behind this session was that we should be able to teach mathematics in schools in a way that is fun and engaging. Danny’s approach is different but it is clear all students are given the opportunity to develop mathematical understanding and to become creative thinkers. Students are more likely to have an interest for the subject and giving them this type of mathematical diet for three years the GCSE should be an easy step for students to take. If you want to look at any of the activities discussed or the large collection of Danny’s resources visit [www.gfsmaths.weebly.com](http://www.gfsmaths.weebly.com). And if you try anything out please participate in the forum at London Maths or keep Danny posted through his website.

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1. Use the following link for the problem http://gfsmaths.weebly.com/josephus-problem.html [↑](#footnote-ref-1)
2. http://gfsmaths.weebly.com/counting-chickens.html [↑](#footnote-ref-2)
3. http://gfsmaths.weebly.com/finger-maths.html [↑](#footnote-ref-3)