

2019 MCTM Mini-Grant Recipient Follow Up: Breakout Boxes!

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Student engagement and motivation is something that I believe all teachers strive for daily. I think for Mathematics teachers this can often be more difficult to achieve as students often seem to have an aversion to, or anxiety about, the subject early on. This has been my experience at least and so I find myself searching for activities and ways to make the subject area as engaging as possible.

I was awarded a MCTM mini- grant for the 2019-2020 school year to help make this happen. My plan – breakout boxes. You may be asking yourself what a breakout box is. **A breakout box is a box or boxes with a series of locks that your students are trying to get into. Each of these locks have clues that lead to being able to open them.** This is where the mathematics comes in. Student clues consist of a series of problems, puzzles, or other material to gain the combination to the locks. Solve these problems correctly and you get to the next clue and/or box, eventually leading to the final lockbox, in which is the final prize. This should be something students want to get to each time and can vary based on the class.

There is preparation that needs to happen ahead of time to get the clues ready for this activity. However, once you have prepped this activity for a topic you will be able to use the materials for years to come. The only preparation that will need to happen from topic to topic is that each time you use these breakout boxes you will need to change the combinations that open the locks. Make sure you save the paperwork when you purchase locks that shows how to change these combinations. Also, for added interest, use various types of locks such as number and letter combinations, directional locks, keyed locks, and more.

Unfortunately, I cannot at this point give a first-hand account of how this worked in my classroom as the state went to lockdown and remote learning as I was preparing to use the breakout boxes in my classroom for the first time. I can however account for the fact that my students' interest was piqued from the moment the supplies I ordered arrived in the classroom. Something new was being prepared for them, a surprise that used special materials. This alone is a way to gain interest early on. Additional reasons that this will catch students' attention and keep them engaged is that they will work in small groups with a competitive element added in of who can "breakout" the fastest. An added bonus, this relatively inexpensive idea to help student motivation can work for most grade levels and any subject matter.