

Mindset Mathematics Materials
Excellence in Education Grant Cycle Spring 2020
Heidi Pruett

“Maths is a subject of beautiful connections, it is not a long list of disconnected topics.”
-Jo Boaler, Professor, Graduate School of Education, Stanford University

Description:

Last year I purchased the complete middle school set of Mindset Mathematics: Visualizing and Investigating Big Ideas by Jo Boaler, Jen Munson, and Cathy Williams. This set includes California State Standards Mathematics Domain related activities for grades 6, 7, & 8. These hands-on, team-based mathematics explorations that I have implemented in all grade levels this past year have been a huge success. Students are excited to interact with mathematics in a new way. These explorations deepen mathematical understanding and interest by providing students with opportunities to make connections across mathematical domains and with the real-world. I use these activities in math intervention, accelerated math, and math extension classes. I was unable to fully implement all of the lessons because I do not have all of the supplies. This grant would cover the material lists for all three grade levels.

Benefits:

This grant would greatly enhance the lessons for mathematics students in grades 6, 7, and 8. The lessons have already been implemented with students in intervention and with students in accelerated pathways. The "low-floor-high-ceiling" format of the lessons provide access points for all students to engage while also providing a boundless pathway for students to take the explorations as far as they want to go. These types of activities encourage collaboration and teamwork which aligns with our district-adopted math curriculum, CPM. Having all of the materials to fully implement all of the lessons will provide an enhanced learning experience for all students.

I want to be clear that this is a supplemental curriculum and does not replace the district-adopted curriculum. Based on student feedback, I have interspersed the Mindset Mathematics lessons with CPM and they provide a refreshing new way to experience and think about the mathematics that helps to deepen student understanding, interest, and enjoyment of the subject.

Success of Program:

Students consistently report that they love math lessons with manipulatives and really love math projects. This grant would greatly enhance the learning experience in my classroom. I have already seen an increase in interest, enjoyment, and understanding with the lessons that I have implemented and am confident that this will increase significantly more with all of the necessary materials. I will monitor the success of this program through regular student surveys.

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Implementation:

These lessons will be implemented at the beginning of the school year and will be a large part of creating a positive and collaborative classroom culture. The lessons will then be dispersed throughout the school year on a regular basis. For example, students have the opportunity to make connections between 2D and 3D worlds after completing a chapter test in CPM on the area of 2-dimensional shapes. These lessons are also a great way to wrap up the school year by tying multiple domains together in a hands-on student generated math project.

Can you share this grant with your grade level or subject team?

The materials provided by this grant would be shared with other math teachers at Alder Creek Middle School. Collaboration is a strength at our site and I would certainly share the lessons and materials with other mathematics teachers. The materials can also be used to enhance the existing CPM curriculum. I have requested ample sets for student study teams of 4 students to share when possible.

Sustainability:

These materials are reusable and durable. I will not need any additional funding for these lessons and am confident that they will be used in my classroom for years to come. The materials are also transferable to other curricula.

Materials List

Lakeshore

Snap Cubes	\$ 19.99 x 8
Centimeter Cubes	\$ 29.99 x 8
Pattern Blocks	\$ 9.99 x 8
Cuisenaire Rods/Fraction & Decimal Builders	\$ 29.99 x 8
Square Tiles (Magna Tiles Master Set)	\$ 129.99 x 1
Angle Rulers/Protractors (Set of 30)	\$ 29.99 x 1
Kinetic Sand (5 lb)	\$ 49.99 x 1

Office Max

Fillable Geometric Solids	\$ 19.89 x 4
Meter Sticks	\$ 8.39 x 8
Yard Sticks	\$ 10.79 x 8
Classroom SAFE-T Compasses	\$ 4.49 x 35