

# Mandala School Newsletter

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## Student of the Week



Above, Graham and his brother, Nolan read a book report during morning meeting.

Below, Graham built a line of cubes and then broke them down into 10s to count. 177 was the final result!



**G**raham is 8 years old and has been at Mandala School for 4 years. At school he likes playing games and art class. When he grows up, Graham wants to be an artist. He'd like to write and illustrate fairy tale books.

Graham's favorite day of the week is Friday because it has the word fries in it and he likes fries. He also likes apples and plain cheese pizza. If Graham could go anywhere, he would go to a trampoline park. His favorite movie is "Karate Kid." His favorite color is red. Graham likes to play uno, draw, color, have snowball fights, go sledding, and build snowmen. He also enjoys sunsets.

His favorite people are his mom and dad. He likes to play games with them. His favorite animals are werewolves and dogs. His favorite sea animal is a shark or a pufferfish. His favorite artist is the Beatles. His favorite Eric Carle book is *The Mixed Up Chameleon*. He likes going to hotels with swimming pools.

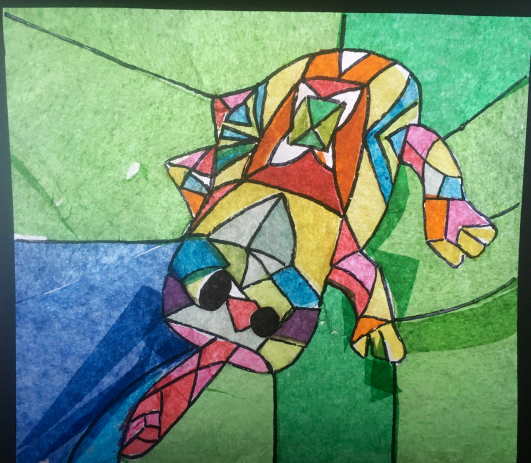
"One time when I was bowling, I rolled a bowling ball but then it hit my pinky and it crushed my pinky. I cried a lot because it crushed my pinky. Since then, I've never gone bowling again."

Interview by Elena, Ama, Starlight, Kyle, Flora, Bryce, and Millie

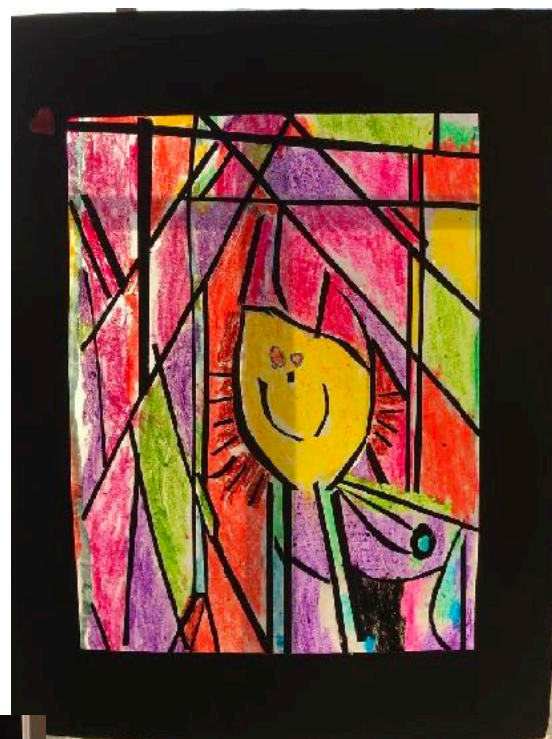
The fun continues in science class! We are learning about solids, liquids, and gases. This week we made oobleck. Thank you Sarah and Kaitlyn for your helping hands.







In January the older Mandala students visited a treasure in the Village: Baker Memorial Church. They spent time studying the stained glass windows and learning about the history. All Mandala students worked on their stained glass project. Each level using a slightly different technique. Miss Jeannet assisted with the black "lead" strips as that became a bit too much precision work. We started this on January 6, when some students looked for a fitting theme in a world that showed turmoil... Ask them about it. Their work turned out very beautiful. We have some great artists in Mandala. Looking at treasures inspires to create treasures... Enjoy our very own colorful art show from inside or outside the font room.





# What is Density?

By Nolan, Sachin, Omi, & Finn

Density is how compacted an object is. For example, a cup of snow is not as compacted as a cup of metal.

If you want to find the density of something, take the weight and divide it by volume.

To find the volume of a cube, multiply the length, the width, and the height together. Because they are cubes, those measurements are all the same. The cubes measured 2.45 centimeters on an edge so  $2.45 \times 2.45 \times 2.45 = 14.7$  cubic centimeters.

We used a balance scale to weigh cubes of the same size but different materials. Here are the results.



Cube	Weight (grams)	Volume in cubic cm	Density weight/volume
Light gold	135.6	14.7	9.2
Dark gold	150	14.7	10.2
Dark silver	125.7	14.7	8.6
Light silver	43.6	14.7	2.97
Dark gray	30.4	14.7	1.6
Dark plastic	19.0	14.7	1.3
Light plastic	15.3	14.7	1.0
Red oak	11.6	14.7	.79
Pine	8.3	14.7	.56

We did a crown problem based off of when Archimedes was trying to figure out if his king's crown was pure gold. Our crown weighed 1000 g and had a volume of 95 cubic centimeters (cm<sup>3</sup>).

We looked up the density of a cm<sup>3</sup> of gold and it is 19.3 g/cm<sup>3</sup>. The density of our crown is 1000/95 to get 10.5 so our crown is not pure gold.

Then we found out from a spy named Nolan that our crown was half gold. What was the other half made of?

If 500 g is gold then divide that by 19.3 to find the volume. The gold takes up about 26 cm<sup>3</sup>. That means 69 cm<sup>3</sup> is the other metal.

So weight divided by the volume is 500g/69cm<sup>3</sup>. That gives us 7.2. We looked it up and tin has a density of 7.2. Our crown is half gold and half tin.