

### Mathematics project description

What my mathematics project is about is platonic solids and how these platonic solids relate to art and design. One of the shapes that I happen to be the well known octahedron is useful in my project because it shows how each side is 8 in total. You can see how each vertical side has four, resulting in it being 8 sides in total. I put designs on it like stars that match well with the shapes color scheme as for my major color scheme is important and plays a huge role in the projects I created. It is important because when creating something the colors have to match well with the concept that you are using. The stars prove to be a helpful part of this project as you can add all sorts of designs and fun shapes into platonic solids there's even a shape of their own that they make like the dodecahedron happens to create octagon while other platonic solids can create other shapes like the tetrahedron happens to be a form of a triangle. This shape is seen in many places like for example a car brand has this platonic solid as their symbol. The tetrahedron has three sides in total which in 3d form can look similar to a pyramid. I added diamonds on the tetrahedron as I think it suits the shape better. The diamonds showed what I did for a project idea as one time we were making wearable art. I was gonna use diamonds to match the concept that I was trying to explain. The colors for the tetrahedron are red because it reminds me of gems that i had used in the past to make designs such as masks. I also added angles to the shapes as most platonic solids happen to have angles or vertices which if you count the amount of vertices a platonic solid has it can be more or less than the amount of sides that a solid holds

which is very interesting for people practicing arts and design. I also made a cube. What I did with that one is made it 3d since 3d shapes happen to be important in terms of arts and design as we do a lot of 3d art involving platonic solids. What I did was added triangles to the edges of the cubes as a reference of what I did in one of my arts and design classes. In my arts and design class we made 3 platonic solids of our choice we had to make the shape match the concept that we were going for like for example if you were to do a dodecahedron you can make it related to dungeons and dragons as it's the shape of their dice that is in the game. We also had to make sure that all sides line up together properly and we had a guide to follow to teach us how to fold paper into platonic solids like there was one with an octahedron guide that shows that we had to cut the paper into triangles but not separate them we had to score the lines in between so that it can fold properly you put the sides together till it forms a diamond like shape you can tape the sides down or glue it whichever you feel comfortable with next you add any color of your choice but in my case we had to do a color that matches our color scheme so I did green and yellow green. With the cube that I made since it had six sides in total I painted it two different shades of blue the spikes on top is this dark blue while the shape is light shade of blue with some of the sides a dark shade as well so that you can tell how many angles that the shape has. Although my shapes that I'm going to bring in is not perfect I think they will match perfectly with the concept that I'm making as not only does it relate to my major but it relates to mathematics as well as we went through platonic solids before and it will be interesting to see a paper replica of some of them platonic solids. These platonic solids can be very helpful as a lot of them are referenced to art and they are fun to make it's a great way to have fun while also learning a bit of math in the

process. So I highly recommend making these platonic solids if you are into both shapes and math. So yeah thats my explanation on platonic solids I hope you enjoy my work.