

# THE ART OF FRESCO PAINTING

While fresco paintings have been performed by adroit artists over many centuries, many pale in comparison to the work of Michelangelo. The paintings in the Sistine Chapel are credited to his astounding work. The paintings he completed in the chapel tell many stories about Christ. The picture below represents Christ's baptism. However, fresco painting is not like many other types of paintworks. It involves painting on top of a wet plaster rather than your traditional canvas. The process also involves quite a bit of chemistry in preparing the plaster for such a task. Fresco is basically composed of lime plaster, which is formed from limestone. This transformation takes four distinct chemical reactions/procedures. The first reaction involves



Michelangelo: Fresco Painting of Sistine Chapel Ceiling<sup>1</sup>

heating the limestone. This creates carbon dioxide gas and calcium oxide. Calcium oxide is then soaked in water to

produce heat and calcium hydroxide. Calcium hydroxide is also called "slacked" lime, which is then mixed with sand to make lime plaster. The final step is to allow the plaster to dry, but as the plaster dries it reacts with carbon dioxide in the atmosphere to reform the limestone. The unique part about fresco painting is the pigment particles become trapped in the plaster and actually become a part of the wall rather than a surface on top. There is one drawback, however, to fresco painting. Calcium hydroxide is very basic; therefore, any pigments used for the painting must not be sensitive to bases (such as acids). Due to this sensitivity, each pigment had to be tested on the lime plaster before we actually painted it.

Thankfully none of the pigments were sensitive to the base. The preparation for this lab was not very intensive because the ceramic tiles we used were already soaked in water overnight. This allowed us to work quickly because all we needed to do was lay a very thin layer of the lime plaster on the tile. Before we could actually start

painting, the lime plaster had to dry which took



Fresco Painting in Progress

around 30 minutes. After the plaster dried, the tile was ready for painting. I once again decided to do a University of Michigan painting. Unfortunately, the yellow pigment did not turn out very well, but the blue and white colors stand out nicely. The "M" stands for Michigan and the "Go Blue" is just a saying often used with the university. The picture below shows my finished fresco painting after drying overnight. I was pretty happy with the way it turned out. The lab today aligned right with the fine arts learning objective to express ourselves creatively through an artistic medium. While my painting may not be the most creative, I saw many other students' artworks that turned out great. I have been very impressed by the creativity of our class.



Finished Fresco Painting

<sup>1</sup> [http://commons.wikimedia.org/wiki/File:Lightmatter\\_Sistine\\_Chapel\\_ceiling2.jpg](http://commons.wikimedia.org/wiki/File:Lightmatter_Sistine_Chapel_ceiling2.jpg)