How to make a leaded stained glass window, or panel.
Patty Ohl

Objectives: Through examining and working on architectural studies of Frank Lloyd Wright and stained glass windows, from his buildings, students will learn the essential skills for making a project as an architectural resource and not just art. Their window or panel must be original and through their exploration they will be able to find one for their liking. They will be expected to draw their design out ahead of time and get approval from me before they start. I know my students and I want them to challenge themselves on this project. I don't want this project too easy, but I don't want them to get frustrated while working on it either. If I see what they have in mind we can discuss and see the direction that they want to take with their project.

Vocabulary focus: This is a great source for vocabulary, which we will look at and discuss before we really get started on this lesson. We will discuss those words that would be relevant to this project.

http://www.azurestainedglass.com/glossary-of-stained-glass-terms/

Students will research the many resources that are available to get an idea of what they might want to do for their project.

Possible resources:

http://www.jdmglass.com/flw-prairie-stained-glass-windows-doors-gallery.html

http://www.franklloydwright.tercenim.com/stained_glass.htm

http://www.scottishstainedglass.com/stained-glass-designs/frank-lloyd-wright-stained-glass/

Living in Mason City and having access to the architectural buildings, and lots of windows to explore as well. The students will be going to these sites to actually see first hand what some of these windows look like. Examples of those are attached.

There will be a focus on the mechanics of stained glass window making.

I have included the steps because if I am observed my principal he can see and understand from my lesson plan what and where the student is in the process. I too will be demonstrating and observing each student so I can see that they understand and can do the steps to complete their project.

Steps to making their projects.

1. Design the window. Decide along with this the colors that will be used to make the window. Keep in mind that Wright used lots of colors that we see in nature. So these colors must be used within your project.
2. Design your image onto a piece of paper the same size as the window. Draw you image with pencil. You will be using lots of straight lines. Once these are drawn out you will go over the lines with a thin Sharpie marker, number your pieces starting over each time you plan on using a different color of glass and make 2 additional copies of your pattern.
3. Cut one pattern out and make sure the cut goes through the center, or middle, of the marker line.
4. Once final colors have been chosen for your project start to carefully glue your

pieces to your glass with rubber cement.
5. After you practice cutting on clear glass you will be given permission to go ahead and start cutting your glass. I will carefully watch and supervise you while you are doing this.
6. Arrange your pieces on one of the patterns and start to build your piece into the 90 degree wooden board that I have provided for you. Start in the lower corner and make sure your pieces are fitting together, similar to building a puzzle.
7. When you have completed this process you might need to grind a few pieces just to make sure your pieces fit tightly into place.
8. Wash your pieces with warm soapy water, and remove the paper pattern, and any excess rubber cement. Make sure you remove glass dust and mark again with a Sharpie the number of each piece.
9. Measure out a piece of lead that is the same size as your glass piece and stretch this with pliers, holding onto each end as you do this.
10. Wrap each piece of glass with the lead and again place into your wooden board that has your pattern piece on it.
11. When this is finished and each piece is in its proper place, horseshoe nails will be used to hold everything in its position.
12. A small wire brush is then used to scuff up the ends of the lead and a small amount of flux is applied by a small paint brush to the ends before the project can be soldered together.
13. Solder your pieces together. Solder comes in spools, so the best way to solder the piece is to take a piece of soldering wire and unwind it, so it can be handled easier. Take the tip of the wire and place it at the beginning of he line you are going to solder together, and use your soldering iron along this edge.
14. Turn over and do the same thing on the other side.
15. Wash your piece. Get the excess dust and marker off.
16. You will need to mud your project with a mixture of plaster, that I have provided for you. You can clean with fine saw dust, and a piece of cheese clothe, or a soft rag. Your piece is complete... and ready for display!

Assessment; Students will be assessed on their final project. The craftsmanship and overall appearance. I will also look at the effort and amount of time that was put into the making of their project. I will assess how well they followed directions, and listened to the instruction that was given before and during their work on the project. Another thing I will look at is when they are working on their projects if they did a sufficient job of cleaning up after themselves when they were done working. I would hope that each student will truly enjoy the process and new skills that they obtained while working on their window. I would hope they would feel a great deal of pride and accomplishment in their completed project.

Pictures taken during the Humanities Workshop August 4-9, 2013---I plan on sharing and discussing these before they start their projects, when they are in the exploration stages.