Stained Glass Window Project
Algebra 1

Purpose: Use linear equations to design a stained glass window.

Requirements: You will include lines with zero, undefined, positive, and negative slopes. The skills of graphing and writing linear equations will be used to create your stained glass window.

Procedure:

1. Create a large piece of graph paper by carefully (and neatly) taping four sheets of graph paper together, with the inner edges making the x- and y- axes.

2. Create your stained glass window by drawing 4 horizontal lines, 4 vertical lines, 4 lines with positive slope, and 4 lines with negative slope. Write equations that will put a line where you want it to go.

3. Make sure your lines extend all the way to the ends of your graph paper. Lightly label each line by writing the equation of the line in **slope-intercept form** somewhere on the line itself.

4. Once all the lines are graphed and labeled, begin to color in **each** section that is formed by the intersecting lines. Be careful that the equations of the lines are still visible. Use colored pencils, markers, paint, colored paper, etc...to make your stained glass window unique and beautiful.

5. Mount your stained glass window on a piece of poster board.

6. On an **index card**, write the 16 equations of the lines you used, in both slope-intercept form and standard form, and your name. Attach the card to the bottom or back of your stained glass window, but do not cover the graph paper.

7. *Bonus: Include a picture of an actual stained glass window that is formed using some straight lines. The picture can be one you have taken or one you find through research. In order to get bonus points, be sure to cite the source below the picture as well as where the stained glass is located.*

Due Date: Tuesday, March 21st, 2017

Name _____   Date Turned In _____

STAINED GLASS WINDOW PROJECT
ALGEBRA 1

SCORING GUIDE

<u>This project is worth 100 points (1 test grade):</u>

20 points for 4 horizontal lines and their equations   _____/20

20 points for 4 vertical lines and their equations   _____/20

20 points for 4 negative slope lines and their equations   _____/20

20 points for 4 positive slope lines and their equations   _____/20

10 points for the index card
(Equations in both slope-intercept form and standard)   _____/10

10 points for creativity, neatness, and uniqueness   _____/10

                                                        Total: _____/100

Bonus: Picture of an actual stained glass window
formed using straight lines. (including source & location)   _____/10

                                                        Final Score _____